

# PC Errors

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In Plain English

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## Smart Computing Reference Series

In an ideal world, computers would never crash and programs would never run into problems. Or at least, if those things did occur, your PC would notify you about any glitches in a way that let you quickly patch things up and continue working.

Uh, time to wake up. PCs run into problems all the time, and they typically respond by sending you a message that is either indecipherable or too vague to be of any use.

In this issue we translate those arcane computing error messages into plain English, and we point out potential solutions to the problem. Use this issue as a handy reference for whenever you encounter PC errors.

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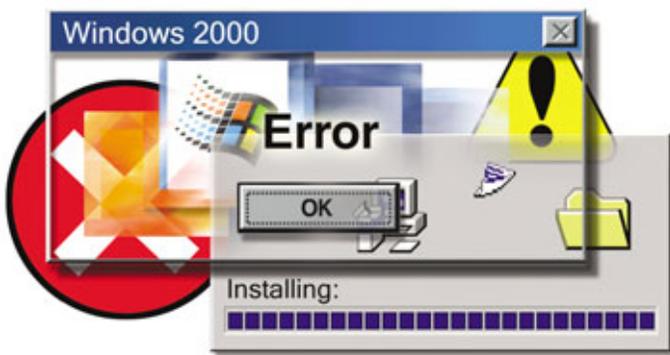
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# Error Terror

Your PC's Scary Messages Can Help You Resolve System Conflicts



**Y**ou're probably familiar with the sinking sensation you get when a car's service engine light illuminates. That ominous, vaguely threatening feeling occurs again when your computer displays portentous and vague error messages. In both cases, drivers/users are left pondering, and maybe panicking, about the unexpected problem: What in the world went wrong? And what do I do next?

■ **Elusive Errors.** Error messages aren't evil monkey wrenches that clog the gears of your computer's systems—but they are signs that something isn't quite right. Pinpointing the problem, even if you have a clearly written error message at your disposal, is not always easy because your computer is so complex, incorporating hardware, numerous programs, and an OS (operating system) that supposedly helps each of those components play nice.

The next time you become livid at a vague error message, consider the multitude of challenges facing software developers. They not only have to create cutting-edge applications on tight deadlines, but they also have to make sure their product doesn't conflict with the programs and hardware components that will likely be on their customers' computers. Developers do their best to smash the worst of their software's bugs, but then the program's release date draws near, forcing companies to move forward in a hurry. Randy Camp, MusicMatch's vice president of software and research and development, says that in these situations, "programmers may forget to omit error messages created during the debugging process, or they may be overlooked because of time and money restrictions or higher-priority user-interface items." As a result, users may not only come across a vague error message, they might even see messages that programmers didn't intend for the public eye.

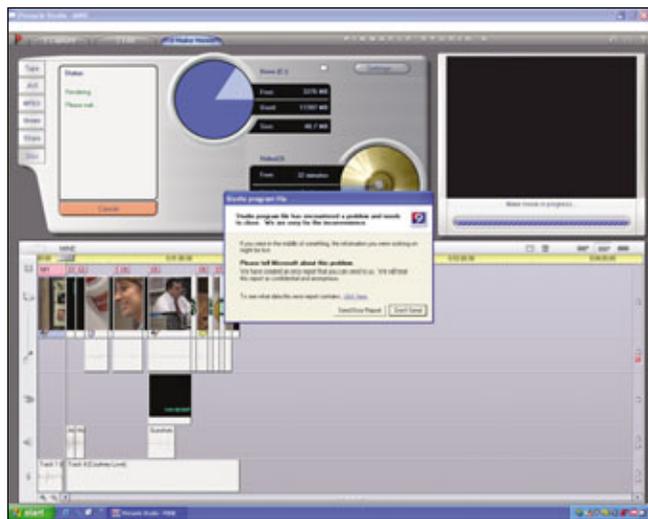
When programmers beat their tight coding deadlines, they take a step back and try to write clear, concise error messages that help users diagnose and fix problems. But as you know, few error messages are really that helpful. One reason is that programmers just don't have the time (or enthusiasm) for creating top-notch error messages. As a result, their sloppy error messages utilize esoteric English or jumbled alphanumeric codes that mean nothing to end users. Worse yet, many error messages are composed by people who've never developed an application themselves, meaning the writers don't have an intricate knowledge of the product's inner workings. Other times, the opposite occurs—an engineer who helped build the program writes the messages, but does so in language that's of no assistance to end users. Still, unhelpful error messages are better than no error messages at all. Without them, programs would simply freeze, fail, or go berserk with zero explanation. Error messages give us a starting point for taking the first steps toward addressing problems that, if undetected, could damage valuable data.

**Hardware and OS errors.** Your computer's hardware and OS spawn many of the messages you see, in part because the OS has such an intense job. It must coordinate the activities of all hardware and software and keep tabs on many separate OS functions, too. Programmers assure hardware and software compatibility by testing their OS with as many setups as they can, but there are always unknown configurations that cause problems.

When an OS encounters unfamiliar or newly revised hardware and software, conflicts may occur due to incompatibilities, or because more than one product demands the same resources as another. There are a few OS-related errors that happen more often than others, and one is called a fatal exception error. Often called BSOD (Blue Screen of Death) errors because of the blue screen and white text that appears, fatal exception errors are the bane of all computer users, as these errors generally halt all programs and prompt users to restart their PCs. You can read in-depth details about BSOD errors in the article "The Fatal Exception Error" on page 152, but for your reference, BSOD errors typically occur due to an incomplete or inefficient third-party program. Often the program in question requests system resources (such as memory) that aren't available, and if the program becomes unstable, the OS puts a stop to the process and requires you to restart your computer.

Many users also see Windows protection or STOP errors, which usually occur at startup. Like fatal exception errors, protection errors freeze processes and force you to restart your PC. Protection errors happen for many reasons, such as driver conflicts, viruses and worms, a corrupted Registry, hardware malfunctions, and more.

You might also encounter GPFs (general protection faults) or any number of illegal operation errors. GPFs occur due to a variety of hardware and software problems and often appear when your processor receives invalid



**These days, when a program crashes, Microsoft wants to know about it. When a programming problem shuts down an application, you may see a dialog box like this one, which offers to send data about the error to Microsoft's software development teams.**

instructions from an application. Illegal operation errors appear because the computer can't complete the instructions it receives, and thus, it stops the process and alerts you with an error.

**Other software errors.** Just like OS programmers, the people who develop third-party programs must create software that will work with a sprawling list of hardware, as well as popular programs from other companies. That's a daunting task, in part because each program on the end user's computer needs to share the CPU, RAM, and other system resources. It's a failure to anticipate problems that generate errors. "In general, warning and error messages are used to indicate that a situation has occurred that was not expected," says Russ Miller, director of software development for Corel.

Sometimes, an error message will offer a generalized explanation that the program isn't compatible with a hardware component, but

that imprecise message won't necessarily help you fix the problem. Other messages may indicate that system resources aren't available because another program is working, but you still might not have a clue on how to resolve the conflict.

These unclear errors are notorious for their unhelpfulness, at least to ordinary home users; nevertheless, many error messages offer more help than those of the past. For example, if you can't save a file in a specific format, a program might well explain why. And if an application is starved for memory, there's a good chance an error message will give you an accurate heads up.

Things should continue to improve as companies provide a more aggressive reaction to errors. Microsoft lets users send error reports via email, hoping to glean information that will help the company's products work better in the future. Miller indicates Corel's applications offer a similar capability and says, "the software offers to transmit a snapshot of related system data via email that enables programmers and testers to get to the root of problems as quickly as possible and ensure the top concerns are addressed in future updates."

■ **What You Can Do.** When you see an error message, be sure to make a copy of it. Depending on the circumstances, you may be able to highlight the error message and its description using your mouse pointer. Then press CTRL-C to copy the message, open a word processing program, and press CTRL-V to paste the information into a blank document. Save the file for future reference. If you can't copy and paste the message, get out your trusty pen and notepad and jot down the message in its entirety.

After you copy the error message, try restarting your computer to see if that resolves any problems you experienced. Often, simply clearing your PC's memory with a restart will set things back to normal with no extra effort from you. Recurring error messages are more frustrating because of their persistence, but

depending on the situation, you might be able to resolve such errors very quickly. Check out the following tips to combat common errors.

**New installations.** Many errors surface soon after you install new hardware or software because conflicts often occur between the new product and previously installed components. To put an end to such messages, you might be able to uninstall the program or hardware (and hardware drivers) and then restart your computer to an errorless state.

If you do find that removing a new product eliminates errors, you might have to do some research to figure out the source of the conflict before you can reinstall the new product. Check the manufacturer's Web site for updated drivers, search support areas for known conflicts, and contact technical support for assistance. Sometimes tech support gurus can help you tweak a setting to end software conflicts.

**Let it finish.** Developing new computing habits can also limit the number of error messages you see. When you first start up your PC, let the hard drive come to a complete stop before starting a task; this lets your computer load all necessary drivers and operating system components necessary for efficient and error-free operation. The same concept works for your other programs. Let each program start up or shut down completely before you move on to another job.

**Look it up.** You can investigate Windows error messages on Microsoft's support site (support.microsoft.com). Click Search The Knowledge Base, select your OS, and enter part of the error message in the Search For text box. You may well find information here to help fix recurring PC problems.

■ **Just The Beginning.** Now you understand a few of the reasons that perplexing and annoying error messages wind up on your monitor. You also know that such messages often occur because too many components are competing for the same system resources.

Keep reading and you'll see detailed explanations of error messages and the best troubleshooting techniques for defeating them (see the article, "Coping With PC Anxiety" on page 8). You will probably never own an error-free system, but with the knowledge you absorb here, you won't panic at every error message you encounter, and your computing sessions will be less stressful and more productive. RS

by Nathan Chandler

# Don't Shoot The Messenger

## Error Messages Contain Helpful Troubleshooting Information

**E**rror messages can seem overwhelming if we don't understand why they happen or how to prevent them. It helps to remember that an error message does not cause the problem; it is merely the messenger. Error messages are much less intimidating if you view them not as signs of doom but as valuable tools that hold clues to

program and system failures. Understanding each part of an error message can help you decipher the information and eliminate the error. **RS**

Compiled by Kylee Dickey

**Title Bar.** This part of an error message should be familiar to most users because you see a title bar at the top of all windows and dialog boxes. Usually, the title bar displays the name of the current program or the title of the open document or folder. In an error message, the title bar might contain the name of the program that generated the error (such as Internet Explorer), the type of error (such as Windows Protection Error), instructions (such as Restart Windows or Insert Disk), or a warning message (such as Warning or Error).

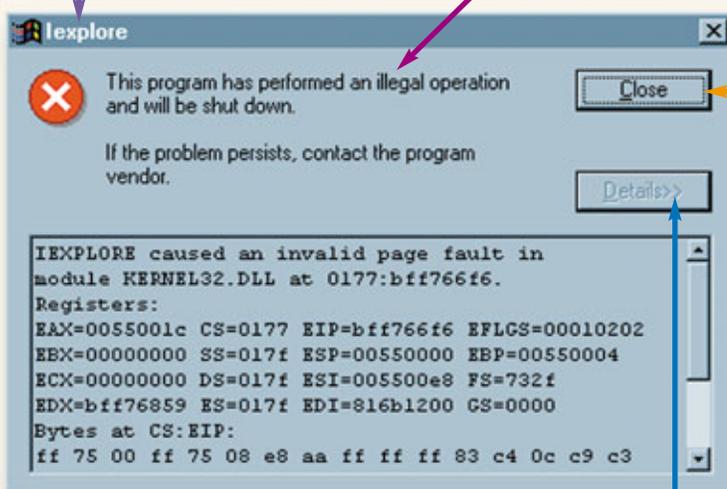
**Message Body.** This is the part of the error message that is in plain English and, ideally, tells you what happened, why it may have happened, and how you can correct the problem. Some error message bodies are well written and provide many details while others are relatively brief. Read the message body carefully, as the message body will often direct you to specific files and actions that have caused the error or that may eliminate the problem.

**Response Mechanism.** All error messages have some type of response mechanism. The most basic response mechanism is a simple OK or Close button that follows the message body. More elaborate response mechanisms might first ask what action you would like to take and then offer a series of buttons, such as Yes, No, and More Info. For example, if the message body indicates that the system may become unstable, the response mechanism might consist of the following three components:

- the question "Would you like to proceed anyway?"
- a Yes button
- a No button

A more basic response mechanism might have no text and only a simple Restart button.

**Details Button.** Not all error messages have a Details button. Those that do can provide information specific to your system and the way you were using it prior to and at the time that the error occurred. When you click the Details button, you will usually see strings of computer code. Although this code may mean little to you, this information can help diagnose the problem if you contact technical support.



# Big, Bad & Blue

## Understand One Of The Most-Feared Types Of Error Messages

The sight makes many computer users tremble: the BSOD (Blue Screen Of Death). Chances are that if you've used Windows for a while, you have, at one point or another, encountered the BSOD. Even Bill Gates had the misfortune of seeing a BSOD on his computer screen during his Windows 98 presentation at Comdex Spring 1998.

The BSOD is one type of Windows error message. Unlike the error message shown in the last article, the BSOD is a full-screen error message. With its bright blue background and white text, the BSOD is hard to miss. Sometimes it signals that an individual program must shut down. Other times, the BSOD indicates that the error is so grave that the entire system must shut down.

The BSOD exists in Windows 3.1/9x/Me. You will also find something very similar to a BSOD in Windows NT/2000/XP. These more recent OSes have an error message called a STOP message that looks similar to and has many of the same elements as a BSOD.

Various types of errors may cause a BSOD. For example, a bad device driver, a hardware conflict, or even an error in the Registry may prompt a BSOD. One of the most common causes of a BSOD is that Windows can't boot from the hard drive. Corrupted data on a hard drive can cause a BSOD, as can the installation of incompatible memory modules.

The most common type of BSOD is a fatal exception error, an error that forces the current application to shut down. This happens when an unexpected event, or exception, occurs. If no code exists to handle the exception, the program cannot proceed, and Windows will display a fatal exception error message. For more information about fatal exception errors, see "The Fatal Exception Error: Deciphering Processor Exception Codes" on page 152.

With so many possible causes, it helps to understand the parts of a BSOD and its language so you can diagnose the problem. **RS**

Compiled by Kylee Dickey

**Type Of Error.** The first part of a BSOD tells you what type of error occurred. In most cases, the error is a fatal exception error, an error so great that it requires that the offending program close.

**Error Code.** This two-character DOS code ranges from 00 to 0F. It provides further information about the type of error that occurred. In this example, 0D indicates a general protection fault, an error that is unique and does not meet the definition of any of the other fatal exception types.

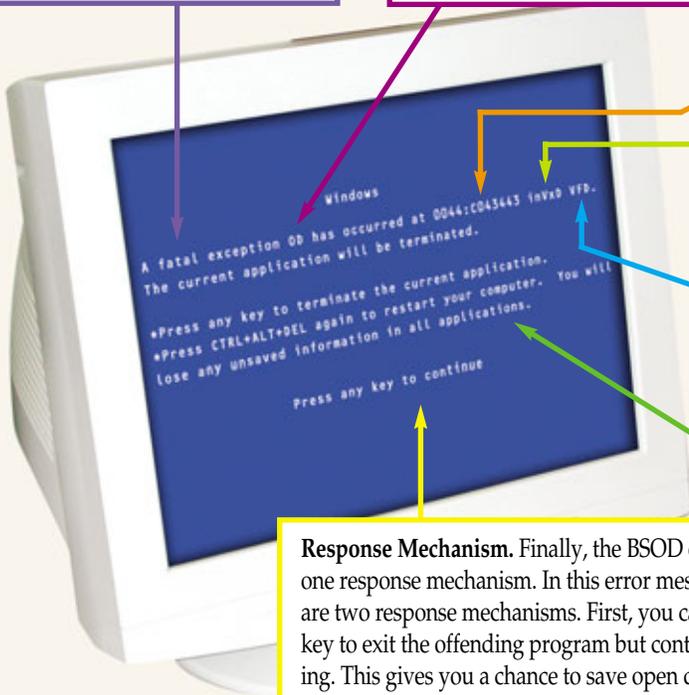
**Memory Address.** This string of characters is the memory address. It tells you the precise location of the error in the system memory.

**Location Of Error.** Here, the BSOD tells you where the error occurred. In this error message, we can see that the problem occurred in a VxD (virtual device driver), a file that manages memory to ensure that programs don't access the same devices simultaneously.

**Offending Device Or Program.** This is the name of the device, program, or file that prompted the error. In this message, the BSOD tells us that the VFD (virtual floppy disk) caused the error.

**Response Mechanism.** Finally, the BSOD offers at least one response mechanism. In this error message, there are two response mechanisms. First, you can press any key to exit the offending program but continue working. This gives you a chance to save open documents before you restart your PC. Second, you can press CTRL-ALT-DELETE to immediately restart your PC.

**Message Body.** After the technical information, the BSOD briefly describes, in plain English, what action you should take (or what action will be taken automatically). In the pictured BSOD, because a fatal exception error occurred, the program cannot continue. The BSOD explains that the application will shut down.



# Coping With PC Anxiety

## Tips & Techniques For Stress-Free Troubleshooting



**S**ooner or later, you're going to have computer problems. That's not a warning; it's a guarantee.

Fortunately, how you react to those problems is up to you. While some of us remain calm, others stress out. Still others scream and panic much like students in bomb squad school about to fail their first and final exam.

Needless to say, such reactions are unhealthy.

That's why we want to help you handle your PC problems stress-free. Here are a few troubleshooting essentials that might help not only to get you through your next computer crash, but help keep your blood pressure down, as well.

■ **Find The Root Of The Problem.** The first thing to do when your PC misbehaves (aside from sighing, gasping, and moaning) is to locate the source of the problem. You might be able to

determine this by tracing your steps. Try to remember what you were doing before the problem occurred. Take note if you've recently installed a new program, saved or deleted an odd-looking file, or moved your computer to a new location. Don't disregard anything.

If you're lucky—well, perhaps "lucky" isn't the right word—an error message will accompany the problem. If so, write it down. This will prevent you from later forgetting what went wrong. Your notes might also come in handy if you need to call a technician. Moreover, error messages sometimes contain important clues as to whether your problem is hardware- or software-related. Let's say you're trying to upload images from your scanner but keep getting an error message saying your computer is unable to connect to the scanning device. Chances are, your PC didn't cause the problem. Nor is it

probably software-related. You'd want to start troubleshooting other hardware, such as the scanner's cable and power connections

Once you've located the source of the problem and determined whether it's caused by hardware or software, you can begin the troubleshooting process.

■ **Troubleshooting Hardware.** Let's be honest, you don't want to open your computer unless you have to. So before you go reaching for a screwdriver, listen for irregular noises coming from inside your PC. A ratchety "zzzzz" sound may mean a stray wire is touching the fan blades or that the fan motor is low on lubricant. A grinding noise may indicate a problem with the hard drive. (If that's the case, save the drive's data immediately: The motor or head system, which contains read/write heads that record and retrieve information from within the drive's case, could be preparing to fail. You have a *right* to panic.)

Try solving hardware problems outside your PC by first making sure the hardware is plugged in and turned on. This may sound obvious, but more than a few people have spent valuable time troubleshooting a PC when all they had to do was just reattach a loose cable or flip a switch.

If the power and cable sources check out OK, refer to the Device Manager. In Windows XP, right-click My Computer, select Properties, choose the Hardware tab, and click Device Manager. Navigate to the hardware device that is giving you problems. A small yellow circle and an exclamation point or question mark to the left of the device's name indicates that Windows has detected a problem. Click the exclamation point, and you might be directed through a series of problem-solving steps. If not, right-click the device, uninstall it, and remove it from Device Manager. Then reboot your computer. Windows will redetect the hardware, hopefully without the problem.

If your computer won't reboot, try starting it in Windows' diagnostics mode, called Safe Mode. In Safe Mode, Windows uses only the most vital drivers and components, which limits the numbers of tasks you can perform but

makes it easier for you to spot problems caused by newly installed drivers. To enter Safe Mode, start your computer and begin tapping the F8 key until an Advanced Options menu appears. Select Safe Mode and press ENTER.

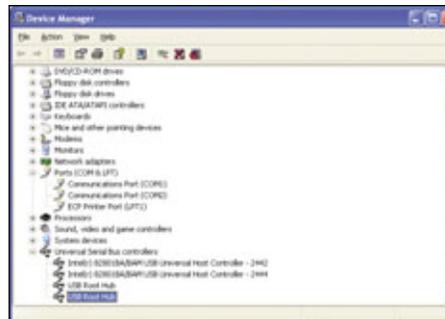
WinXP users can add Safe Mode to their Boot Menu. Right-click My Computer and select Properties. Choose the Advanced Tab. Under Startup And Recovery, click Settings. Then, in the resulting Startup And Recovery dialog box, click the Edit button under System Startup. After Notepad opens, copy the last line of text and paste it in the next line. Delete the description inside the quotes (most likely "Microsoft Windows XP Home Edition") and replace it with Safe Mode. In the same line, change `"/fastdetect"` to `"/safeboot:minimal/sos/bootlog"`. Now click File, Save, and then exit Notepad. Click OK twice (once to close the Startup And Recovery dialog box and again to close the System Properties dialog box). The Safe Mode option will appear the next time you boot your computer.

**■ Troubleshooting Software.** Software glitches occur far more frequently than hardware glitches. That's because software (which includes the operating system, OS utilities, and other applications) is responsible for carrying out every single task the computer performs. And when you consider that multiple programs may be running at any given moment—either behind the scenes or in your computer's foreground—it's no surprise that applications occasionally conflict with one another.

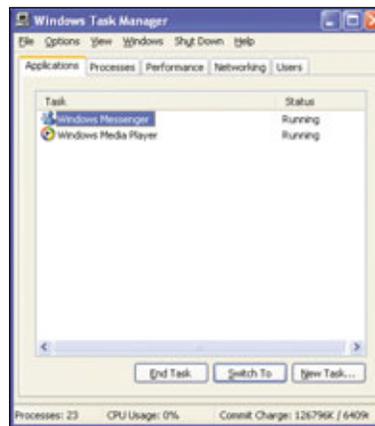
Viruses and bugs, however, cause most software problems. Viruses are better prevented than fixed (with antivirus software and firewalls), but users have less control over bugs (which are actually coding errors or defects within the software program). A good software company will offer updates, or patches, to fix bugs in its products, but often minor bugs can be eliminated by the user.

If you experience problems immediately after you've installed a new program, try simply uninstalling or reinstalling the software.

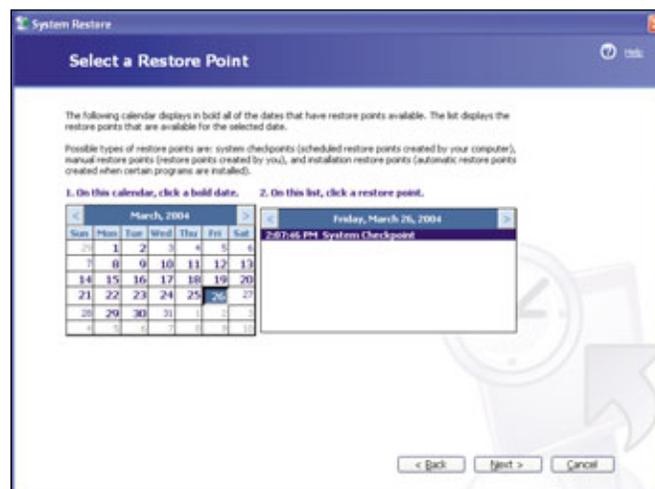
If your computer freezes, try pressing the ESC key. If the ESC key doesn't work, try closing the application with the Windows Task manager. Press CTRL-ALT-DELETE and select Task Manager. Now choose the Applications tab. Here you'll see a list of all the programs



**Use the Device Manager in Windows to check hardware problems, such as missing drivers and malfunctioning system devices.**



**If a program stops responding, try closing it through Windows Task Manager (press CTRL-ALT-DELETE).**



**Windows Me and XP users can restore their computers to an earlier date and time using the System Restore feature.**

open on your computer. If a program is not working properly, or is "Not Responding," use the End Task button to terminate the program.

Also in the Task Manager, under the Processes tab, you'll find a list of all the applications your computer is running, including

those applications running in the background, along with a reading of how much memory each task is using. If too many programs run at once, or your system gets low on memory resources, you're likely to notice a slowdown in your computer, perhaps even a BSOD (Blue Screen of Death).

Items listed under the Processes tab as LOCAL SERVICE, NETWORK SERVICE, and SYSTEM typically can't be closed, but other items can be (select the program and click the End Process button). You might be able to end slowdowns by closing some of these items. Just don't close any applications if you aren't sure what they are.

The best way, however, to end freezes, crashes, slowdowns, and even some glitches is to simply reboot your computer. If you think you've caused a problem by accidentally deleting a necessary file, try recovering it from the Recycle Bin or a backup disk. Windows Me/XP users have the option of using System Restore. (Click Start, point to All Programs, Accessories, System Tools, and select System Restore.) System Restore, although not a backup utility, monitors system and program files and creates restore points at selected intervals. If a user with either of these OSes experiences a problem, she can revert the system to a state when it worked properly.

WinXP users also have access to The Last Known Good Configuration feature. This feature will revert your OS to the same settings in effect the last time your computer started successfully. To use The Last Known Good Configuration feature, start your computer, tap the F8 key to enter the Windows Advanced Options menu, select Last Known Good Configuration (your most recent settings that worked), and press ENTER.

**■ Tech Support: The Last Resort**

During major crises you may have no choice but to refer to technical support. Try to make this your final option. Tech support can be expensive and time consuming, especially if you seek help through email, which can take days to receive a

response. With patience and a little effort you can solve most computer problems on your own . . . without the panicking. **RS**

*by Eric Melvin Reed*

# A Helpful Hand

## Debuggers Let You Record & Track Error Messages

To err may be human, but to err and trash your PowerPoint presentation is distinctly PC. Sometimes the errors are random, other times they're more predictable, but they're always annoying. To make matters worse, the most annoying errors always seem to have the most obfuscated error messages. Windows does come with a number of small tools to help you track and, in some cases, solve application errors.

Perhaps the best known tool is Dr. Watson. If you have Windows, chances are you have Dr. Watson installed. The good doctor, however, has gone through a number of changes over the years and works differently depending on which version of Windows you're using. A handful of additional tools can provide extra help in solving errors. Windows XP, for instance, lets you submit error reports to Microsoft each time an error occurs. Other tools help catch errors that Dr. Watson may miss. We'll take a look at some error debugging tools and show you how you can use these tools to help pinpoint problems.

■ **House Calls.** As we mentioned above, Dr. Watson is perhaps the most well-known debugging application for Windows. Dr.

Watson sits in the background waiting for errors to occur. When Dr. Watson detects an error, it takes a snapshot of everything that's going on in the system and saves the data to a log file. You may be able to use some of the information in the log to pinpoint where errors are occurring, but you'll find the log files are most helpful when submitted to technical support teams.

In newer versions of Windows, Dr. Watson is constantly running. Windows 2000/XP users do not need to start Dr. Watson manually and will not see any indication that Dr. Watson is running.

On older systems, users will need to start Dr. Watson before it can log any errors. In Windows 98/Me, click Run in the Start Menu and type `drwatson`. You'll see an icon in the System Tray when Dr. Watson is running.

Win98/Me users who are experiencing frequent but random errors may want to make a shortcut to Dr. Watson and place it in the Start-up program group in the Start menu. This will load Dr. Watson each time the system boots. To create a shortcut, right-click the Desktop, select New from the pop-up menu, and click Shortcut. Type `drwatson` in the text field and click Next. Provide a name for the shortcut (Dr. Watson works fine, but it can be anything you want) and click Finish. Right-click the newly



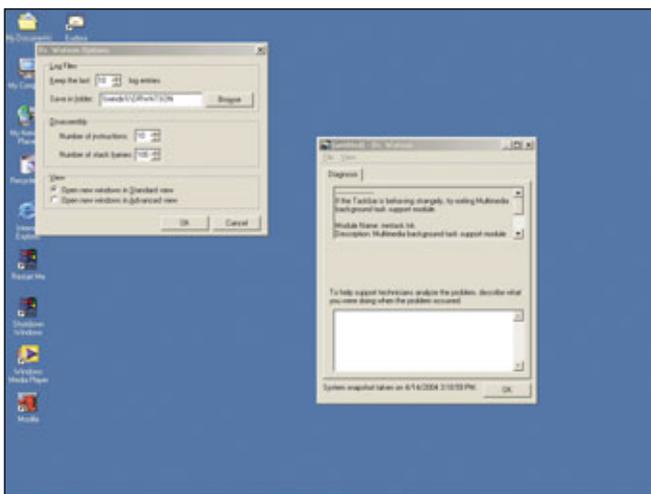
created shortcut and select Copy. Right-click the Start Menu and select Explore. Double-click Programs and Start-up and then select Paste from the Edit menu.

**Options.** In Win98/Me, right-click the Dr. Watson icon in the System Tray and select Options. You can specify the number of log entries to save and set the directory where Dr. Watson will store its logs along with a handful of other options.

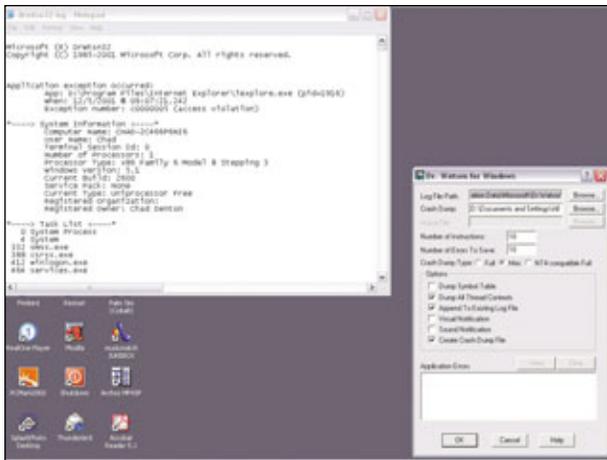
There are more options available to Win2000/XP users. To open the configuration window, click Run in the Start Menu and type `drwtsn32`. Once again, you can set the number of log entries to save and specify the directory where Dr. Watson will save its log files. These versions can also create Crash Dump files that developers or support staff can load into other debuggers.

Win2000/XP users will also notice recent Dr. Watson entries listed at the bottom of the window. Highlight an error and click View to view the details.

**Log Files.** The location where Dr. Watson saves log files by default depends on the version you're using. Open the configuration window using the method described above to locate the directory where Dr. Watson saves its log file. Older versions on Win98/Me systems use a `.WLF` file extension while newer



**Windows 98/Me users will need to make sure Dr. Watson is running before an error occurs. You can set a handful of options in older versions of Dr. Watson.**



**Recent errors are listed in the Dr. Watson configuration screen, but errors will remain in the log file even after you've cleared entries from the configuration window.**

versions running Win2000/XP use a .LOG extension.

In Win95/98, double-click the Dr. Watson icon and then click Open Log File in the File menu. Users with Win2000/XP can open recent logs from the configuration menu as described above. If you've cleared out entries in the configuration window, you can still open the Drwtsn32.log file in a text editor such as Wordpad (log files may be too large to open in Notepad).

Logs can be very long, and most of the information is of no use to you unless you're a programmer. Nonetheless, in some instances you might be able to find some useful information buried in a Dr. Watson log.

Each entry starts listing the date, time, and name of the application that crashed. Names provided are file names rather than generic program names (for instance, Wmplayer.exe instead of Windows Media Player). You'll also find a list of modules and other applications running at the time of the crash and a generic program error code. You can use this information to search the Web for other users who may have had similar problems with a specific application.

You can find the exact point where the problem occurred. You'll find multiple headers that read "State Dump For Thread Id xxxx" (where xxxx changes). You may see the word Fault in front of one or more of indented lines under these headers. Take a closer look at the beginning of any segment that contains a Fault line, and you should see a line beginning with Function. In some instances, you may be able to find some information by researching the function

name (also called a symbol).

If the application is a Microsoft application, try searching Microsoft's online Knowledge Base (support.microsoft.com). It may be useful to include the application name, error code, and symbol (if any). If the error is from another application, search the support documents from the software's publisher. Other handy utilities include Google (www.google.com) and Google Groups (groups.google.com).

In some instances, you may be able to track down a software conflict between two or more applications and find a simple workaround. Though in most cases, you probably will have to contact the software's tech support department. Submitting Dr. Watson logs may prove helpful. Even if the developer is unable to fix the problem in a timely manner, the company may be able to fix the problem in future revisions.

**■ Error Reporting.**

In WinXP, Windows offers to report any errors directly to Microsoft any time an error occurs. This may or may not be helpful depending on the situation. Regardless, due to privacy concerns, error reports are completely anonymous, and only a handful of Microsoft developers have access to these error reports. Don't expect Microsoft to get back to you concerning an error report. Microsoft developers, however, may notice trends in submitted reports over time. They can use this information in the future to fix common errors.

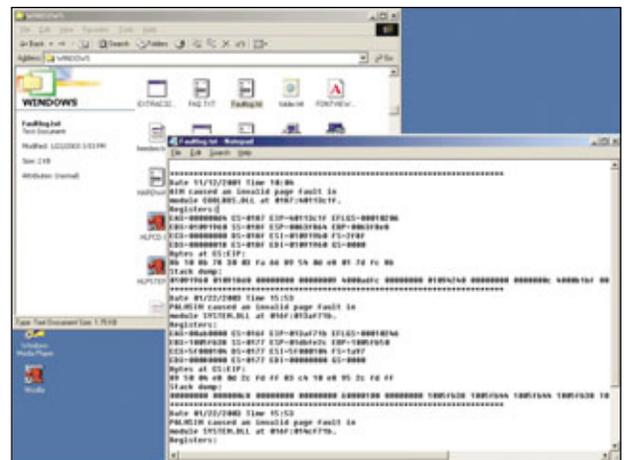
Remember, the information you submit in these reports is confidential. If you do contact Microsoft's tech support department directly, they will not have access to the report you submitted. Dr. Watson logs, therefore, are still useful when contacting Microsoft's tech

support department even if you've filed an automatic error report.

**■ Safety Net.** In older versions of Windows, unexpected errors can slip through if Dr. Watson isn't running. Older versions of Windows still catch and record errors in a file called Fault.txt located in the C:\Windows directory.

Entries in this file are small, especially compared to the wealth of data provided by Dr. Watson. Nonetheless, they do provide some basic information you might find helpful. You'll find the name of the application that caused the crash and the name of the module that crashed along with a date and time stamp. A few other technical details are provided, but they'll mostly be of use to technical personnel. Addition reports are appended to the end of the file, so you'll find the most recent errors listed at the bottom of the file.

**■ Limitations.** Dr. Watson and other error reporting utilities do have somewhat limited use. They will not, for instance, help with major errors involving the OS itself (we'll



**If an error caught you without Dr. Watson running, you can find a little extra information about the error in the Faultlog.txt file in your Windows directory.**

refrain from making the obvious WinMe joke here). These applications are best used to catch errors that occur when specific applications crash. In instances where the entire OS suddenly locks up, they may be of little use. **[RS]**

by Chad Denton

# Windows XP Installation Errors

## Don't Get Stopped Before You Start

Once upon a time, installing a new version of Windows could turn into a monumental chore fraught with errors and frustration. We even recall the times when Windows 95 came on *floppy diskettes* (about 25 of them for a new installation). The Web is full of horror stories from Windows users who suffered through botched installations and spent countless hours getting their systems to run.

One of WinXP's many improvements to the Windows experience is ease of installation. The vast majority of the time, a WinXP installation is very easy and chugs efficiently along with little or no interference from you. It's almost as easy as inserting the setup CD into your CD-ROM drive and walking away. If setting up WinXP is boring, that's a very good thing. Go get a cup of coffee, prop your feet up, and relax while Windows does the heavy lifting. But don't relax too much. Sometimes things can go wrong.

When something goes wrong with a WinXP installation, the setup process halts and reports an error message that attempts to describe the problem and, in some cases, what you can do to fix it. But like most error messages, installation error messages leave a lot to be desired. If you don't have access to another computer while installing WinXP and the installation trips up, it can be a very stressful situation when you have no way of obtaining more information about a particularly cryptic error message.

Read on to learn more about WinXP installation messages; in the next few pages, we'll describe a few common messages, translate what they say into plain English, and then tell you how to solve the condition that caused the error. We hope you will see some common threads at the heart of many of these error messages. Knowing what can go wrong and why will give you the knowledge you need to prep your system and ensure a smooth, trouble-free upgrade to Microsoft's best OS.

### **INSTALLATION ERROR MESSAGES**

**Error Message:** "STOP: 0x000000A  
irql\_not\_less\_or\_equal."



**This error message is triggered when you are upgrading your system from Windows 98/Me to WinXP.**

**Translation:** Hmm . . . This one is not very descriptive at all. IRQs (interrupt request lines) are the communication channels via which your hardware devices communicate with your computer's CPU. When a device needs the CPU's attention, it uses an interrupt request to let the CPU know that it has data that requires handling. So it's reasonable to suspect this error message indicates a problem with a hardware device or a device driver.

**Solution:** According to Microsoft, the root cause of this problem is an incompatible hardware device or device driver. To resolve the problem, restart your computer; if the Setup program gives you the option to revert to your previous OS, take it. When your old OS (whether it's Win98 or WinMe) restarts, uninstall any antivirus and boot manager software and "clean boot" your computer. A clean boot is a simplified boot sequence that prevents device drivers, startup programs, and other settings from loading at boot time.

To clean boot in WinMe, click Start and Run and type `msconfig` in the Open textbox. Click the General tab and then click the Selective Startup checkbox. Under Selective Startup, click the checkbox to the left of each item to deselect the item. Then, click the Startup tab, find the \*StateMgr entry in the list, and click its checkbox to select it. Click OK to accept your changes and click Yes when prompted to restart your computer.

To clean boot in Win98, the steps are fairly similar. To launch the System Configuration Utility in Win98, click Start, Programs, Accessories, System Tools, and System Information. Click Tools and then click System Configuration Utility to launch the application. Click the General tab and deselect every item under Selective Startup by clicking each checkbox. Click OK to accept your changes and then click Yes when you are prompted to restart your system.

After the computer clean boots, attempt the WinXP installation again. If the error still occurs, see the steps below.

If the WinXP Setup program did not give you the option to revert to your previous OS,

Microsoft advises that you remove every unnecessary piece of hardware from your system. This includes any hardware device that you absolutely don't need to run the computer, from USB (Universal Serial Bus) devices to network and sound cards. If the WinXP setup is still unsuccessful, try flashing your BIOS (Basic Input/Output System) to a new version. Consult with your computer's manufacturer to figure out how to do this.

**Error Message: When upgrading Win98/Me to WinXP, you get one of the following messages:**

**"Fatal Error:**

**Setup Cannot Continue. Please Contact Microsoft Technical Support. (Error: 3E6h)"**

**or**

**"WINNT32 this program has performed an illegal operation. WINNT32 caused an invalid page fault in module KERNEL32.DLL"**

**Translation:** This message indicates that a software application or a device caused the Setup program to crash. The second message indicates that another application or program tried to access the same area of memory assigned to KERNEL32.DLL, one of the critical Windows DLL (dynamic-link library) files.

**Solution:** If you have any of the following programs or hardware devices,

- System Restore Remover Pro by Definition Software
- Intuit Quickbooks
- Dell Dimension 8100
- Echo Audio sound card

Microsoft recommends that you take some actions before continuing. Remove both software programs using Add/Remove Programs. The System Restore Remover Pro works only with WinMe, so you won't be able to use this program with WinXP. Intuit's Quickbooks is compatible, but Microsoft advises that you remove the program, complete the setup process, and then reinstall it once WinXP is up and running.

If your Dell Dimension 8100 has a Turtle Beach Santa Cruz sound card installed, browse to the C:\DELL\DRIVERS\r33637 folder and check for two installation files for the sound card's drivers, both called Setup.exe. These files are found at C:\DELL\DRIVERS\R33637\9x\Setup.exe and C:\DELL\DRIVERS\R33637\NT\Setup.exe; rename both programs to Setup.old.

If you have any of the Echo Audio sound cards we mentioned above, upgrade their audio driver to version 6.0 or higher. Go to [www.echoaudio.com](http://www.echoaudio.com) to get the files and instructions for installing them.

If the steps outlined above don't solve the problem, perform a clean boot in Win98 or WinMe as we described above and restart the setup process. If Setup still reports the error, unplug all peripherals that are not required to start your computer and restart the setup process. Microsoft even recommends that you clean your installation CD-ROM before proceeding.

This issue brings up an important question: Should you upgrade to WinXP on top of your Win98 or WinMe installation or should you perform a clean upgrade? The short answer is no.

**Error Message: "Fatal Error: An error has been encountered that prevents setup from continuing."**

**One of the components that Windows needs to continue setup could not be installed.**

**Press OK to view the setup log file."**

**Translation:** This error message means the Setup program is unable to read from your WinXP installation CD.

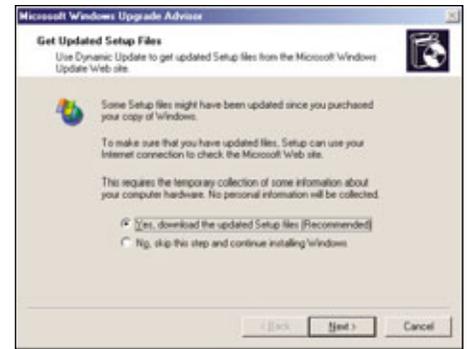
**Solution:** If your WinXP installation CD is very damaged or scratched, you'll have to get a replacement from Microsoft. If you're in the United States, call (800) 360-7561 Monday through Friday from 5 a.m. to 7 p.m. Pacific to order a new CD. If you're in Canada, call (800) 933-4750 during the same days and hours to get a replacement.

You may be able to resolve this by copying the setup files from the CD to a folder in your hard drive. If you're installing WinXP to a clean hard drive, insert a Win98 or WinMe startup disk in your computer's floppy drive and reboot the computer. At the command prompt, type the following command:

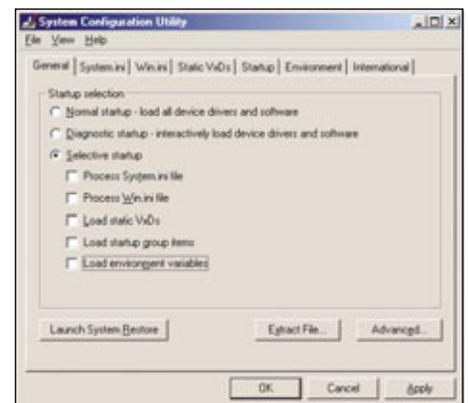
```
xcopy [CD Drive Letter]\i386\*. *
c:\i386\*. * /s /e
```

This command copies all the files in the i386 folder of your WinXP installation CD to a new i386 folder in your C: drive. The /s and /e command switches ensure that you copy all directories and subdirectories (even empty ones) to the new location.

Now, type `c:\i386\winnt.exe` to continue the setup process. Winnt.exe is the installation file that must be used when you're running



**During the installation, Windows XP's Setup program prompts you to check Microsoft's Web site for updated installation files. This is a good option to choose and ensures a trouble-free installation.**



**To perform a clean boot, choose Selective Startup in the System Configuration Utility's General tab and uncheck all the checkboxes to minimize the number of files processed and loaded by Windows at boot time.**

the Setup program from a startup disk command prompt.

If you're simply upgrading an existing Win98/Me installation, click Start and Run, type `cmd` in the Open textbox, and click OK. At the command prompt, type the same command as above to copy the files. When the copy process is complete, type `c:\i386\winnt32.exe` to launch the setup process. The reason you use the winnt32.exe file in this situation is that you are running the Setup program from within Windows.

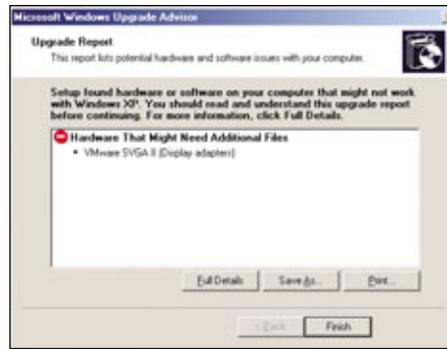
**Error Message: When upgrading from Win98/Me to WinXP, you get the following message during setup:**

**"Setup has disabled the upgrade option, could not load the file D:\i386\Win9xupg\W95upg.dll. Setup cannot continue, because this version can only install as an upgrade."**

**Translation:** As the message implies, this issue occurs because the Setup program mistakenly assumes the upgrade option is not valid for your software. This occurs in spite of the fact that you are eligible for an upgrade because you are obviously installing on top of an existing Windows installation.

**Solution:** There are two solutions to this problem that Microsoft suggests. First, clean boot your computer and try to run Setup after the boot process completes. Please refer to the discussion above to find out how to clean boot in Win98 or WinMe.

The other solution is to copy the i386 folder from the WinXP installation CD to a folder on your hard drive. If you're already in Windows, simply use Windows Explorer to browse to the i386 folder in your WinXP installation CD, right-click the folder, and click Copy. Browse to a location on your hard drive, right-click, and click Paste. The copy process might take a few minutes because you are transferring a large amount of data when you do this.



**After Setup checks your system for compatibility issues, it reports its findings to you. Problem areas may be easily fixable by simply updating your hardware's drivers.**

**Error Message:** This one is not a message but a behavior that occurs when you upgrade from Win98/Me to WinXP. The WinXP Setup program freezes during the "Preparing Installation" step.

**Translation:** Again, this is a symptom that occurs when performing an upgrade to WinXP on top of an existing Windows installation. According to Microsoft, the root cause of this problem is antivirus software installed with your previous version of Windows that is running in the background and interfering with the setup process.

**Solution:** To resolve this issue, exit Setup and then disable or uninstall any antivirus software in your computer. Once the antivirus software is disabled or uninstalled, restart Setup.

**Error Message:** After restarting your computer when an upgrade to WinXP is complete, the following message may appear:

```
"STOP: 0x000000ED (0xaaaaaaaa, 0xbbbbbb, 0xcccccc) UNMOUNTABLE _BOOT_VOLUME"
```

(NOTE: aaaaaa, bbbbbbb, and cccccc represent various hexadecimal numbers.)

## Most Common Error Message

We really can't pinpoint any one setup or installation error message that occurs with greater frequency than others. The variety of hardware and software configurations out there is truly staggering, so every situation will be different.

But there are two common situations that crop up time and time again behind many of the error messages we've examined: upgrading to Windows XP on top of an existing installation and not doing a thorough compatibility check.

### A Clean Upgrade Path

Upgrading on top of your old Windows installation is, at first glance, the easiest road to take, but this road can turn treacherous in a hurry. Upgrading on top of an old installation means you instantly transfer all of the problem files and settings associated with your previous Windows OS (operating system) to your brand new OS. In some cases, the

problems are serious enough to derail the WinXP setup process itself.

We recommend you take the time to archive your important data, reformat your hard drive, and perform your WinXP upgrade on a clean hard drive. Some people think you can't do this with an upgrade CD, but that is not true at all. If the WinXP Setup program does not detect a previous Windows installation on your hard drive, it requests that you insert your previous Windows version's installation CD into your CD-ROM drive. Once the Setup program verifies that you have a bona fide WinMe or Win98 installation CD, the WinXP installation continues normally.

### Does Your System Have What It Takes?

If you're going to upgrade your system to WinXP, visit Microsoft's HCL (Hardware Compatibility List) Web site

([www.microsoft.com/hcl](http://www.microsoft.com/hcl)) before you upgrade. Make a list of your system's hardware devices and software applications and look for them in this list. If a device or application is not listed, go to the manufacturer's Web site and see if it has updated drivers or patches that make the device or application compatible with WinXP. In some rare cases, you may have to upgrade to a new version. Performing this simple inventory before you attempt an upgrade to WinXP may save you a lot of time and grief when you attempt to install WinXP. It's time well spent.

Another even handier way to check your system's compatibility with WinXP before you upgrade is to let WinXP's Setup program do it for you. When you launch WinXP Setup from within Windows, you have three options in the Setup program's initial screen: install WinXP, perform additional tasks, and check compatibility. Clicking the arrow

to the left of the Check System Compatibility option launches another window where you can choose to go to Microsoft's Web site and verify your system's compatibility yourself or you can choose to let Setup automatically verify compatibility. Choosing the automatic compatibility option launches the Microsoft Windows Upgrade Advisor, which checks your system and compiles the findings into a text file that's automatically saved to C:\WINDOWS\upgrade.txt.

Please note that while running the WinXP Setup program, the Windows Upgrade Advisor may launch a window prompting you to check Microsoft's Web site for updated setup files. This feature, called Dynamic Update, ensures that your Setup program files are the very latest. We recommend that you choose to let Dynamic Update download and install the latest WinXP setup files.

# This is another one of those messages

that points to a possible problem with your WinXP installation CD.

**Translation:** If you have a UDMA hard drive and motherboard controller but are using a standard 40-wire connector cable to connect the drive to the controller and the BIOS is configured for UDMA mode, this error will be triggered. This is a complex way to say that you're using the wrong cable with your UDMA drive and controller.

Another possible cause of this error message is a damaged file system. If the second reported memory address is 0xC0000032, the file system is damaged.

**Solution:** To resolve the first cause behind this error message, replace your 40-wire IDE (Integrated Drive Electronics) connector cable and reset your BIOS settings to the default options.

To resolve the second problem triggering the error message, reboot your computer using either a startup disk or the WinXP Setup CD-ROM. At the Welcome to Setup screen, press `r` to launch the Recovery Console and type `chkdsk /r` to begin repairing your damaged file system. When the process completes, type `exit` to leave the Recovery Console and press `ENTER` to restart the computer. If this doesn't resolve the problem, repeat this process but use the `fixboot` command instead.

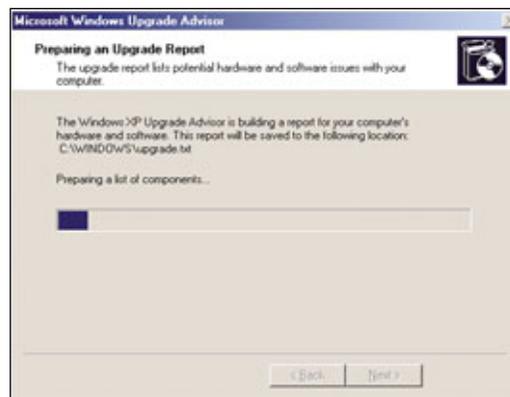
**Error Message:** This is not an error message, but a symptom: While you're entering the Product Key during Setup while upgrading from Win98/Me, Setup cycles back to the Welcome to Setup screen.

**Translation:** This is another one of those messages that points to a possible problem with your WinXP installation CD.

**Solution:** To resolve the problem, copy the contents of your installation CD-ROM's `i386` folder to a folder on your C: drive (using the `xcopy` command we discussed earlier) and run the Setup program from your hard drive. To do this, click Start and Run and type `c:\i386\winnt32.exe` in the Open textbox. Click OK to execute the command.

**Error Message:** Again, this one is not an error message, but a symptom. You've

just completed the WinXP installation, but when you reboot the computer, you discover that WinXP assigned passwords to all user accounts. Because you don't know the password Windows assigned to each account, you can't log in to any of them.



Windows generates an upgrade report, saved in a text file called `Upgrade.txt` and saved to your `C:\WINDOWS` folder.

**Translation:** The problem here is the Setup program did not complete properly. During the Setup operation, Windows assigns temporary passwords to each user account; these passwords are stored in a file called `setupact.log` in your Windows installation folder. When the Setup program completes properly, these temporary passwords are cleared, allowing you to set up your own password. But if the Setup program does not complete properly, the passwords are retained.

**Solution:** To resolve this problem, find the `setupact.log` file and locate an entry that reads "Random password for Username is [`password`]."

Write down the password exactly as it's written and use it to log on to the account. How you do this depends on whether you configured your file system as FAT32 or NTFS.

If the file system is FAT32, restart your system using a WinMe or Win98 startup disk. At the command prompt, type `edit c:\windows\setupact.log` and follow the instructions above to locate the password.

If the file system is NTFS, configure your BIOS settings so the computer boots from the CD drive and insert your WinXP installation CD into your CD-ROM drive. Restart the computer, and at the prompt press any key to boot from the CD. Press `r` at the Welcome To Setup screen to launch the Recovery Console and then press `ENTER` when prompted for the administrator password. At the command prompt, input type `setupact.log` and press `ENTER`. Make a note of the password associated with each account. Restart the computer and use the retrieved password to log on to the user account.

**Error Message:** "This program cannot be run in DOS Mode."

This message appears when you attempt to execute `Setup.exe` from within a DOS real-mode command prompt.

**Translation:** The WinXP `Setup.exe` executable cannot be run from MS-DOS.

**Solution:** If you need to run the installation from within MS-DOS, type `[CD-ROM Drive]:\i386\winnt.exe` to start the Setup program.

**Error Message:** After the WinXP Setup program completes the file-copy process, the following error message appears:

"Setup cannot set the required Windows XP configuration information. This indicates an internal setup error. Contact your system administrator."

**Translation:** This is WinXP's way of reporting a hardware incompatibility issue.

**Solution:** First, update your system BIOS to the latest version. Then, determine if any hardware in your system is incompatible with WinXP. You can verify this by using the Setup program's automatic compatibility check or manually by browsing to Microsoft's Hardware Compatibility List ([www.microsoft.com/hcl](http://www.microsoft.com/hcl)) Web catalog. Either update the device drivers or remove the incompatible hardware from your system. Then restart the Setup program.

## Most Confusing Error Message

Finding the most confusing error message among so many candidates was truly a difficult task. But, we think we found a very worthy nominee. The following error message can occur during the WinXP upgrade process:

**“An unexpected error (768) occurred at line 5118 in <drive letter>\xpclient\baseboot\setup\setup.c Press any key to continue.”**

When you press any key as instructed, the following error message appears:

**“A problem has been detected and windows has been shutdown to prevent damage to your computer. PROCESS1\_INITIALIZATION\_FAILED”**

Huh? Again, the Microsoft Knowledge Base comes to the rescue. The root cause triggering this error message is a software program (namely Roxio's GoBack) that is incompatible with WinXP. To resolve the problem, disable GoBack when WinXP restarts by pressing the space bar at the GoBack boot menu, pressing **d** to disable and pressing **y** to confirm. Once GoBack is disabled, cancel the WinXP setup process and uninstall GoBack. □

**Error Message:** When performing an upgrade to WinXP from Win98/Me, you get any one or more of the following error messages:

**“Error: Cannot get main entry point for C:WINDOWSSYSTEMVIPERSTI.CPL. Error:127 [ERROR=127 (7Fh)]”**

**“Error:**

**The signature for Windows XP edition Setup is invalid. The error code is fffffdf0.”**

**or**

**“The system cannot find message text for message number 0xffffdf0 in the message file for Syssetup.dll.”**

**or**

**“Fatal Error:**

**Setup failed to install the product catalogs. This is a fatal error. The setup log files should contain more information.”**

**or**

**“Error:**

**Warning! Setup failed to remove the setup catalog ieexcep.cat”**

**or**

**“Error:**

**Warning! Setup failed to remove the setup catalog sp1.cat”**

**Translation:** If the Setup program fails to delete all of the files in the C:\WINDOWS\SYSTEM32\CATROOT2 folder (or whatever drive letter and Windows folder contain the previous Windows version files), these error messages may be generated. This is another one of the many problems that can occur when you attempt to upgrade to WinXP on top of a previous Windows version.

**Solution:** Rename the C:\WINDOWS\SYSTEM32\CATROOT2 folder to something such as catold to prevent WinXP's Setup program from locating the folder and halting the installation. If you are still in Setup, press SHIFT-F10 to launch a command prompt from within Setup. At the command prompt, type **cd \windows\System32** to open the System32 folder and then type **rename CATROOT2 catold**, press ENTER, restart the computer, and attempt the upgrade again.

If you cannot reach a command prompt from Setup, reboot the computer from a Win95, Win98, or WinMe startup disk and rename the folder from the command prompt. You can also launch a command prompt by booting from the WinXP installation CD and running the Recovery Console.

**Error Message:** During a WinXP installation, you get one of the following error messages:

**“STOP: 0x0000008e”**

**or**

**“STOP: 0x00000050 PAGE\_FAULT\_IN\_NON\_PAGED\_AREA”**

**Translation:** This error is generated when one or more of your system's RAM memory modules is faulty.

**Solution:** Remove a memory module and restart the setup process. If the error reappears, replace the memory module you just removed, remove a different memory module, and restart the setup process again. Continue using this procedure until you isolate the specific memory module that is causing the error message.

Keep in mind that WinXP needs at least 128MB of RAM to run properly. If you have 128MB or less of total system RAM, this is a good opportunity to upgrade your system

memory to 256MB or 512MB. The more memory you have when running WinXP, the better; 512MB is probably the optimum amount of memory you'll need to run WinXP and all your other applications efficiently.

**Error Message:** During the WinXP installation process, you receive one of these error messages:

**“Failed to install product catalog.”**

**or**

**“STOP: 0x0000008E (0x00000005, 0xBF869F22,0xF9470688,0x00000000)”**

**Translation:** This error message is a variation on the “Cannot get main entry point for C:WINDOWSSYSTEMVIPERSTI.CPL. Error:127 [ERROR=127 (7Fh)]” message discussed above. Again, if the Setup program fails to completely remove the CATROOT2 folder in your previous Windows installation, Setup will report this error. This error also occurs if one of your RAM memory modules is faulty.

**Solution:** To resolve the first possibility, use the same approach discussed in the “Cannot get main entry point for C:WINDOWSSYSTEMVIPERSTI.CPL. Error:127 [ERROR=127 (7Fh)]” error message to rename the CATROOT2 folder.

To determine which of your RAM memory modules is defective, use the troubleshooting approach discussed in the “STOP 0x0000008e” message.

**Error Message:** When upgrading from Windows 98/98SE/WinMe/NT to WinXP Professional, the following error message appears:

**“Setup cannot upgrade your current installation to Windows XP. Your copy of Windows XP does not support upgrading from an evaluation copy of Windows. Setup cannot continue.”**

**Translation:** The problem here is your WinXP Pro installation CD may only be designed to upgrade an OEM (original equipment manufacturer) version of Windows 2000. In other words, you have the wrong type of WinXP installation CD for the type of upgrade you're trying to do.

**Solution:** Contact the OEM or reseller where you purchased the CD and obtain a valid WinXP Pro upgrade CD-ROM.

**Error Message:** **“STOP: 0x0000001E (0x80000003, 0xBFC0304, 0x00000000, 0x00000001)**

**[bugcheck code] ([1] [2] [3] [4])”**

**Remember, WinXP requires at least *2GB* of hard drive space, so if you're at the ragged edge of that limit, try to make some more room.**

**Translation:** Microsoft calls this specific error message (STOP 0x1E) a bug check code, which is a programmatic procedure used to report an illegal instruction detected by the WinXP kernel. The number 1 represents the exception code, the number 2 represents the memory address where the error occurred, and the numbers 3 and 4 represent the parameters 0 and 1 of the exception.

In plain English, Microsoft uses this error code to report programmatic errors caused by insufficient hard drive space, a faulty device driver, or possibly a BIOS that needs updating. If a device driver is the cause behind the error message, the name of the device driver may be displayed in the error message text.

**Solution:** First, try to make more room in your hard drive for WinXP. Remember, WinXP requires at least 2GB of hard drive space, so if you're at the ragged edge of that limit, try to make some more room.

If a faulty device driver is the culprit, upgrade the driver to the latest WinXP-compliant version if one is available. If a WinXP-compliant version of the driver is not available, you may have to remove the hardware from your system to make WinXP Setup work properly.

Finally, perform a flash upgrade to get your system BIOS up-to-date. Consult your BIOS documentation to learn how to upgrade the BIOS; follow all instructions provided by your BIOS manufacturer to the letter or you could wind up with major problems if you botch the flash upgrade.

**Error Message:** "STOP: 0x0000001E KMODE\_EXCEPTION\_NOT\_HANDLED"

This message also mentions the device driver `aspi32.sys`.

**Translation:** This is a specific example of a STOP 0x1E message; `ASPI32.SYS` is Adaptec's Advanced SCSI Programming Interface, a device driver used in CD writers.

**Solution:** Upgrade your system's version of `ASPI32.SYS` to version 4.57 or higher;

download the file from Adaptec's Web site at [www.adaptec.com](http://www.adaptec.com).

**Error Message:** During the WinXP setup process, you see the following message:

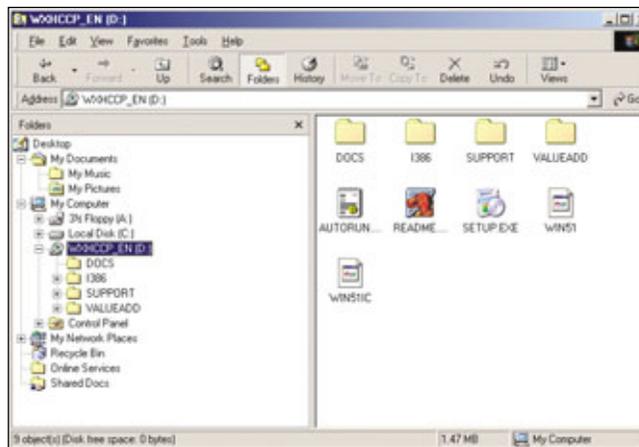
"Uninstall Option Not Available  
There is not enough Space to save your current operation system.

Your computer has enough disk space for Windows XP, but it does not have enough to save your current version of Windows for backup.

The backup image size is [number\_of\_megabytes]

It is recommended that you cancel Setup now, free additional disk space, and then restart Setup."

**Translation:** This is a surprisingly clear Windows error message. When WinXP is installed, the Setup program saves a backup copy of your previous Windows version to a folder in your hard drive. This backup is in two files, `BACKUP.CAB` and `BOOT.CAB`, stored in a folder at `C:\Undo`. This is done in



**The folder structure of the Windows XP installation CD features four folders: DOCS, I386, SUPPORT, and VALUEADD.**

case your WinXP upgrade is not successful and you want to revert to your previous Windows version. But in this instance, the Setup program reports there is not enough space to save this backup copy of your previous Windows version.

## Most Unusual Error Message

After sifting through a few error messages, we nominated this gem for the most unusual error message:

**"Error Message: An unexpected error has occurred. (536821760) occurred at line 1768 in D:\xpclient\base\boot\setup\arcdisp.c"**

This error message gives us absolutely no clue as to what is causing the problem. Fortunately, the Microsoft Knowledge Base does have an answer: What's triggering this error message is a problem with our computer's memory, specifically a damaged memory module or a damaged memory slot (the physical area in the motherboard where memory modules are inserted).

We can't understand why Microsoft's Windows developers can't simply say that a problem exists with one of your memory modules. That approach would at least point you in the right troubleshooting direction. □

**Solution:** You can do a number of things to resolve this situation. First and foremost, we certainly recommend that you take advantage of the option to back up your current OS. You never know what might go wrong with your WinXP installation, so it's advantageous to have the option to go back to your old OS, just in case.

You can cancel the Setup process by pressing `ESC`. After you cancel Setup, reboot into your existing OS and free up more drive space. If you have another partition in your system with sufficient space for this backup, choose this partition when prompted to back up the existing system files by the Setup program.

This error is not a show stopper for the Setup program. If you choose to simply not do the back-

up, click `Next` to continue the Setup procedure. But, remember that you will not be able to uninstall WinXP and revert to your previous OS if you choose to do this. **RS**

by Sixto Ortiz Jr.

# Windows XP Startup & Shutdown Errors

## Keep Windows Running Smoothly

**W**indows XP, Microsoft's flagship operating system, is widely recognized as the company's most reliable consumer OS yet. With WinXP, Microsoft eliminated the Windows 9x architecture from its consumer OSes and adopted the technology core of its Windows NT and Windows 2000 corporate OSes. This strategy considerably beefed up reliability and virtually eliminated the constant crashes that plagued products such as Windows 98/Me. Windows users hailed the dawn of a new era of reliable, crash-free Windows computing.

But in spite of the significant improvement to Windows reliability, WinXP is not crash-proof. After all, we are talking about a program packing millions of lines of code that must work in a virtually unlimited variety of computer configurations. And we haven't even mentioned the wide variety of computer user skills, from raw rookies who can barely turn on their PCs to accomplished experts who love to tinker with everything in their computers. WinXP is much improved, but it does crash from time to time. And sometimes crashes occur at the worst possible times.

Startup and shutdown crashes are probably the most frustrating for Windows users. Startup crashes are especially vexing because you can't even get your system going long enough to diagnose and solve the problem. Shutdown crashes are frustrating also: Just when you think you can push away from the computer and go



on with your life, a mysterious crash throws a monkey wrench into your plans. A 15-minute check-your-email-and-log-off session suddenly turns into a five-hour troubleshooting ordeal.

When crashes occur, WinXP usually presents you with a message attempting to describe the error and, in some cases, telling you what you can do to fix it. The only problem is, for those of us who aren't programmers or Windows experts, most error messages are virtually incomprehensible. Instead of making things clearer, cryptic error messages only muddy the waters. Seeing "Non-system disk or disk error" at startup sounds pretty serious, right?

In the next few pages, we're going to cut through WinXP's gobbledygook and take a

closer look at some common WinXP startup and shutdown errors.

## STARTUP ERRORS

**Error Message:** "Non-System disk or disk error . . . Replace and strike a key when ready."

**Translation:** This simply means that WinXP is attempting to boot from a disk (be it a floppy diskette or one of your hard disks) that doesn't contain the system files WinXP needs to start. WinXP needs access to certain bits of information when it starts up. Your hard drive's boot sector, a specific location on the disk, contains the startup files WinXP needs to continue the boot process. If WinXP can't find those files, the boot process stops cold.

**Solution:** This one is either a simple mistake or a catastrophe. First, check to see if you have a floppy diskette in your drive. Nine times out of 10, this error is caused when you leave a floppy in the disk drive, turn off the computer, and then turn it on again without taking the diskette out of the drive. If the floppy is not a system disk with the required boot files, WinXP won't launch. Check the floppy drive, and if there is a diskette in it, remove it and press any key on your keyboard. Windows should now start up normally.

If a forgotten floppy disk is not the cause, then you've got a much bigger problem on your hands. Somehow, your hard drive's boot sector has been damaged or erased. This is typically caused by either a boot-sector virus or a hard drive failure. Most antivirus programs let you create a rescue disk designed specifically for those times when a virus renders your computer unbootable.

If you created a rescue diskette, insert it into your floppy drive, restart the computer, and follow the antivirus software's instructions to clean the boot-sector infection and restore your computer.

If you don't have a rescue diskette, go to a friend or co-worker who has one and either use his or use his antivirus software to create one, even if you use different antivirus programs. Right now, your main focus should be on disinfecting and booting your computer.

If a boot-sector virus is not the cause, the hard drive's boot sector, for some reason or another, has been damaged. WinXP's Recovery Console has two utilities you can use to try to repair your boot sector: FIXBOOT or FIXMBR. FIXBOOT writes an entirely new boot sector, while FIXMBR repairs the MBR (master boot record) in the boot sector.

To run the Recovery Console, boot into your WinXP setup CD and press **r** when prompted. To boot into your WinXP installation CD, restart the computer and enter your Setup (BIOS [Basic Input/Output System]) program. Your BIOS should have a menu where you can change the sequence of boot devices for your computer. By default, your computer looks for a bootable disk in your floppy drive first, your hard drive second, and your CD drive last. Adjust the boot sequence in your BIOS so your computer searches for a bootable disc in your CD drive first (leave the hard drive as the second choice), insert your WinXP installation disc into your CD drive, and restart the computer. Because BIOS programs vary from manufacturer to manufacturer, consult your BIOS' documentation to find out how to change the boot device sequence.

To run FIXBOOT, type **FIXBOOT [drive]** at the command prompt, where *drive* is the drive letter for your boot drive (usually C:). To run FIXMBR, type **FIXMBR [device name]**, where *device name* is the nomenclature the Recovery Console's MAP command uses to describe the various hardware devices in your computer. For example, you might type **FIXMBR \device\HardDisk0** to restore your boot record's MBR. If you don't enter a device name, FIXMBR repairs the MBR of the default system disk.

**Error Message:** "STOP: 0xc000026C [Unable to load device driver] Driver" or "STOP: 0xv0000221 [Unable to load device driver] Driver" or "STOP: 0xv0000221. Bad image check sum, the image user32.dll is possibly corrupt. The header check sum does not match the computed check sum."

**Translation:** These errors have two possible root causes: As the first two messages imply, the errors can be caused by a device driver file (\*.SYS) that is missing or has been corrupted. The third message is pretty straightforward, also: Again, something's gone awry with a file—this time with USER32.DLL. This is one of those critical system files containing

## Most Common Error Message

**Y**es, the most common error message found in Computerland is the classic "Non-System disk error" message. More often than not, this error occurs because we leave a floppy disk in the disk drive after turning off the computer. When the computer is turned on again, it attempts to boot from the floppy disk, which more than likely does not contain the files Windows needs to boot normally.

We already gave an exhaustive overview of this message, including what to do when a floppy disk is not the cause (besides panic when you don't know what the error means). Most of the time, the panic is short-lived, and all you have to do is remove the floppy from the drive and restart your system. □

information that WinXP absolutely needs to run properly.

In a nutshell, a DLL (dynamic-link library) is a file containing information that another program (this time, it is Windows itself) needs to run properly. For example, a DLL file may contain additional functions that another program's code may call as the program runs. Programmers love DLLs because they let them simply call functions from within their code instead of having to code them from scratch. This particular DLL provides functionality related to the WinXP API (Application Programming Interface). Bottom line is, USER32.DLL is very important to WinXP.

**Solution:** The solution to this problem is to restore the missing or corrupted files to your

restore the required files. First, how to restore the drivers:

1. Type **cd windows\system32\drivers** at the command prompt to open that directory.
2. Type **ren DRIVER.SYS DRIVER.BAK** to rename the corrupted copy of the driver (if the problem is a corrupted driver; if the driver is just missing, skip this step and proceed to step 3).
3. Type **copy [CD drive letter]:\i386 DRIVER.SYS** to copy a fresh, functional copy of the driver from your WinXP installation CD to the WINDOWS\SYSTEM32\Drivers directory.
4. Type **exit** and then press the ENTER key to exit the Recovery Console.

Second, let's restore USER32.DLL:

1. Browse to the required directory by typing **cd [drive letter]:\windows\system32** at the command prompt.
2. If you have a copy of USER32.DLL in the windows\system32 directory that you suspect is corrupt, type **ren USER32.DLL USER32.BAK** to rename the file. If the file is missing, skip to step 3.
3. Type **expand [CD drive letter]:\i386\USER32.DLL\_ [drive letter]:\windows\system32** to copy the new USER32.DLL file to your Windows directory.

**Error Message:** "The file C:\windows\system32\c\_1252.nls is missing or corrupt."

**Translation:** As WinXP error messages go, this is one of the most straightforward. WinXP is simply reporting that the strangely named file c\_1252.nls has gone AWOL.

**Solution:** The strategy to solve this problem is the same as in the "STOP: 0xc000026C [Unable to load device driver] Driver" error: Restore a fresh copy of the missing or

Non-System disk or disk error  
Replace and strike any key when ready

**This seemingly terrifying message is actually quite common, and most of the time, it has a very simple solution.**

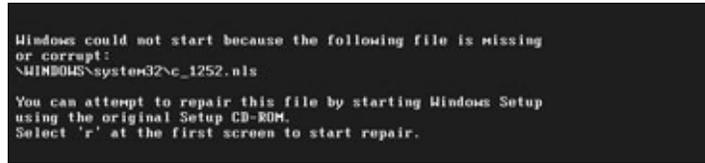
system. This is done using WinXP's Recovery Console. In the solution to the last message, we discussed how to access the Recovery Console.

At the Recovery Console's command prompt, type the following commands to

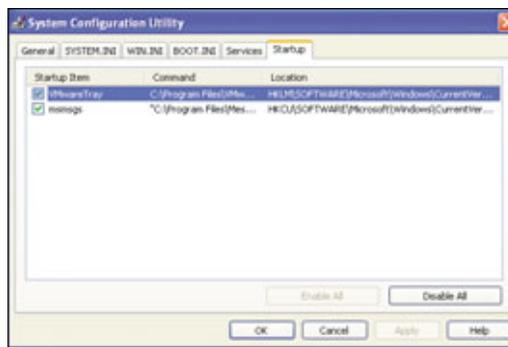
corrupted file from your WinXP installation CD. Again, you must use the Recovery Console to do this. Once in the Recovery Console's command prompt, type the following commands:

*This problem illustrates a tried-and-true principle of Windows computing:  
When upgrading to a new Windows version, always perform a “clean” upgrade.*

- `cd C:\windows\system32`—opens the system32 folder in C:\Windows; this is the default location of the file.
- `ren c_1252.nls c_1252.bak`—The approach here is to give the existing copy of the file an extension that disables it by preventing WinXP from finding the corrupted file at startup. If the file is missing, this step is not necessary.
- `expand [CD drive letter]:\i386\USER32.DL_ [drive letter]:\windows\system32`—This copies a pristine copy of the file from the WinXP installation CD to the WINDOWS/System32 folder.
- Do as usual to exit the Recovery Console.



**As this error message advises, the key to solving this problem is using the Recovery Console to copy a functional version of this file to the appropriate directory.**



**Use the Startup tab in Windows XP's System Configuration Utility to view the programs that automatically start with Windows and, if need be, to prevent unnecessary or troublesome programs from starting.**

**Error Message:** “Devices or applications disabled. CD Recording software will cause Windows to become unstable. Windows has prevented these drivers from loading. Click here for more details.”

**Translation:** WinXP doesn't get along very well with older versions of Easy CD Creator software. If you upgraded to WinXP and didn't remove your older copy of Easy CD Creator software, WinXP detects this incompatible program and lets you know about it with the above message.

**Solution:** The solution here is to purge your system of all traces of the program. This problem illustrates a tried-and-true principle of Windows computing: When upgrading to a new Windows version, always perform a “clean” upgrade. In other words, format your hard drive to wipe it clean and then upgrade.

The first step is removing Easy CD Creator. Click Start and Control Panel and double-click the Add or Remove Programs icon. Locate the Easy CD Creator program on the list and click Remove.

The next step is to disable any drivers Easy CD Creator copied to your system. Click Start, Search, and All Files And Folders. Type `cdr*.sys` in the All Or Part Of The File Name box, select your C: drive in the Look In dropdown menu, and click Search. If Search finds

any files called `Cdr4_2K.sys` or `Cdralw2k.sys`, right-click the file names, click Rename, and change each file name to `Cd*.old`.

Finally, you must remove any keys in your Windows Registry that reference Easy CD Creator files. Keep in mind, modifying the Registry is dangerous, so tread with care. A misstep here and you can easily end up with a very sick system. OK, on with our Registry surgery: Click Start and Run, type `regedit` in the Open textbox, and click OK.

In the Registry editor, find the following key and click it to highlight it:

HKEY\_LOCAL\_MACHINE\SYSTEM\CURRENTCONTROLSET\CONTROL\CLASS\{4D36E965-E325-11CE-BFC1-08002BE10318}

If you see a value called `UpperFilters` on the Registry editor's right pane, delete it by right-clicking it and clicking Delete. Click Yes to confirm.

Likewise, if you see a `LowerFilters` value, use the same procedure to delete it.

Now, delete the following Registry keys. To delete a key, locate it, right-click, and click

Delete. Click Yes to confirm the deletion:

HKEY\_LOCAL\_MACHINE\SYSTEM\CURRENTCONTROLSET\SERVICES\Cdr4\_2K  
HKEY\_LOCAL\_MACHINE\SYSTEM\CURRENTCONTROLSET\SERVICES\Cdralw2k  
HKEY\_LOCAL\_MACHINE\SYSTEM\CURRENTCONTROLSET\SERVICES\Cdufd  
HKEY\_LOCAL\_MACHINE\SYSTEM\CURRENTCONTROLSET\SERVICES\UdfReadr

**Error Message:** “Hpppt.exe unable to locate component. This application failed because WNASPI32.DLL was not found.”

**Translation:** The message suggests that Hpppt.exe is executed at Windows startup, but because it cannot find the auxiliary file it needs, the program reports the error message and interrupts the Windows startup process.

Hpppt.exe is HP's parallel port test utility, a program that verifies whether or not your parallel port is set to ECP (Extended Capabilities Port) or EPP (Enhanced Parallel Port) mode, two parallel-port configurations that support bi-directional communications between your parallel port and whatever device is connected to it. Many devices that connect to your parallel port, such as scanners and printers, require bi-directional communication to allow a software utility that controls the device to get information about the status of the printer or scanner.

**Solution:** As you might guess, the key is to prevent the Hpppt.exe program from launching when Windows starts. To do this, remove Hpppt.exe from the Startup list of programs by clicking Start and Run and typing `msconfig` in the Open textbox. Click OK to launch msconfig (the System Configuration Utility) and click the Startup tab. Find the HP Parallel Port Test checkbox and click it. This clears the checkbox and removes Hpppt.exe from the startup list of programs. Click Apply and OK and restart your computer.

**Error Message:** “Hard disk drive failure”

**Translation:** This one is self-explanatory: WinXP is reporting a problem with your hard drive.

**Solution:** This is a hardware problem, so the solution is to determine whether your hard drive is permanently damaged or whether the hard drive information in your system’s BIOS is incorrect. The first step is to reboot the computer, enter your computer’s BIOS Setup program, and verify the settings for your hard

drive. If everything looks OK in the BIOS, you may have a damaged hard drive. In this case, we hope that you have backed up your data because most likely the data on the damaged drive may be very difficult, if not impossible, to recover.

**Error Message:** “Fatal System Error: 0x000000a0 (0x00000002, 0x00000000, 0x00000000)”

**Translation:** This one is fairly straightforward: WinXP reports a serious crash along with a memory address. The question is, what exactly is this telling you? Reporting a hexadecimal memory address without further detail is no help at all in deciphering this message.

**Solution:** According to Microsoft, this error occurs if you have a Microsoft Sidewinder Gamepad Pro USB device, and you unplug it during the boot process. The solution? Simple, really. Don’t unplug your Gamepad Pro during startup.

**Error Message:** “Windows could not start because the following file is missing or corrupt: \Windows\System32\Drivers\Isapnp.sys”

**Translation:** This is another one of those messages that points directly to the culprit. ISAPNP.SYS is a device driver WinXP needs to function properly. The message is telling you this file is either missing or damaged.

Most WinXP files with a \*.SYS extension are Windows device drivers that reside in the C:\WINDOWS\SYSTEM32\DRIVERS folder. This folder is one of the most important in your entire hard drive. If any of these files go AWOL or are damaged, WinXP will report serious errors and you won’t be able to get your system started until you restore a functional device driver.

**Solution:** Start the Recovery Console (we’ve already discussed how to start the WinXP Recovery Console). If the ISAPNP.SYS file is still in your C:\WINDOWS\SYSTEM32\DRIVERS folder, the driver is corrupt. Rename the existing file and copy a new version from your WinXP installation CD. If the file is missing, then all you need to do is copy the file from your WinXP CD to the C:\WINDOWS\SYSTEM32\DRIVERS folder by typing the expand command: `expand [CD drive letter]:\i386\isapnp.sys C:\windows\system32\drivers\isapnp.sys`.

**Error Message:** “STOP: 0x0000009F DRIVER\_POWER\_STATE\_FAILURE”

**Translation:** This error can occur when you’re starting up the computer from a standby or hibernation state or when you attempt to shut down your computer. The message is telling you that a device driver in your system—it doesn’t specify which one—is not behaving properly when WinXP changes power states.

**Solution:** According to Microsoft, you must find out if any device drivers in your system are not digitally signed by Microsoft. WinXP’s developers knew that a huge reason for Windows problems in previous versions was the use of device drivers that did not work well with Windows, especially with its power-management features. Many times, hardware and software developers did not take the time to properly test their device drivers, resulting in incompatibility problems with Windows.

Microsoft’s solution was to digitally sign device drivers that were tested and verified to work well with Windows. Obviously, not every developer is going to have its driver tested. So, many third-party hardware devices and applications have unsigned device drivers. These unsigned drivers may be the root cause of the specific problem described here.

To find out which device drivers in your system are not digitally signed, run a tool called sigverif.exe (File Signature Verification utility) by clicking Start and Run and typing `sigverif.exe` in the Open textbox. Click OK to launch sigverif.exe. At the sigverif startup window, click the Advanced button and click the Look For Other Files That Are Not Digitally Signed checkbox. Now, click the Browse button, go to the C:\WINDOWS\SYSTEM32\DRIVERS folder, and click OK. Click OK again to return to the initial screen and click Start to begin the search. The tool’s output is a list of device drivers that are not digitally signed.

Now, the task is to disable each driver one by one to verify whether it is the root cause of the problem. There are three ways to disable a driver. First, right-click My Computer, click the Hardware tab, and click the Device Manager button. Scroll down the list until you encounter the hardware device that the driver controls. Right-click the device’s entry in the list and click Disable. Click OK to accept your changes.

Second, if the driver in question is associated with a software application, remove the program. Do this by going to Control Panel and using Add/Remove Programs to uninstall the application.

## Most Hilarious Error Message

We searched and searched and finally found what we think is the most hilarious Windows error message we’ve seen. Of course, you might not find this so funny if it’s happening to you. The message is:

“Windows could not start because of an error in the software”

Really? And all this time we thought Windows crashed just to spite us. The guy in charge of error messages must have been in a hurry to get home the day this one got written because it’s painfully obvious that very little thought went into crafting this pearl of wisdom.

But seriously, this error occurs when Windows XP or Windows 2000 program files are missing or corrupted. To correct the error, you must perform an in-place upgrade using your WinXP installation CD.

To perform an in-place upgrade, boot your computer from your WinXP installation CD. At the Welcome To Setup screen, press ENTER to enter the WinXP Setup program. On the next screen, press F8 to accept the Windows licensing agreement. In the next screen, you should only see one WinXP installation listed; to repair it, press r. The process starts automatically, so follow the instructions to complete it and perform the required in-place upgrade. All this does is reinstall a fresh copy of Windows over your existing (and malfunctioning) copy. Microsoft’s error message might not tell you what specific software error is causing the problem, but this shotgun approach is designed to cure it. □

# This is another one of those messages reporting that a specific file—*Hal.dll* in this case—is missing or damaged.

The third and final way to disable a driver is to browse to the Drivers folder in C:\WINDOWS\System32 and simply rename the device driver file.

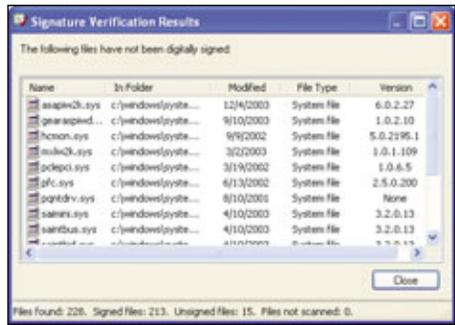
Once you disable the driver, try to duplicate the error by putting your computer into Hibernate or Standby mode and attempting to wake the computer from its low-power mode. If the computer restarts normally, you've isolated the problem; if the error message still occurs, you've got some more wayward-driver hunting to do.

**Error Message:** "Windows cannot find openme.exe"

**Translation:** This one is straightforward: Windows is looking for a file called OPENME.EXE that is configured via the Registry to start automatically.

**Solution:** OPENME.EXE is an executable file containing the W32.DSS Trojan horse virus. The file is typically attached to an unsolicited email; if you launch the executable, you infect your computer with this Trojan horse, and the program also adds an entry in your Windows Registry. If your antivirus software is working properly, it will remove the virus and the program from your computer, but, in some cases, it won't remove the reference to the file in your Registry.

To get rid of the Registry entry causing this startup problem, click Start and Run and type `regedit` at the Open textbox. In the Registry editor, navigate to `HKEY_LOCAL_MACHINE\SOFTWARE\MICROSOFT\WINDOWSNT\CURRENTVERSION\Winlogon` and click the Winlogon key to select it. In the Registry editor's right pane, find the name Shell and look at its Data value. If the Data column contains the string "explorer.exe openme.exe," right-click Shell, click Modify, and delete the openme.exe



The Windows Signature Verification utility is an excellent tool for determining which device drivers are not digitally signed by Microsoft.

"Windows could not start because the following file is missing or corrupt. C:\Windows\system32\hal.dll. Please re-install a copy of the above file."

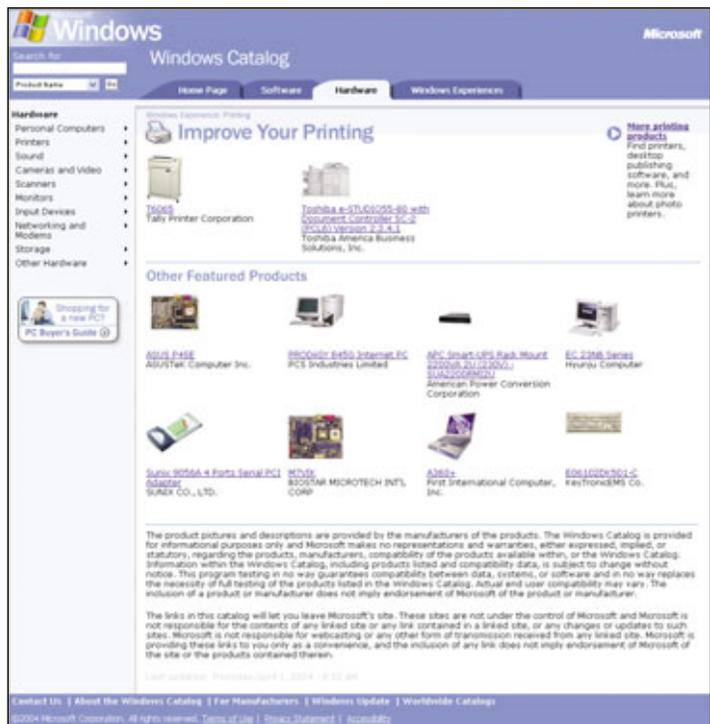
**Translation:** This is another one of those messages reporting that a specific file—Hal.dll in this case—is missing or damaged. Hal.dll is the Windows Hardware Abstraction Layer DLL, a set of programming tools that shields Windows from having to know intimate details about every piece of hardware it controls. So this DLL is critical to Windows' interaction with device drivers in your system.

**Solution:** The solution, unfortunately, is to begin the setup process all over again. Restart the computer, select Cancel Windows XP Setup in Windows Advanced Options to uninstall WinXP, and then run Setup again.

## SHUTDOWN ERRORS

**Error Message:** "Your system is low on virtual memory. Windows is increasing the size of your virtual memory paging file. During this process memory requested for some applications may be denied."

**Translation:** This message is telling you that an unruly application is hogging inordinate amounts of virtual memory. Virtual memory is space on your hard drive that Windows reserves as "pseudo-memory." When you're running low on system RAM, Windows swaps



Check out Microsoft's HCL (Hardware Compatibility List) catalog to see which of your installed hardware devices or software programs are deemed compatible with Windows XP, especially if you are about to upgrade to WinXP.

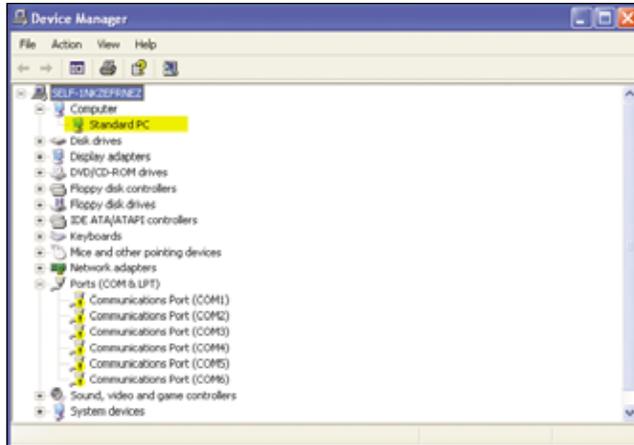
part of the string. Restart the computer; the issue should now be resolved.

**Error Message:** When you complete an upgrade to WinXP from Win98 or WinMe and Setup restarts your computer, you get the following message:

memory usage to a designated region in your hard drive. That is why, especially if your system has the minimal memory requirements to run WinXP, your hard drive starts to audibly thrash when your system memory is used up and WinXP has to go to virtual memory. According to Microsoft, this problem

occurs when Symantec's Norton Personal Firewall is installed and configured to run at Windows startup.

**Solution:** According to Microsoft, the solution to this problem is to configure the Norton Personal Firewall to start from the Startup folder and not from the Registry. To disable the application's Registry startup, click Start and Run, type `msconfig` in the Open textbox, and click OK. This launches the



**If the entry under Computer in Device Manager is Standard PC, your computer is not ACPI-compliant or Windows is not reporting this information correctly.**

mentioned System Configuration Utility; now click the Startup tab and click the checkbox to the left of the IAMAPP.EXE entry in the Startup Item list to uncheck it. Click OK to accept your changes.

To add IAMAPP.EXE to your Startup folder, browse to the Startup folder at `C:\DOCUMENTS AND SETTINGS\ALL USERS\START MENU\PROGRAMS\StartUp`. Click File in the folder's window, click New, and click Shortcut to launch the Create Shortcut window. At this window, click the Browse button and navigate to `C:\PROGRAM FILES\NORTON PERSONAL FIREWALL\Iamapp.exe` (if you have Norton Internet Security, the path is `C:\PROGRAM FILES\NORTON INTERNET SECURITY\Iamapp.exe`). Click OK and click Next; type a name for the shortcut and click the Finish button to create the shortcut.

**Error Message:** "Saving your settings."

**Translation:** This one occurs as WinXP becomes nonresponsive during a shutdown. The computer hangs, and you are unable to restart it.

**Solution:** The root cause of this one is that a Microsoft IME (Input Method Editor) is

installed and set up for use at the Welcome screen but is not functioning properly. And what, you might ask, is an IME? IME is a program in Windows designed to let you enter complex, foreign language characters (such as Far East languages such as Korean or Chinese) using a standard keyboard.

WinXP already comes with built-in language support for Chinese, Japanese, and Korean, so you don't need to download any of the IMEs to work with one of those Far East languages in WinXP. To set up the various multilanguage options in WinXP, double-click the Regional and Language Options icon in Control Panel.

**Error Message:** Here, you can't see the message; instead, you briefly see a blue screen and then Windows automatically restarts.

**Translation:** The reason Windows is quickly restarting when the error occurs, without giving

you enough time to see the error message, is that the system is configured to automatically restart when a system error occurs. When a STOP error occurs, Windows restarts so rapidly you have no time to look at the message. This behavior is quite disconcerting because you can't get the error message information you desperately need to troubleshoot the problem.

**Solution:** Before any troubleshooting effort can begin, you need to configure WinXP so it won't automatically restart when the error occurs. Right-click My Computer, click Properties, and click the Advanced tab. Click the Settings button in the Startup and Recovery option groups and click the Automatically Restart checkbox in the System Failure option group to clear it. Click OK to accept your changes.

WinXP now displays the error message, and you can troubleshoot the problem.

**Error Message:** "STOP: 0x000000D1, (0x0000002b, 0x00000002, 0x00000000, 0xEEEE1b01) IRQL\_NOT\_LESS\_OR\_EQUAL Kbdclass.sys" or "STOP: 0x0000007E (0xc0000005, 0xFC7F1945,

## Most Unusual Error Message

This one is also a tough category to award; we went outside the Microsoft Knowledge Base and found this gem (the message occurs when you install Laplink Software's Laplink or PCSync software):

"\_INS0432.\_MP - Entry Point Not Found - The procedure entry point SUnMapLS\_IP\_EBP\_16 could not be located in the dynamic link library KERNEL32.dll"

Wow! This one is bound to strike fear in the hearts of even the hardest PC veterans. Laplink recommends various possible remedies for this issue, including updating your video drivers to the latest version, removing temporary files from your computer and attempting the installation again, downloading and installing the latest Microsoft Java Virtual Machine, and finally, ensuring that all the latest patches and service packs are installed.

We realize this one isn't related to a startup or shutdown, but we simply couldn't pass this one up.

0xFC9589B0, 0xFC9586B0) Kbdclass.sys-address Fc7F1945 base at FC7F1000, Datestamp 3b7d82f3"

**Translation:** These two separate errors are very similar, so we will discuss them together. As you can see, the device driver file Kbdclass.sys is triggering an error; the dense hexadecimal nomenclature you see here is the memory address affected by the error.

**Solution:** The problem occurs with Logitech equipment, such as a mouse or keyboard, which uses a driver (kbdclass.sys) that's incompatible with WinXP. Specifically, the second message is triggered when you are using version 1.5 or earlier of Logitech's iTouch software, used with the company's Cordless Freedom keyboards. The first message affects computers using Logitech mice with Logitech's Mouseware software versions 9.10 and 9.24.

The solution is simple: Browse to the Logitech Web site and get the very latest updates for your device's software. Go to

www.logitech.com for instructions on removing the old software and upgrading to the latest version.

These two error messages illustrate a very common WinXP problem that you can easily solve by acting proactively *before* you upgrade to WinXP. The first step is to take a look at Microsoft's Hardware Compatibility List ([www.microsoft.com/hcl](http://www.microsoft.com/hcl)) and check to see if your hardware is included in the list. This list is a comprehensive catalog of software and hardware tested and approved to work with WinXP. At the very least, you should visit the manufacturer for every piece of hardware you own and make sure they have published device drivers written specifically to achieve compatibility with WinXP. Doing this prep work before upgrading is time well spent and will most likely prevent annoying problems later on.

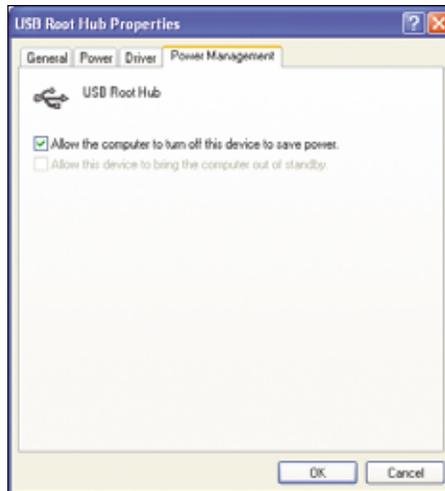
**Error message:** When you attempt to shut down your computer, WinXP hangs. After awhile, a dialog box launches stating: "Msmgs.exe not responding" or "ActiveMovie not responding"

**Translation:** According to Microsoft, this doesn't occur very often and is caused by an intermittent problem (bug) with Windows Messenger.

**Solution:** To resolve this, upgrade to the very latest WinXP Service Pack.

This simple-to-solve problem illustrates a tried-and-true principle in Windows computing: Always keep your system up-to-date with the latest patches, upgrades, and service packs. This keeps your system secure and prevents these documented bugs from wreaking havoc with your computer. With WinXP's automatic update feature, it's very easy to keep your system up-to-date.

To use WinXP's automatic update feature, right-click My Computer, click Properties, and then click the Automatic Updates tab. You can configure Windows to tell you before downloading and installing an update or you can configure it to download updates automatically and then prompt you before installing them. The most automatic setting is



**You can set up your USB (Universal Serial Bus) hub's power management options in the USB Root Hub Properties dialog box's Power Management tab.**

the third option: Here, WinXP downloads and installs the updates automatically without any interference from you. We prefer the second setting, which lets you review the details about an update and, if you choose to do so, postpone the install to a later date. This is convenient when you're busy working and don't have time to install an update and restart your computer.

**Error Message:** When you attempt to shut down your computer, the system hangs and displays the following message: "It is now safe to turn off your computer"

**Translation:** WinXP is reporting a problem with your computer's power-management settings. For your computer's APM (Advanced Power Management) feature to work correctly, the computer must support the ACPI (Advanced Configuration and Power Interface) standard, and the settings must be correct in both WinXP and your system BIOS.

**Solution:** First, verify whether your PC is ACPI-compliant. To do this, right-click My Computer, click Properties, click the Hardware tab in the System Properties window, and click the Device Manager button. Click

the plus sign (+) to the left of the Computer entry on the list to expand the branch. If the computer is listed as Advanced Configuration And Power Interface (ACPI) PC, your computer is ACPI-compliant. If the computer is listed as Standard PC, then either your computer is not ACPI-compliant or WinXP is not reporting your computer's ACPI status correctly.

If your computer is ACPI-compliant and you are experiencing this issue, restart your computer and verify the power-management settings in your system BIOS. It's possible that this error is caused by a BIOS with incorrectly entered power-management settings.

(NOTE: The BIOS is a critical part of your system; consult with your PC's manufacturer and plan your approach very carefully before messing around in here. A misstep could render your computer unbootable.)

Microsoft advises that if your computer is not ACPI-compliant, you may be able to resolve this issue by installing the NT Apm/Legacy Interface Device. As you did before, launch the Device Manager. In the Device Manager window, click View and click the Show Hidden Devices entry. Click the plus sign to the left of the Non-Plug And Play Drivers entry in the devices list; if Microsoft ACPI Driver is not listed, click the plus sign to the left of the NT Apm/Legacy Support entry to expand this branch. The NT Apm/Legacy Interface Node entry should have a red X next to it indicating that the driver is disabled. Right-click the NT Apm/Legacy Interface Node entry and click the Enable Device button. Click OK to accept the change, exit the Device Manager, and click OK in the System Properties window to accept all your changes.

If you expand the Non-Plug And Play Drivers' branch in the Devices list and Microsoft ACPI Driver is listed, you must disable this driver before installing the NT Apm/Legacy Interface Device. To disable the ACPI driver, right-click its entry in the list, click Disable, exit the Device Manager, click OK in the System Properties window, and restart your computer.

**These two error messages illustrate a very common WinXP problem that you can easily solve by acting proactively *before* you upgrade to WinXP.**

# The Selective-Suspend feature

allows Windows to turn a device

(a USB mouse or keyboard, for example)

off to conserve power. This is especially useful in  
**notebook computers,**

where conserving battery power is a primary goal.

## Most Confusing Error Message

Windows error messages are confusing to begin with, so awarding the “Most Confusing Error Message” crown was a difficult task. We selected the following message because it requires you to go on a Windows scavenger hunt for information. The fun begins during startup when Windows displays:

“At least one service or driver failed during system startup. Use Event Viewer to examine the event log for details.”

What could have been a clear, straightforward message quickly slides into a confusing ordeal. It's logical to ask why Microsoft can't simply report the specific service or driver that failed. But, let's follow Microsoft's logic on this one.

The next step is to launch the Event Viewer and see what further information is displayed. To start the Event Viewer, click Start and Control Panel and double-click the Administrative Tools icon (this is assuming your Control Panel is in Classic view). If your Control

Panel is in Category View (Windows XP's default), click Performance and Maintenance and then click Administrative Tools. Double-click the Event Viewer shortcut; in Event Viewer's right pane, look for an Error entry with Event ID 7024. The description for this event is The Messenger Service Terminated With Service-Specific Error 2270. Now, the task is figuring out exactly what “Error 2270” is. For this, run a utility called net helpmsg.

To run net helpmsg, click Start and Run and type **command** in the Open textbox. At the command prompt, type **net helpmsg** followed by the message number. In this case, type **net helpmsg 2270** and press ENTER. The following message is displayed:

“The computer name could not be added as a message alias. The name may already exist on the network.

**EXPLANATION**  
A software error occurred.  
**ACTION**

Contact technical support.”

This is the end of the trail, and if you're like everyone else out there, everything should now be clear as mud. Microsoft's Knowledge Base advises that this message is triggered when your computer's name on a network is not unique. Microsoft's Messenger service monitors network messages and uses a set of aliases based on data about network computers to determine a message's intended recipient. One of the criteria for the aliases is a computer's name, so if the computer name is not unique, Messenger cannot use the alias and the service fails to start.

To resolve this problem, rename the computer so its name is unique. Right-click My Computer, click Properties, click the Computer Name tab, and click the Change button. Type a unique name and click OK. Then click OK again to accept your changes and restart your computer.

Whew . . . you still with us?

Now you have to add the NT Apm/Legacy Interface Device support. Go to Control Panel, double-click the Add Hardware icon, and click Next to launch the Add Hardware wizard. The wizard will automatically search your system for recently added hardware. When the wizard finishes searching, click the Yes, I Have Already Connected The Hardware radio button and click Next. Scroll to the bottom of the Installed Hardware list, click the Add A New Hardware Device entry to select it, and click Next. In the next dialog box, click the Install The Hardware That I Manually Select From A List (Advanced) radio button and click Next. In the Common Hardware Types list box, find the NT Apm/Legacy Support entry, click to select it, and click the Next button. In the next dialog box, click the NT Apm/Legacy Interface Node entry in the Model list box (it should be the only one on the list) and click Next to install the driver. Click the Finish button to complete the process.

**Error Message:** No message here, just a symptom: After connecting a USB device, your computer hangs when you try to shut it down.

**Solution:** The root cause of this problem is the fact that a USB device is configured for selective suspend, but the device doesn't support it. The Selective-Suspend feature allows Windows to turn a device (a USB mouse or keyboard, for example) off to conserve power. This is especially useful in notebook computers, where conserving battery power is a primary goal. But for this feature to work, of course, the device must support it.

To resolve the problem, right-click My Computer, click Properties, and then click the Hardware tab. Click the Device Manager button and scroll down the devices list until you find the Universal Serial Bus Controllers entry.

Click the plus sign to the left of the entry to expand it, right-click the USB Root Hub entry, and click Properties. Click the Power Management tab on the USB Root Hub Properties window and click the Allow The Computer To Turn Off This Device To Save Power checkbox to clear it.

Click OK to accept your changes and then exit the Device Manager. 

by Sixto Ortiz Jr.

# Windows XP Hardware Errors

## Keep Windows & Devices In Sync

**W**indows XP is much more competent than previous versions of Windows at dealing with the wide variety of hardware devices it needs to communicate with. Even so, there are times when XP hits a stumbling block and calls for help by issuing one of its cryptic error messages. Understanding the error message and determining which device is causing the problem is easier than ever, but resolving the problem can still be a very complex process.

### STOP ERRORS

**Error Message:** WinXP Generates a “STOP: 0xA0” Error Message During Hibernation

**Translation:** If you have an IDE (Integrated Drive Electronics) hard drive, it may time out during the hibernation process. This is because the ATAPI driver does not wait long enough for the primary drive to become available.

**Solution:** This is resolved in the latest service pack for WinXP. Go to [www.windowsupdate.com](http://www.windowsupdate.com) and download any service packs that are not installed on your computer.

**Error Message:** “STOP: Xxxxxxxx1”

**Translation:** When you shut down your computer that has one or more USB (Universal Serial Bus) devices attached to it, you may receive this error message. This problem occurs because of bugs in the USB driver software.

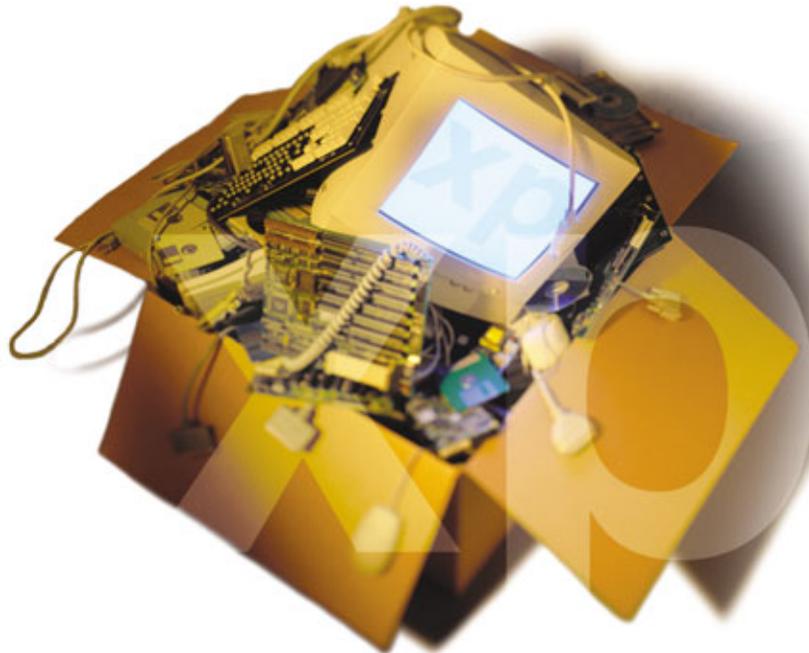
**Solution:** This problem has been resolved in Service Pack 1. Download and install all available service packs for WinXP, available at [www.windowsupdate.com](http://www.windowsupdate.com).

**Error Message:** “STOP: 0x000001E (0x80000003, 0xBF0304, 0x0000000, 0x0000001) [bugcheck code] ([1] [2] [3] [4])”

**Translation:** When you run WinXP Setup, you may receive an error message similar to this one.

This can show up if you restart your computer during or after the Windows Setup process, if any of these conditions exist:

- There is insufficient disk space on the drive on which you installed Windows.
- There is an outdated or incompatible third-party driver (or drivers) installed on your computer—a faulty video driver, for example.
- There are system BIOS (Basic Input/Output System) incompatibilities.



**Solution:** Depending on which of the conditions exists, use one of these procedures.

• **Free Up Hard Drive Space**

Make sure the drive you are installing Windows on has enough free space. You may need to delete some files or install to a different drive.

• **Disable or Remove the Third-Party Driver**

If the STOP 0x1E error message lists a driver by name, disable or remove it by clicking Start, My Computer, and then Control Panel. Then double-click System, Hardware, and Device Manager. From the list, find the item “DVD/CD-ROM drive and click the plus sign (+) to expand

the list. If that fixes the problem, get in touch with the manufacturer of the component or check for an updated driver on their Web site.

• **Upgrade Your System BIOS**

Check with the manufacturer of your computer or the manufacturer of your computer’s motherboard for availability and procedures for updating the system’s BIOS.

**Error Message:** “STOP: C0000221 Unknown Hard Error” or “STOP: C0000221 STATUS\_IMAGE\_CHECKSUM\_MISMATCH”

**Translation:** These error messages are all related.

STOP: C0000221 unknown hard error  
Path\File\_name

-or-

STOP: 0xC0000221 unknown hard error  
C:\Winnt\System32\Ntdll.dll (or another specific file or driver)

-or-

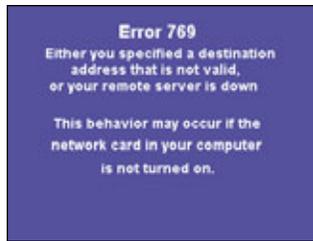
STOP: 0xC0000221 STATUS\_IMAGE\_CHECKSUM\_MISMATCH Path\File\_name

You will see one of these if the file named in the error message is corrupted. Windows always checks a series of files on startup, including:

- All driver files.
- All DLLs (dynamic-link libraries), including User, GDI (Graphics Device Interface), Shell, Kernel, Ntdll, Crt.dll, etc.

You may also see this if you installed the wrong driver for a particular component.

**Solution:** To fix this, either get a new copy of the corrupted file and copy it to your system or reinstall Windows. If you continue to receive any of these error messages after you reinstall Windows, it's possible you may have a hardware or network problem.



**A simple numeric error with a long explanation lets you know that you aren't connected to the network.**

**Error Message:** A "STOP: 0xc000026C" or "STOP: 0xc0000221 Unable to Load Device Driver"

**Translation:** When WinXP starts up, you may get one of the following error messages:

STOP: 0xc000026C [Unable to load device driver] XXXXXXXX

-or-

STOP: 0xc0000221 [Unable to load device driver] XXXXXXXX

-or-

STOP: 0xc0000221. Bad image check sum, the image user32.dll is possibly corrupted. The header check sum does not match the computed check sum.

XXXXXXXX is the name of the device driver file. This may happen if one of these conditions exists:

- A device driver file (.sys) is missing or damaged.
- The missing or damaged file is probably the driver file that the error message mentions.
- The User32.dll file may be missing or damaged.

**Solution:** Use the appropriate fix depending on the particular problem above:

**• For a Missing or Damaged Driver File**

Use Recovery Console to replace the missing or damaged driver file. (See the sidebar "Using The Recovery Console.")

At the command prompt, type the following command, and then press ENTER:

```
cd windows\system32\drivers
```

Rename the damaged driver file by typing the following command, and then press ENTER:

```
ren XXXXXXXX.sys XXXXXXXX.bak, where XXXXXXXX is the name of the damaged driver file.
```

To copy the driver from the WinXP CD-ROM to the Drivers folder, type the following command, and then press ENTER:

copy D:\i386 XXXXXXXX, where D: is the drive letter for the drive that contains the WinXP Installation CD-ROM.

Type exit, press the ENTER key, and then restart your computer.

**• For a Missing or Damaged User32.dll File**

Use Recovery Console to replace the corrupted or damaged User32.dll file,

then, if needed, perform an in-place upgrade (also called a repair install) of WinXP. To do so, follow these steps:

Insert the WinXP CD-ROM into the CD-ROM or DVD-ROM drive and then restart the computer. Select any options that are required to start the computer from the CD-ROM or DVD-ROM drive if you are prompted to do so.

Type exit, press ENTER, and then restart the computer. (NOTE: If WinXP still won't boot, you may have to perform an in-place upgrade [also called a repair install]).

**Error Message:** "STOP: 0x000009F DRIVER\_POWER\_STATE\_FAILURE"

**Translation:** This error appears when drivers don't handle power state transition requests properly, usually during shutting down, suspending or resuming from Standby mode, or suspending or resuming from hibernation.

**Solution:** To fix this error, update or remove the driver that's causing the problem. This error can occur because of a device driver, but it can also occur because of a file system filter driver such as an antivirus, remote control, or backup program.

To isolate the driver that is causing the error, follow these steps:

**Most Unusual Error Message**

**Error Message:** "THREAD\_STUCK\_IN\_DEVICE\_DRIVER"

**Translation:** This is a STOP error that pertains specifically to an NVIDIA video card. The actual message is "STOP: 0x000000EA THREAD\_STUCK\_IN\_DEVICE\_DRIVER." It shows up if you are using the Nv4.sys video driver to support the NVIDIA card. Fortunately, getting an updated driver from the NVIDIA site ([www.nvidia.com](http://www.nvidia.com)) will extract the string and let your video device work properly.



When the "Welcome to Setup" screen appears, press R to start Recovery Console. (See the sidebar "Using The Recovery Console.")

At the command prompt, type the following command, and then press ENTER:

```
cd windows\system32
```

To rename the User32.dll file, type the following command, and then press ENTER:

```
ren user32.dll user32.bak
```

To expand a new copy of the User32.dll file from the WinXP CD-ROM to the System32 folder, type the following command, and then press ENTER:

```
expand D:\i386\user32.dl_ c:\windows\system32\user32.dll, where D: is the drive letter for the drive that contains the WinXP CD-ROM, and c:\windows is the drive letter and folder where WinXP is installed.
```

- Check to see if your computer and all the installed devices are listed on the HCL (Hardware Compatibility List) located at [www.microsoft.com/hcl](http://www.microsoft.com/hcl).
- Check for with the hardware manufacturer for updates that may be available for your hardware (updates are usually available on the hardware manufacturers' Web sites).
- Update any software that uses filter drivers such as antivirus, remote control, and backup software.
- Remove any noncritical devices and software and see if the error appears after they are removed. If the error returns, you've found your problem.
- Install Windows in a new folder. Add any drivers or components one at a time, and restart the computer after each addition.

# Microsoft has recommended

*in the past that caching on IDE drives be turned off on programs with somewhat critical data stored on the drive or for situations that allow a slight drop in overall speed.*

**Error Message:** “STOP: XxxxxxxED UNMOUNTABLE\_BOOT\_VOLUME”

**Translation:** When you first restart your computer during the upgrade to WinXP or when you start WinXP, you may receive this error.

(NOTE: If you receive this error message when you restart the computer for the first time during an upgrade to WinXP, the original operating system is still functional.)

This can happen if the file system is damaged and cannot be mounted

**Solution:** If the second parameter (XXxxxxxx) of the Stop error is 0xC0000032, then the file system is damaged. You will need to restart the computer to the Recovery Console and then use the `chkdsk /r` command to repair the file system. When that's done, check the drive to locate the cause of the file system damage. To use the Recovery Console, see the sidebar. At the Recovery Console command prompt, change to the drive where Windows is installed, type `chkdsk /r`, and then press ENTER. At the command prompt, type `exit` and then press ENTER. The computer will restart. If this doesn't fix the problem, repeat it and use the `fixboot` command in step 5 instead of the `chkdsk /r` command.

**Error Message:** “STOP: XxxxxxxED” (on OEM installations of WinXP)

**Translation:** When you use volumes that use the NTFS (NT file system) on IDE drives with caching enabled, you may receive this error message during startup. The normal recovery process in such a case is to run the `chkdsk /r` command from Recovery Console and then continue. On OEM versions of WinXP, the Recovery Console may not be accessible. If this fix has not been included in the OEM build of WinXP, you may not be able to enter Recovery Console and run the `chkdsk /r` command for recovery. Because of the write-pattern optimization in IDE drives, the

caching routines sometimes write data out of order to keep drive write speeds at the fastest possible level, depending on where data is located on the drive. This opens a timing window where the NTFS file system could have critical tables damaged if a write is not finished. Microsoft has recommended in the past that caching on IDE drives be turned off on programs with somewhat critical data that is stored on the drive or for situations that allow a slight drop in overall speed. Programs with critical data may need to use SCSI drives, which have better control of data transactions.

**Solution:** Install the latest service pack(s) for WinXP.

(NOTE: If you are not able to log on to the Recovery Console by pressing R when the boot screen appears, see error “The Password Is Not Valid” for details on installing the Recovery Console.)

## DEVICE ERRORS

**Error Message:** “Windows cannot start this hardware device because its configuration information (in the Registry) is incomplete or damaged. (Code 19)”

**Translation:** When attempting to enable 3D, an MSI G4 4200 Ti-TD video card cannot see the Display adapter under device manager. When trying to add new hardware, the card is listed, but it produces this error when clicked.

**Solution:** Run WinXP's repair/reinstall on top of the installed version. It will rebuild the Registry. Then, you will have to reinstall any updates/service packs.

**Error Message:** “Windows XP does not discover Visioneer Paperport One Touch scanner. It is not USB but parallel only.”

**Translation:** Visioneer Paperport scanner with a parallel interface is not recognized by WinXP.

## Using The Recovery Console

The Recovery Console is a software tool for restoring various parts of Windows XP. It is part of the standard distribution CD; however, if your computer came preloaded with Windows you may not have the CD. In that case you will need to contact Microsoft to get a copy of the Recovery Console files.

Use Recovery Console to replace the missing or damaged driver file. To do so, follow these steps:

Insert the WinXP CD-ROM into the CD-ROM or DVD-ROM drive, and then restart the computer. Select any options that are required to start the computer from the CD-ROM or DVD-ROM drive if you are prompted to do so.

When the “Welcome to Setup” screen appears, press R to start Recovery Console.

If your computer is configured for dual booting or multiple booting, select the WinXP installation you want to recover.

When prompted, type the administrator password, and then press ENTER.

NOTE: In WinXP Home Edition, the administrator password is blank by default. You will be presented with a command prompt (essentially a blank screen). Follow the instructions for the particular restoration you need to perform. You'll find the instructions contained in the solution portion of the error message.

At the command prompt, type the required command and then press ENTER. □

**Solution:** Review Visioneer's Trade Up Offer to address this problem at [www.visioneer.com/offer](http://www.visioneer.com/offer).

(NOTE: This is only a trade-in discount toward a new scanner, not a fix.)

**Error Message:** Belkin F5U103 RS232/serial to USB adapter works intermittently.

**Translation:** Belkin F5U103 RS232/serial to USB adapter is not recognized by WinXP and is not assigned a serial port.

**Solution:** Download a current driver from the Belkin Web site at [web.belkin.com/support](http://web.belkin.com/support).

If it's necessary to reinstall the drivers, unplug the F5U103 and go to System hardware and "Remove" it. Then plug the F5U103 back in, and when Windows asks for the location of the driver, point to the folder where the driver file is. If the installation is successful, the assigned COM port should show up under "Ports: Com and LPT" in the hardware list.

**Error Message:** Can't get a Matshita CD-RW/DVD ujda740 to work on a Dell Latitude 640c.

**Translation:** The driver delivered with the computer doesn't work with the CD-RW/DVD drive properly.

**Solution:** Panasonic is the manufacturer of the Matshita drive. A simple driver will fix the problem; you can download the drivers from [www.panasonic.com/business/office/support/downl\\_drivers\\_cdr.asp](http://www.panasonic.com/business/office/support/downl_drivers_cdr.asp).

**Error Message:** Unable to make a gameport-to-USB device work in WinXP.

**Translation:** The gameport-to-USB adapter worked with previous operating systems but is not recognized or installable for WinXP.

**Solution:** Microsoft no longer supports enhanced gameport drivers/software. The industry as a whole has abandoned gameport devices. Gameports were largely unreliable at getting data through the sound card to the system. For this reason, manufacturers now make their devices USB, which is far more reliable. It is necessary to replace the device with a direct USB connection.

**Error Message:** WinXP doesn't support ATA-133 controller and hard drive.

**Translation:** When installing WinXP on a new system with an ATA 133 controller, occasionally the drives/controller are not discovered.

**Solution:** ATA 133 hasn't been supported since Windows 98. You may need to install the



**This pesky message is annoying and persistent.**

proper motherboard drivers so as to get the built-in IDE ATA 133 driver installed or install the correct driver if it is an add-on ATA 133 card. See the manufacturer of the motherboard or ATA card.

**Error Message:** A modem is installed on the computer, but the network services can't

make an Internet connection with the modem.

**Translation:** WinXP's Remote Access applet is not functioning. The modem itself is working, but the applet doesn't recognize it.

**Solution:** Reinstall all WinXP updates, starting with SP1.

**Error Message:** After upgrading to WinXP Pro: When attempting to play a DVD that has a readability problem, WinXP sets the transfer mode to PIO.

**Translation:** PIO (Programmed Input/Output) is only fast enough for CDs.

## Most Common Error Message

**"STOP"** errors contain specific coded information that identifies the particular problem Windows XP has encountered. They cover a wide range of problems, but because the messages are in code, you will need to look up each one in order to find out what it's reporting and how to resolve the problem.

Because there are so many possible conditions that can trigger a STOP error, they are fairly common. The best way to address one when you see it is to follow the particular Microsoft troubleshooting guide for the specific code.

Here are excerpts from the "HOW TO: Troubleshoot "Stop 0x0000007B" Errors in WinXP." You'll find this guide in the Microsoft Knowledge Base as Article 324103. Remember that code 0x0000007B is only one of the possible codes.

This step-by-step article describes how to troubleshoot "STOP: 0x0000007B" error messages in WinXP. A "STOP: 0x0000007B" error message may appear on a blue screen when you start your computer. The error message includes the following information: STOP: 0x0000007B (parameter1, parameter2, parameter3, parameter4) INACCESSIBLE\_BOOT\_DEVICE

Setup has encountered a fatal error that prevents it from continuing. Setup cannot continue. Power down or reboot your computer now.

Use the Last Known Good Configuration feature. This may resolve the problem if you recently installed an incompatible device driver for your boot controller.

Use the Repair option with WinXP Setup.

Restore a Registry backup.

You may receive a "STOP: 0x0000007B" error message if your computer is infected with a boot-sector virus.

You may receive a "STOP: 0x0000007B" error message if a device driver that your computer's boot controller requires is not configured to start during the



startup process or is corrupted or if information in the WinXP Registry about which device drivers load during the startup process is corrupted.

And, from Article 315239 in the Microsoft Knowledge Base: Microsoft Support Policy for

Hardware That Does Not Appear on the Windows HCL

If the System hive in the WinXP Registry is corrupted, WinXP may not be able to load the miniport device driver that the boot controller requires.

You may receive a "STOP: 0x0000007B" error message if there is a resource conflict between the boot controller and another controller, or between SCSI devices, or if drive translation is not being performed or was changed.

Other potential causes of a "STOP: 0x0000007B" error message include:

The boot volume is corrupted and cannot be mounted by WinXP.

You are installing on a mirrored boot partition that was created by Windows NT 4.0.

# When you save or move documents or during general file-management activities in WinXP, you may intermittently receive “Delayed Write Failed” error messages.

**Solution:** Go to your device Manager. Remove the CD-R drive by following these steps: Click Start, My Computer, and then Control Panel. Then double-click System, Hardware, and Device Manager. From the list, find the item DVD/CD-ROM Drive and click the plus sign to expand the list. Select the CD-R drive (if there is more than one item) and right-click it. From the menu that appears, click Uninstall. Then, find the item in the Device Manager list named IDE ATA/ATAPI controllers and click the plus sign to expand the list. Select Secondary IDE Channel and right-click it. From the menu that appears, click Uninstall. Reboot. This will allow the device to work; however, the condition indicates you are getting repeated DMA errors. See info at [www.microsoft.com/whdc/hwdev/tech/storage/ide-dma.msp](http://www.microsoft.com/whdc/hwdev/tech/storage/ide-dma.msp).

**Error Message:** DVD-R/-RW drive can read DVDs but nothing else.

**Translation:** The machine tries to read from the CDs but fails. It even fails to read its own product recovery CDs, so it can't be a problem with the CDs themselves.

**Solution:** In Control Panel, start Sounds and Audio Devices, click the Hardware tab, and then make sure that the CD/DVD drive is listed, along with Audio Codecs. If these items are not listed, use the Add/Remove Hardware program in Control Panel to reinstall these drivers. Search Microsoft's knowledge base for article #314096, How to Troubleshoot CD-ROM Drive Problems in WinXP.

**Error Message:** After downloading critical windows updates to WinXP Pro, the sound is not working.

**Translation:** If you have a Sony VAIO PC and you see this message, it probably means you have a problem with a Yamaha audio device driver.

**Solution:** You need to download the current generic driver from Yamaha or roll back your system to the original driver you were

using before the download (on a Sony VAIO, the driver is “yacxgc.sys”). Click Start, My Computer, and then Control Panel. Then click System, Hardware, and Device Manager. In the Device Manager, find the entry for the sound chip. Click it. From the Driver tab, click Driver Rollback.

**Error Message:** “Data is invalid”

**Translation:** When installing the audio driver for the VIA Technologies chipset, this error message appears.

**Solution:** The error is a known issue for this PCI card and usually means a Registry protection problem. To fix it, click Start, then Run, and then type **regedit**. Locate the HKEY\_LOCAL\_MACHINE\SYSTEM\CONTROLSET001\ENUM\PCI entry. Go through all the VEN\_XXX entries till you find your card. Highlight it, click the right mouse button, and highlight Permissions. Then click Allow By Full Control, click OK, and quit regedit. Reboot.

**Error Message:** “Delayed Write Failed”

**Translation:** When you save or move documents or during general file-management activities in WinXP, you may intermittently receive “Delayed Write Failed” error messages.

This issue may be caused if any of the following conditions exist:

- The Enable Write Caching On The Disk feature for your hard drive is turned on.
- Your UDMA (Ultra-Direct Memory Access) hard-drive controller is configured in either of the following ways:
  - You are using a 40-wire connector cable to connect the UDMA drive to the controller instead of the required 80-wire, 40-pin cable.
  - Your BIOS settings are configured to force faster UDMA modes.

**Solution:** Make sure that your UDMA hard-drive controller is using an 80-wire,

40-pin cable. Contact your UDMA hard-drive controller manufacturer. If the issue is not resolved, go to the next step.

Also make sure that the settings in your BIOS are not configured to force faster UDMA modes.

*NOTE: Change BIOS settings with caution. Read your computer's documentation regarding changing any BIOS settings.*

If the issue is not resolved, go to the next step. Turn off the Enable Write Caching On The Disk feature:

*(NOTE: If you turn off the Enable Write Caching On The Disk feature, your hard drive performance may decrease.)*

- In Windows Explorer, right-click your hard disk and click Properties.
- Click the Hardware tab.
- Click the hard drive and then click Properties.
- Click the Policies tab.
- Click to clear the Enable Write Caching On The Disk checkbox and click OK twice.
- Repeat these for each hard disk installed in your computer.



**Cached data can be lost if your hard drive settings are not correct.**

**Error Message:** “Video decoder error”

**Translation:** After you install WinXP on a computer

that was previously running Windows 2000, everything works except for ASUS Live. The error message above appears.

**Solution:** Find the solution on the ASUS ([usa.asus.com/download/multimedia/beta-app.htm](http://usa.asus.com/download/multimedia/beta-app.htm)) download site. Download the driver first and then the beta software. WinXP will advise you that this version is not XP authorized. Ignore it and you'll get the correct drivers. If that doesn't resolve the problem, try this:

- Remove any third-party drivers you have.
- Go to [www.nvidia.com](http://www.nvidia.com) and download the detonator drivers for WinXP.

## Most Hilarious Error Message

You almost have to laugh when you get an error message like this. As a Hard error and also a STOP error, there has to be something very specific going wrong.

At startup, Windows XP runs through each of the driver files, .dll files, and a series of files that are critical to making XP work and checks them to see if they're still in proper working order. If it finds a problem, you'll get this message.

If you're lucky, the file causing the error will be named in the error message, and you can go right to the Recovery Console and restore the offending file. But of course, there's always the possibility that just replacing the damaged file won't cure the problem. In that case, simply reinstall Windows.



### Error Message: "STOP: C0000221 Unknown Hard Error" or "STOP: C0000221 STATUS\_IMAGE\_CHECKSUM\_MISMATCH"

**Translation:** These error messages are all related.

STOP: C0000221 unknown hard error

Path\File\_name

-or-

STOP: 0xC0000221 unknown hard error

C:\Winnt\System32\Ntdll.dll (or another specific file or driver)

-or-

STOP: 0xC0000221 STATUS\_IMAGE\_CHECKSUM\_MISMATCH

Path\File\_name

You will see one of these if the file named in the error message is corrupted. Windows checks a series of files on startup, including:

- All driver files.
- All DLLs (dynamic-link libraries), including User, GDI (Graphics Device Interface), Shell, Kernel, Ntdll, Crt.dll, etc.

You may also see this if you installed the wrong driver for a particular component.

**Solution:** To fix this, either get a new copy of the corrupted file and copy it to your system or reinstall Windows. If you continue to receive any of these error messages after you reinstall Windows, you may have a hardware or network problem. □

### Error Message: "Error 692: Hardware Failure in the Modem"

**Translation:** When you dial a RAS (Remote Access Services) server in WinXP, you may receive this error message as the modem starts to initialize.

This can happen if any of the following conditions exists:

- The modem is turned off, unplugged, or malfunctioning.
- If you have an external modem, the serial cable is incorrectly wired.
- If you have an external modem, the serial cable is not connected or has open connections.
- The serial port or multipoint adapter on the RAS server or client is malfunctioning.
- The handshaking options for the modem are incorrectly configured.
- The modem is unsupported or the chosen emulation may be incorrect.
- The modem INF files become corrupted or the modem driver becomes corrupted.

**Solution:** Check these conditions.

- Reset your modem. Consult the documentation for information about how to reset the modem.
- If you have an external modem, make sure that you are using the correct serial cable.
- If you have an external modem, make sure that the serial cable is connected securely.
- If you are using a pin adapter to connect your external modem to your serial port, make sure that the pin adapter is wired properly for modem communication.
- Test the serial port or multipoint adapter, and replace the adapter if necessary.
- Make sure that the handshaking options for the modem are configured properly.
- Contact the modem manufacturer to see if any setup and initialization information is available for your modem. Also, check the latest Windows Hardware Compatibility List to make sure that your modem is supported.
- Use Device Manager to remove the modem. You can do this in Safe Mode or in normal mode. Restart the computer in normal mode. WinXP will redetect the modem and reinstall the correct drivers.

### Error Message: CD or DVD drive is not recognized as installed.

**Translation:** After performing a System Restore, the CD-RW or DVD+RW drives are no longer recognized on the computer.

**Solution:** Attach CD/DVD drives to a ribbon cable (different drive controller header on

- From the same Web site, download the WDM\_1.08.exe file.
- Download the new Asus VCR (asvd200.zip).
- Install everything and reboot.

### Error Message: "Floppy Disk is Not Accessible, Not Formatted, or Not Recognized by Windows"

**Translation:** When you access a floppy disk, you may receive one of the following error messages:

A:\ is not accessible.

The device is not ready.

-or-

Disk is not formatted.

The disk in drive A is not formatted.

Do you want to format it now?

-or-

STOP: The disk media is not recognized, it may not be formatted.

The same disk may work correctly with MS-DOS or Windows 95 or after you reformat the disk with Windows 98/Me/NT/2000/XP or Windows Server 2003.

You'll see this on disks that don't contain a media-descriptor byte in the BPB (BIOS parameter block) of the boot sector. Some older, preformatted floppy disks were not created with a media-descriptor byte. Older product disks may also not have the media-descriptor byte.

The media descriptor indicates the type of medium currently in a drive. With MS-DOS and Win95, you do not have to set the media-descriptor byte. Therefore, this problem does not occur with older operating systems.

**Solution:** To resolve this problem, simply reformat the floppy disk with Win98/Me/NT/2000/XP or Windows Server 2003. Your computer should now recognize the floppy.

the mother board) that does not connect to the hard drive.

**Error Message:** Hard disk may become corrupted when entering standby or hibernation.

**Translation:** If your computer has an ATAPI hard drive that is larger than 137 gigabytes, you may get one of these problems.

- The computer may restart instead of resuming from hibernation.
- Your hard drive may be corrupted when your computer enters standby or hibernation.
- Your hard drive may be corrupted when WinXP writes a memory dump file because of a Windows error.

**Solution:** Search Microsoft.com for article 331958 and download the patch shown there.

### BOOT ERRORS

**Error Message:** “System Restore cannot run until you restart the computer.”

**Translation:** When you attempt to run System Restore, this error message may appear. This can happen if a Wininit.ini file is present in the Windows directory.

**Solution:** To fix this, restart the computer. If the error appears again, search the hard drive for the presence of the Wininit.ini file, and then rename it. To do so, follow these steps:

Restart your computer in Safe or DOS Mode.

Click Start. Point to Search. Click For Files or Folders. In the Named box, type **wininit.ini**. In the Look in box, click Local Hard Drives.

Click Find Now, right-click the Wininit.ini file, click Rename, and then type **wininit.xxx**. Click OK. Close the Find Files window, and then run System Restore again.

If that doesn't fix the problem, run the following command to repair the damaged portions of your Registry: **scanreg /fix**

**Error Message:** “Please Insert a Disk into Drive A:”

**Translation:** This message continually appears when starting the computer, and you

may continue to receive the preceding message until you insert a disk into the floppy drive or until you click Cancel. You'll see this if you have selected the Restore previous folder windows at logon checkbox in Folder Options, and you shut down or restart the computer when the floppy drive is being viewed, but the drive is empty when the desktop appears.

**Solution:** To stop this from appearing, exit the floppy drive in Windows Explorer before you restart the computer, or disable the Restore previous folder windows at logon feature. To disable this feature, follow these steps:

Open Windows Explorer.

In the Tools menu, click Options.

On the View tab, click to clear the check from the the Restore Previous Folder Windows At Logon checkbox.

**Error Message:** “Services.exe - Application Error. The application failed to initialize (0xc0000006).”

**Translation:** When the computer is started, the desktop appears without the icons, and a message box appears with the title of “Services.exe - Application Error” and the above error.

After clicking OK, nothing appears on the screen and the Desktop is blank. If the Services.exe file is renamed or removed, the message box doesn't appear, but the computer is still on the Desktop without the icons.

**Solution:** Services.exe is an Application used only in Windows NT4/2000/XP for starting, stopping, and interacting with system services. To resolve the issue, reinstall the operating system.

(NOTE: This is really called an “in-place upgrade” and should only have the effect of repairing the current installation.)

Refer to the link for more details:

[support.microsoft.com/default.aspx?scid=kb;en-us;315341](http://support.microsoft.com/default.aspx?scid=kb;en-us;315341)

**Error Message:** How do I make sure that my new installation of WinXP Pro recognizes my dual Pentiums correctly?

**Translation:** When installing WinXP on a computer with two processors, how does WinXP recognize multiple processors?

**Solution:** Windows requests information from the computer's BIOS; as long as the BIOS of your machine sees them, WinXP should see them. Check the BIOS of your computer to determine that the processors are correctly identified there.

**Error Message:** After you install a new hardware device or new software, your computer may start to restart spontaneously, or you may receive error messages on a blue screen.

**Translation:** This is usually caused by a device driver that doesn't match the version of Windows on which it is installed. Or just a poorly written driver.

**Solution:** Check third-party software or drivers. Try removing any third-party software or drivers recently installed or disabling them so that they do not load. Then, restart the computer to see whether that cures the problem. If that cures it, report the problem to the manufacturer of the software or driver.

If you can't restart WinXP

after you install the software or drivers, use one of these methods to restore Windows:

- Try using the Roll Back Driver feature. Search Microsoft.com for article 283657 HOW TO: Use the Roll Back Driver Feature in WinXP
- Try using the WinXP System Restore feature. Search Microsoft.com for article 306084 HOW TO: Restore the Operating System to a Previous State in WinXP.
- Try using Recovery Console. (See the “Using The Recovery Console” sidebar.)



**This Hard Error is really describing some software component that is either missing or damaged.**

When you attempt to run **System Restore**, this error message may appear. This can happen if a **Wininit.ini file** is present in the **Windows directory**.

## Most Confusing Error Message

**H**UH? There's a problem with my disk?

Disk-reading problems can show up almost any time you try to open a file, start a program from disc, switch discs while using programs that require multiple discs, or when a program tries to read data from some particular area on the disc. There is a wide variety of error



messages indicating problems reading the disc or copying specific files. Here are some of them, but remember that the one you get may or may not be similar to one of these.

Best of luck.

- “application name is not a valid win32 application.”
- “A device attached to the system is not functioning.”
- “A required file kernel32.dll was not found.”
- “Not enough memory to run this application.”
- “Cannot find the file(s) needed to start this application.”
- “Error Reading From File [Installer Error 1305]”
- “Unable to find Setup.exe”
- “CDR-101.”
- “Unable to read drive *drive letter*.”

Insufficient Memory Problems reading from a disc may also produce the following symptoms:

- The disc label does not appear in Windows Explorer.
- The contents of the disc will not display in Windows Explorer.
- When you insert the disk in the drive or read a disc, the computer stops responding.
- The disc does not eject from the drive.
- Reading from the disc takes an exceptionally long time. □

**If WinXP will not start, you will need to create a new Setup Disk by downloading the appropriate files from the Microsoft site and following the included instructions.**

- Try starting MS-DOS:

If Windows is installed on a partition that uses the FAT file system, try starting your computer to MS-DOS and then renaming the problem software or driver.

### GENERAL ERRORS

#### Error Message: “Error 769”

**Translation:** Either you specified a destination address that is not valid, or your remote server is down. This behavior also may occur if the network card in your computer is not turned on.

**Solution:** Turn on (enable) the network card and then run the Network Setup Wizard. To do this, follow these steps:

- Click Start and then click Control Panel. In Control Panel, click Performance and Maintenance, and then click System. In the System Properties dialog box, click the Hardware tab, and then click Device Manager. In Device Manager, click Network Adapters. On the Action menu, click Enable. Quit Device Manager. Click Start and then click Control Panel. In Control Panel, click Network and Internet Connections, and then click Network Connections. In Network Connections, click Network Setup Wizard under Network Tasks- and then follow the on-screen steps. When you complete the steps in the wizard, restart your computer.

**Translation:** When you attempt to log on to Recovery Console in WinXP by typing the correct password for the local Administrator account, Recovery Console may display the following error message:

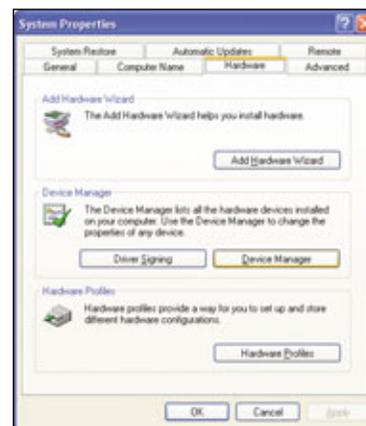
“The password is not valid. Please retype the password.”

Type the Administrator password:

This issue may occur if WinXP was originally installed from a Sysprep image or if Sysprep 2.0 was run on the computer at one time. Sysprep.exe makes changes to the way that password keys are stored in the Registry; these changes are not compatible with the Recovery Console logon routine.

**Solution:** Attempt to install the Recovery Console by accessing the Windows SP CD-ROM from the command prompt and typing `winnt32 /cmdcons` from the I386 folder on the WinXP CD-ROM.

If WinXP will not start, you will need to create a new Setup Disk by downloading the appropriate files from the Microsoft site and following the included instructions. Boot the computer with the Startup Disk (the Recovery Console will be included in them) and log



**Click Device Manager to access the Network Adapters on your machine.**

into the Recovery Console.

You are now able to perform Recovery tasks as required (see Error Message: **STOP: Xxxxxxxx** [on OEM installations of WinXP]). **RS**

by Scott Koegler

**Error Message: “The Password Is Not Valid”**

# Windows XP Software-Related Errors

## Keep Working Despite Problems

In Windows XP, there's no such thing as an elegant crash. A dialog box appears suddenly, demanding your attention. A cryptic stop message, accompanied by a red exclamation point, interrupts your daily routine. Usually the application or operating system task you were performing comes to a screeching halt.

Thankfully the most common crashes—the kind that occurs when you were just trying to change your video resolution or copy a file—are not too detrimental. You can sometimes just reboot or close the dialog box and get back to work. In other instances a crash can signal a more serious problem with the operating system—one that might take hours to resolve or, worse, a long phone call to tech support.

Fortunately Microsoft has provided several new diagnostic features in WinXP. One of the most important: There's a way to send bug reports to Redmond, where technicians can track the issue and fix any problems that seem to be rather widespread. WinXP sometimes provides clues about what went wrong, including an error code or message that you can use to address the problem right away. Interestingly many of the errors in WinXP are brand new problems not found in previous 16-bit versions of the operating system, such as Windows 98. So, by following the tips and ideas below, you can fix problems in WinXP and restore your computer to good working order.



### Most Serious Errors

Serious operating system errors are often the most frustrating to fix because they often involve a recurring system conflict. When you see a blue screen with a vague message about kernels and page faults, you might be tempted to just bring the computer back to the shop and start over. Fortunately even the most seri-

ous errors can be resolved by following some specific steps. No conflict occurs randomly just to spoil your day; they are usually the result of a program you have installed recently, a new hardware device you've attached to the computer, or some other traceable and logical cause. The good news is that once an error occurs, you can fix the problem, and it probably won't occur again. Every problem, at least on a computer, has a solution.

**Error Message:** "STOP: 0x0000077" or "KERNEL\_STACK\_INPAGE\_ERROR"

**Translation:** This could be a boot sector virus or a corrupted WinXP paging file.

**Solution:** Reboot your computer. In some cases when Windows starts up and runs the Autochk program, any bad sectors will be remapped—problem solved. (Just keep an eye on your computer, though, to see if the error message reappears.) Otherwise, if Autochk does not fix the problem, your computer may have defective or poorly seated RAM modules. If you're comfortable opening the computer case, you can reseat the RAM modules so that they are firmly snapped into position (ground yourself properly beforehand). Also, double-check all the other PCI (Peripheral Component Interconnect) and AGP (Accelerated Graphics Port) cards to make sure they are seated properly. Run a virus-checking program such as Norton Anti-Virus 2004 ([www.symantec.com](http://www.symantec.com)) to scan for a boot sector virus.

**Error Message:** "STOP: 0xA0" error message during hibernation

**Translation:** This problem can occur on a notebook if you use the Standby option (by selecting Start, Turn Off Computer, and Standby), which puts the computer to sleep. The CD-ROM driver conflicting with the hard drive driver usually causes the error.

**Solution:** Microsoft fixed this problem with the WinXP Service Pack 1, available at [www.microsoft.com](http://www.microsoft.com).

However, if you're not connected to the Internet and can't download the service pack (and the error keeps causing your notebook to crash), you can just avoid the problem by adjusting the battery-saving features on your computer to never hibernate. That way, even if you pause to answer the phone or fix dinner, your notebook will never hibernate and crash.

**Error Message: "STOP: 0x000000A" error message when you fast switch between users**

**Translation:** This rare but troublesome error can occur if your multimedia keyboard uses the Netropa driver and you have enabled fast user switching. Typically, when you log off your computer (using Start and Log Off), all the programs you are running will shut down automatically. If you enable Fast User Switching in the User Accounts control panel, your programs will remain active. When you log off, the keyboard driver will cause a stop error.

**Solution:** You'll need to download and install a new keyboard driver, available at [www.netropa.com/download/mmkbd/download.html](http://www.netropa.com/download/mmkbd/download.html)

**Error Message: "STOP: 0x0000007B" or "0x4,0,0,0"**

**Translation:** The boot sector of your computer (the portion of memory that handles computer start ups) has become corrupted, causing an error on a blue startup screen.

**Solution:** Boot sector problems are difficult to troubleshoot because they occur before WinXP even loads. You won't be able to just run a program, edit a WinXP Registry file, or remove a device driver. The 0x0000007B error usually includes an error code such as 0x4,0,0,0 that can help a Microsoft tech support engineer troubleshoot the problem. However, you can perform a few diagnostic steps on your own.

First, try rebooting a second time to see whether the stop error reoccurs. Sometimes WinXP may run the Autochk program and correct a disk error automatically. Second, think about whether you have added any new hardware devices recently, such as a second hard drive or a SCSI (Small Computer System Interface) drive. Try removing that drive and restarting. Third, you can remove your primary hard drive and install it on another computer. Often a boot sector problem can be resolved by using a different computer because the second computer may be using a more recent

## Most Obvious Error Message

**Error Message:** "Another copy of this application is already running"

**Translation:** The application you are trying to start is already running.

**Solution:** You can just switch over to the application you are trying to start instead. This error can also appear if you have upgraded from Windows 98 to Windows XP, which makes it much less obvious and more difficult to fix. You'll need to rename some files and reinstall some WinXP files, but for most of us, the error only appears when you don't notice that the program is already running.

BIOS (Basic Input/Output System; the software that controls the computer startup procedure). As a last resort, you can reformat the drive to correct a boot sector problem, which will require that you reload WinXP.

**Error Message: "STOP: 0x9F"**

**Translation:** This error occurs most commonly on notebooks that are frequently entering standby mode or resuming from hibernation. The problem has to do with the power management features on the notebook conflicting with a device driver.

**Solution:** The quickest solution is to remove the driver that is causing the problem, but finding the guilty party can be difficult. Conflicts occur with unsigned drivers that are not officially sanctioned by Microsoft to work with power management features (or with WinXP in general). You can use the Sigverif.exe tool to see which unsigned drivers might be causing problems. (Before you run this program, it's a good idea to close any open applications and make a backup of your most important data because the computer will enter a diagnostic-scanning mode.)

Click Start and Run and type **Sigverif.exe**. Click the Advanced button. Select the option to

Look For Other Files That Are Not Digitally Signed . . . and click OK. In the Look In This Folder field, type **C:\Windows\system32\drivers** (substitute C for the drive letter you use). Next, on the Logging tab, make sure the Save The File Signature Verification Results To A Log File option is checked and then click OK. Now click Start. Windows will save the Sigverif.txt file to C:\Windows, so open that file with Notepad to see a listing of all signed and unsigned driver listings.

Use the Device Manager to disable unsigned drivers you find, one by one, until the problem is fixed. Click Start, Control Panel, and System. Select the Hardware tab and click Device Manager. Look for the driver you want to disable. (You may need to use the Show Hidden Devices option under the View menu.) Right-click the driver and select Disable. You may be able to remove the program and any associated drivers by using the Add Or Remove Programs control panel.

Another trick: You can just look in the WINNT\SYSTEM32\Drivers folder for any drivers that may be causing the power management problems and rename the file, which means WinXP won't load that driver after you reboot.

Use the Sigverif.exe program to look for unsigned drivers that may be causing power management problems in WinXP.

**Error Message: "STOP: 0xC2" or "STOP: 0x000000C2"**

**Translation:** A device driver has caused a WinXP kernel error.

**Solution:** A device driver has caused a conflict with the kernel in WinXP, which is the heart of the operating system—the most important code that is used to run applications and manage memory. A device driver error is like a faulty part on an automobile: The best way to get the operating system running again is to remove the driver. Unlike the "STOP: 0x9F" error in WinXP, which unsigned drivers can

cause, a signed or unsigned driver can cause the "STOP: 0xC2" error. The best method for resolving this problem is to think about any new programs you have installed recently or new hardware devices that you have attached and that have installed a driver automatically.



**The Sigverif.exe tool will help you find error-causing drivers.**

# This error can occur when you transfer **large files such as photo and videos** over a USB connection to your computer.

Try uninstalling any new programs you've added recently (by using the Add Or Remove Programs control panel) and unplug any hardware devices. Reboot your computer.

## **Error Message: "0x00000D1" error when you turn your computer off**

**Translation:** A USB (Universal Serial Bus)-related error related to the OHCI (Open Host Controller Interface) driver, which controls USB file size and memory allocations.

**Solution:** This error can occur when you transfer large files such as photo and videos over a USB connection to your computer. WinXP does not allocate enough resources for the large file transfers. To prevent this error from occurring, you'll need to download the WinXP Service Pack 1 at [www.microsoft.com/windowsxp/pro/downloads/servicepacks/sp1/default.asp](http://www.microsoft.com/windowsxp/pro/downloads/servicepacks/sp1/default.asp)

## **Error Message: "0xc000026C" or "STOP: 0xc0000221 Unable to Load Device Driver" error occurs when you start WinXP**

**Translation:** This error occurs during the WinXP startup process if a critical system driver is missing or damaged or if the file User32.dll is missing or damaged.

**Solution:** WinXP is not too forgiving if you happen to delete a .SYS file in your WINDOWS\System directory. One missing file and the operating system will fail during startup. There's only one solution: You'll need to run the Recovery Console and replace the missing or damaged file; otherwise, you'll have to reinstall WinXP altogether. Fortunately the error message contains the driver file name, so fixing the error is relatively easy.

To run the Recovery Console, first insert the WinXP disc in your CD-ROM drive and then reboot. Newer computers typically include a startup option to boot from the CD; otherwise, you'll need to enter your BIOS (usually by pressing the DELETE key) and change the boot sequence so that your computer boots from CD. Save the BIOS, and your computer will continue the startup process.

When you see the Welcome To Windows screen, press r to use the Recovery Console. In the instructions below, *drivername* is the name

of the file listed in the error message. (After each command, press ENTER.)

Type in your login information. Then, at the command prompt, type:

```
cd windows\system32\drivers
```

Then, type:

```
ren drivername.sys drivername.bak
```

Finally, type:

```
copy cd-rom:\i386 drivername
```

The Recovery Console will reboot the computer. If the user32.dll file caused the problem,

## **Most Annoying Error Message**

**Error Message:** "System Has Recovered from a Serious Error" message after every restart

**Translation:** Windows XP error reporting sometimes gets stuck in memory and won't refresh, so the error will appear each time you restart.

**Solution:** This is an annoying error message because, even if you fix the problem, WinXP will still prompt you to send the error to Microsoft after every reboot. It's one of those errors that some of us just live with, even to the point where we expect to get the error after a reboot and just click Don't Send each time. However, you can correct the problem. Click Start and My Computer, and then right-click and select Properties. Select the Advanced tab and click Settings in the Performance area. In the Virtual Memory area, click Change. Under Paging File Size For Selected Drive, click No Paging File and click set. You'll see two warnings; just click Yes on both of them and then select the System Managed Size option. Close out of all the dialog boxes and reboot.

you need to type these commands into the Recovery Console instead and then reboot:

```
cd windows\system32
ren user32.dll user32.bak
expand cd-rom:\i386\user32.dl_ c:\windows\system32\user32.dll
```

If replacing the files still doesn't work, you'll need to do a repair install of WinXP, which is an option listed at the Welcome screen when you boot from the CD. Note that a repair install won't delete your documents and important files, but you will lose all your Windows settings, Internet favorites, and other operating-system-related files.

## **Error Message: "0x000008E" error on a blue screen in WinXP**

**Translation:** This rare (and random) error can occur when a program references an incorrect memory address, causing your computer to crash.

**Solution:** Microsoft has released a hotfix, which you can install and run to fix the problem. You'll need to call Microsoft technical support to obtain the hotfix, however. It's not available online (at least, not yet). If you only see the error occasionally, you might consider waiting for another service pack release for WinXP, although living with the error is probably counter-productive. For support options visit [support.microsoft.com](http://support.microsoft.com).

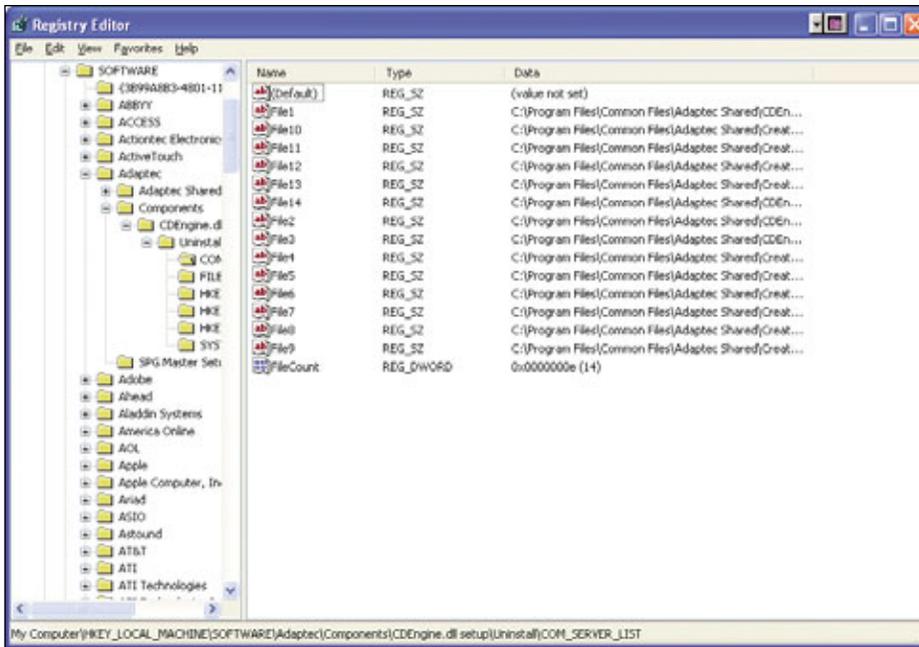
The good news is that if the tech support engineer determines that you do need the hotfix, you won't be charged for the call.

## **Error Message: "STOP: 0x000001e"**

**Translation:** You're using an older version of the Aspi32.sys CD-ROM driver.

**Solution:** You'll need to download the latest driver from Adaptec ([www.adaptec.com](http://www.adaptec.com)). Go to the site, look for the Support area, and then click Downloads. Download the latest version and install the new driver.

## **Error Message: "WinXP could not start because the following file is missing or corrupt: \WINDOWS\SYSTEM32\CONFIG\SYSTEM"**



Cleaning a specific file from your Registry can help solve Bluetooth errors.

**Translation:** Your WinXP Registry is corrupted and requires restoration.

**Solution:** This is one of the most serious errors you're likely to encounter in WinXP, and

the solution involves four specific steps. You'll need to copy new files from the WinXP setup disc, reinstall GUID (globally unique identifier) files, delete critical system files that are causing problems, and use the RestorePoint feature in WinXP. Although the fix may seem complicated, it's clear and straightforward.

You can access the complete solution at Microsoft's Knowledge Base; look up article number 307545.

However, because you will be replacing system files, there's always a possibility that your system could become even more unstable, that you could replace the wrong file and have to start over, or that one of your previous RestorePoint files is also corrupt. If you have a backup of your most important files and don't mind losing your WinXP settings (for example, Internet Favorites, desktop wallpapers, etc.), then a faster and easier solution—one that will eliminate any problems once and for all—is to reformat your hard drive and reinstall WinXP from scratch.

### **Error Message:** "RUNDLL Error loading irprops.cpl" error when you start WinXP

**Translation:** A Bluetooth Authentication Agent DLL file is missing or you have uninstalled the Bluetooth Authentication Agent, but a Bluetooth-related entry still exists in the WinXP Registry.

**Solution:** Bluetooth is the short-range wireless standard for connecting handheld devices and phones to your computer so you can

## Most Common Error Message

**Error Message:** "Missing shortcut"

**Translation:** You have tried to start a program using a shortcut that is no longer valid.

**Solution:** This common error occurs because Windows XP doesn't automatically change shortcuts if you move a program file to a new location (for example, if you decide to run a card game program from the root of your C: drive instead of the Program Files folder). The solution: Right-click the shortcut. Click in the Target field and change the path to the correct EXE application. As an option, you can let WinXP attempt to find the missing application. This can take some time, so it's usually easier to just click the Browse button (in the Missing Shortcut dialog box) and look in your Programs Files folder for the correct application.

transfer files back and forth. To solve the problem, remove the Bluetooth Authentication Agent using the Add Or Remove Programs control panel. Sometimes when you remove Bluetooth, the Registry entries still attempt to control authentication between the device and your computer. To remove the Registry entry, click Start and Run, type **regedit**, and click OK. Look for the following Registry entry: `HKEY_LOCAL_MACHINE\SOFTWARE\MICROSOFT\WINDOWS\CURRENTVERSION\Run`.

Right-click `BluetoothAuthenticationAgent` and click Delete. Close Registry Editor and restart your computer.

Use the WinXP Registry program as a last resort to troubleshooting the most arcane error messages.

### **Error Message:** "8E STOP" error on a blue screen

**Translation:** When you transfer a file to a USB device, the `Usbser.sys` driver generates an error on a blue screen. Usually the file is shown with the error, although you may just see the stop error and not the name of the offending driver.

## Most Frustrating Error Message

**Error Message:** "Computer Configuration\Windows Settings\Local Policies\Security Options\Shutdown: Clear virtual memory pagefile."

**Translation:** The `secpol.msc` and `sceregvl.inf` localization files are corrupt.

**Solution:** For anyone who uses foreign language localizations of WinXP, you know that errors can occur that are difficult to understand and troubleshoot, especially if the translations are wrong. For example, when the French location files cause security problems and virtual memory paging file errors, the message "Arret: Creer un fichier d' echange de memoire virtuelle" will appear. If you know French, you know that the error is meaningless. Worse, there is no fix for the error because Microsoft is still addressing the problem. So: frustrating, translated incorrectly, and not fixable!

# Outdated applications *such as CD-backup software and programs designed to run on the previous 16-bit versions of Windows can cause frequent error messages, usually when they access memory incorrectly.*

**Solution:** You'll need to call and request a hotfix for this problem. To contact Microsoft go to support.microsoft.com.

Most likely, because this is an operating system problem, you won't be charged for the tech support call. Another option: Try rebooting, copying the file to your USB device again, and seeing if the error reoccurs.

**Error Message:** "STOP: 0x00000073 (0x00000001, 0xc000017d, 0x00000002, 0xfc96fcc0) CONFIG\_LIST\_FAILED"

**Translation:** WinXP is unable to access a core system file.

**Solution:** One of the more common stop errors in WinXP, this problem occurs when you have run low on either disk space or system memory (or both). If you are running low on disk space, reboot your computer and delete files that you don't need anymore. You can do a search (Start and Search) to look for large files that you may have forgotten about, such as game files and large photos. Under Search, click All Files And Folders, click the What Size Is It? arrow, and then select Large (More Than 1 MB). Click Search and view the list by size by clicking the Size tab. Look through the largest files and delete the ones that are taking up unnecessary space.

If system memory ran low and caused the error, you can usually solve the problem just by rebooting and running fewer programs at the same time. Upgrading your RAM is only important if you tend to multitask several applications at the same time.

**Error Message:** "STOP: 0xc0000218 (0xe11a30e8, 0x00000000, 0x00000000, 0x00000000) UNKNOWN\_HARD\_ERROR" or "STOP: 0xc0000218 {Registry File Failure} The Registry cannot load the hive (file)."

**Translation:** This occurs due to a corrupted Registry, corrupted hard drive, a driver that is damaged and is attempting to load into system memory, or if the RAM on your

computer is damaged and causing problems with the Registry.

**Solution:** There are several troubleshooting options available, each one intended to address one of the four possible causes. You

## Most Confusing Error Message

**Error Message:** "Load needed DLLs for Kernel"

**Translation:** Important Windows XP program files are missing or damaged.

**Solution:** This error is confusing for several reasons. First, many users may not understand that the kernel is the main program file in WinXP, the heart of the operating system. Second, the term "load needed DLLs" is just ambiguous enough that you might not know how serious the error really is. Unfortunately, this problem cannot be corrected by just rebuilding the system Registry or restoring files from the WinXP installation CD. You'll need to perform an "in-place install" of the operating system, which will destroy most of your settings such as Internet Favorites and all of your applications. The good news: An in-place install will usually not overwrite files in your My Documents folder and will keep other files located in other directories (as long as they are not operating-system-related). To perform an in-place upgrade, you'll need to boot from the WinXP CD, which might require that you enter the BIOS (Basic Input/Output System) of your computer and enable the Boot From CD option. Then, when the install starts up, select the Install WinXP option and follow the remaining instructions. □

should first try rebooting the computer and see if the Load Last Known Good Configuration option appears. Sometimes, by using this option, you can load a previous version of the Registry that is not corrupted. The next step involves using the WinXP Recovery Console program to rebuild the system Registry, a complicated process described online at Microsoft's Knowledge Base in article number 307654.

The other options are much more drastic: reformatting your hard drive completely and reinstalling WinXP and replacing the RAM on your computer. One of the problems with solving this error is that, if the problem is RAM-related, you could replace the hard drive and still experience problems (and vice versa). Our advice is to consult a computer repair technician or call Microsoft tech support engineers who can further diagnose the problem and suggest the best course of action.

## Application Errors

Not every program runs perfectly on WinXP. However, application errors are generally easier to diagnose than an operating system error. The worst-case scenario is that you will have to remove the application and try something that works better in WinXP. Outdated applications such as CD-backup software and programs designed to run on the previous 16-bit versions of Windows can cause frequent error messages, usually when they access memory incorrectly. WinXP handles most applications errors gracefully, providing a message and shutting down the program. WinXP itself usually remains quite stable after an application error (which was not true in previous iterations of the operating system). The best rule of thumb is that, if the program is outdated, you can usually obtain an updated release by going to the company Web site and downloading and then installing the upgrade.

**Error Message:** "This Application Requires the Windows Installer to Run"

## Most Hilarious Error Message

**Error Message:** "STOP: c0000218 {Registry File Failure} The Registry cannot load the hive (file): \SystemRoot\System32\Config\SOFTWARE or its log or alternate"

**Translation:** You are attempting to install Windows XP on a corrupted or outdated hard drive.

**Solution:** This message may cause a few chuckles when you consider that Microsoft uses the word "hive" in reference to the core operating system files. It's funny, considering that WinXP can seem like a beehive of files at times (especially if you start exploring the Registry). It's hilarious, when you start thinking about how there may be a few "Star Trek" fans at Microsoft. In the series, the Borg "hive" is the central core of the alien race. And, incidentally, the solution to this problem is not as earth-shattering as you might think: If you are attempting to install Windows on a corrupted or outdated hard drive, it's an error message that's quite helpful. Even if you could install WinXP, crashes would undoubtedly occur. Better to just use a new hard drive or reformat the drive entirely.

**Translation:** The application was loaded incorrectly on your computer, is located on a network drive that is not available, or needs to be reconfigured.

**Solution:** Usually, the best course of action is to reinstall the application from the source CD, making sure that you install to a local drive. If the application was installed originally to use a network drive, you'll need to make sure you have access to that drive. Click Start and My Network Places to see which network drives are available. (In an office environment, you might call the network administrator to see if a network drive is not accessible.) In some cases you can search for the actual program file and double-click the executable file to get the application to run. Click Start and Search and type the name of the program file (for example, `Excel.exe`). Then, when you find the

program, double-click on it to see if the program will run.

**Error Message:** Ole32.dll may cause an error message in WinXP

**Translation:** An outdated version of MSN Messenger has caused a memory leak.

**Solution:** This error sometimes includes another message: "Msmmsgs.exe has encountered a problem and needs to close. We are sorry for the inconvenience." The fix is to visit messenger.msn.com and download the latest version of the instant-messaging client.

**Error Message:** "CD Recording Software Will Cause Windows to Become Unstable" error when you start Windows

**Translation:** You are using an outdated version of Easy CD Creator ([www.roxio.com](http://www.roxio.com)).

**Solution:** You'll need to remove the Registry entries for Easy CD Creator. Contact Roxio technical support at [www.roxio.com/en/support/index.jhtml](http://www.roxio.com/en/support/index.jhtml). However, you may be able to resolve the problem by upgrading to the latest version of Easy Media Creator 7.

**Error Message:** Explorer.exe may generate an application error when you close a folder

**Translation:** Internet Explorer causes WinXP to freeze when you open or close folders.

**Solution:** You may not use IE for any other task than browsing the Web, but it's also useful for browsing your own files and folders. Unfortunately this random error was a problem with the Service Pack 1 release. No error message appears on-screen; your computer will just stop responding. The solution is to download a new file (`Duser.dll`) for WinXP that fixes the problem at [www.microsoft.com/downloads/details.aspx?displaylang=en&FamilyID=49E589AE-2F93-48DC-A39A-C9D98DADA7A5](http://www.microsoft.com/downloads/details.aspx?displaylang=en&FamilyID=49E589AE-2F93-48DC-A39A-C9D98DADA7A5).

Another option: If you have Service Pack 1 installed, you can safely browse files by using the My Computer icon on your Desktop.

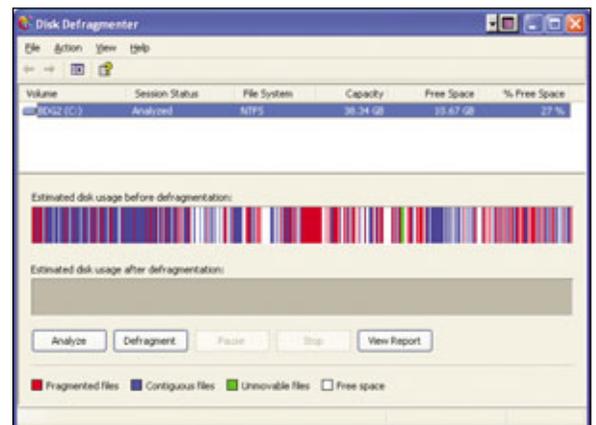
**Error Message:** "Install.exe is not a valid win32 application" or "Setup.exe is not a valid win32 application."

**Translation:** This error appears when you attempt to install a program designed to run on older versions of Windows on the new 64-bit version of the operating system.

**Solution:** You won't be able to install or run 16-bit applications on the new 64-bit version of WinXP. The solution is to obtain a 32-bit or 64-bit version of the program you are trying to install. In some cases you can obtain a 32-bit installer for the application and then still run the older application, even in 16-bit mode.

## System Maintenance Errors

File and system maintenance errors seem to fall into two categories: routine errors with a straightforward solution and more complex errors that may be a symptom of a more critical problem. In most cases a system maintenance error occurs because you have moved files and folders around so much and because you have installed so many programs that Windows is having difficulty keeping track of all the changes and additions. One routine maintenance task that may help prevent problems: run the Disk Defragmenter tool. Click Start, All Programs, Accessories, System Tools, and Disk Defragmenter. The program will perform a disk analysis and then suggest whether you should run defrag. Just follow the advice of



**Use the Disk Defragmenter as a part of your maintenance routine to help stop errors before they start.**

the program to decide if your disk needs to be defragged or not. Run this utility about once per month, or more often if you are constantly adding and deleting files, folders, and programs.

Run the Disk Defragmenter program in WinXP to make sure the operating system doesn't become clogged trying to manage your files and programs.

# *Memory errors occur* when your computer runs low on disk space, you open too many applications at once, or when the RAM in your computer becomes corrupted.

**Error Message:** Unable to start programs with an .EXE extension

**Translation:** A virus has infected your computer.

**Solution:** Many of the most destructive viruses will cause EXE problems. You'll need to install and run a virus protection program, such as Symantec's Norton Anti-Virus 2004 ([www.symantec.com](http://www.symantec.com)). Many of the most powerful antivirus programs also include virus-prevention tools that scan incoming email and can watch for boot sector viruses.

**Error Message:** "The Target can not handle this type of document" error appears when you try to copy a file in WinXP SP1

**Translation:** This is an operating system bug.

**Solution:** This error occurs when you right-click a file and use the Send To command to copy a file that is not housed in the My Documents folder to some other location, such as a network drive. The solution is to use the Send To command from the Desktop. The bug is also quite innocuous: although you will see the error, the file actually copies over correctly. Microsoft will address the bug in the next service pack update.

**Error Message:** "Delayed Write Failed" error when you manage files in WinXP

**Translation:** You have selected the Enable Write Caching On The Disk option in your computer's BIOS or you have used a 40-wire cable to connect a UDMA (Ultra-Direct Memory Access) hard drive to your IDE (Integrated Drive Electronics) controller instead of an 80-wire, 40-pin cable.

**Solution:** You should replace the 40-wire UDMA cable with the 80-wire, 40-pin cable (or bring the computer to a service shop to perform the replacement). If that doesn't solve the problem, you should enter the BIOS (usually by pressing the DELETE key as the computer starts up) and disable the write-caching option.

Using the BIOS on your computer incorrectly can cause new (and harder to diagnose) problems, so you should consult the manual that came with your computer or call for technical support before enabling or disabling any other features. Make sure that if you do use the BIOS and disable disk caching that you save your changes in the BIOS.

**Error Message:** "Bad Command Structure" error message occurs when you extract files from a compressed folder

**Translation:** You've discovered another minor bug in WinXP when you try to extract a compressed file but only if you type in a directory that does not exist on your computer.

**Solution:** WinXP has built-in file compression capabilities. This error occurs when you right-click on a compressed file (with a .ZIP extension) and decide to extract the file. WinXP presents a dialog box where you can type in the directory for the extracted file. If you type in an invalid destination, you'll receive an error that WinXP was unable to create the directory. Microsoft will undoubtedly address this problem in the next WinXP service pack.

## Memory Errors

Memory errors occur when your computer runs low on disk space, you open too many applications at once, or when the RAM in your computer becomes corrupted. Fortunately most memory problems can be resolved quite easily, just by freeing more space on your hard drive, adding a memory module or two, or closing out of applications. Some memory errors can be resolved once and for all by just rebooting your computer and waiting for the Autochk program to run, which fixes common hard drive problems. And if the virtual memory paging file (which provides more memory when your RAM runs low) is overloaded, you can usually just reboot or adjust the size of the paging file. Problem solved!

Of course, other memory problems, such as a corrupted hard drive or corrupted RAM, are more difficult to diagnose. In those cases you may need to experiment with a variety of troubleshooting techniques, such as removing RAM modules one by one until you find the culprit. In some rare cases, you may need to reformat the hard drive and start fresh with a new WinXP installation.

**Error Message:** The StgCreateDocFile() function causes an "STG\_E\_FILEALREADY EXISTS" error in WinXP

**Translation:** A memory leak has occurred that's related to a core operating system file.

**Solution:** This is a known bug that occurs when a program uses the StgCreateDocFile

## Most Unusual Error Message

**Error Message:** "Fatal System Error: 0x000000a0 (0x00000002,0x00070124, 0x00000000,0x00000000)"

**Translation:** If you happen to own a Microsoft Sidewinder Game Pad Pro (not the joystick model), you may experience a unique problem. If you just happen to be running WinXP (as opposed to any other operating system) and you decide to unplug the USB (Universal Serial Bus) cable while WinXP is starting up, you will see the fatal system error and a blue screen, preventing you from accessing your Desktop.

**Solution:** Microsoft is working on a fix for this error, but at press time it is still unresolved. Fortunately, the workaround is rather simple. Just make sure you don't unplug the Sidewinder cable when the system is starting. □

## Most Difficult To Fix Error Message

**Error Message:** “Error 1402. Could not open key.”

**Translation:** Microsoft Office 2000 causes this error when you try to run the application suite on Windows XP.

**Solution:** There is a complicated fix to this error message, which involves some detailed editing in the system Registry (not for the uninitiated). One of the problems with editing the Registry, though, is that you can do more harm than good if you enable or disable just one simple option by mistake. Also, you’ll need to know how to search for a specific Registry key (HKEY\_LOCAL\_MACHINE on Local Machine in this case). More importantly, because Office 2000 is several versions older than the latest release, you may experience additional errors while running Word, Excel, and other programs—such as unexpected crashes and a constant reminder to register the software. The best solution is to call Microsoft tech support and discuss various options, such as upgrading to Office 2003 or updating the Windows Registry with help from the engineer. □

core operating system function in WinXP. It’s actually a code flaw that will cause the memory leak, leading to additional error messages until the computer becomes unstable and you have to reboot. The solution is to obtain the WinXP Service Pack 1, available at [www.microsoft.com](http://www.microsoft.com).

**Error Message:** “Your system is low on virtual memory. Windows is increasing the size of your virtual memory paging file. During this process memory requested for some applications may be denied.”

**Translation:** You are running too many applications at the same time, or there is a conflict with Symantec’s Norton Internet Security program.

**Solution:** If you see this large balloon message in the lower-right corner of your screen, it’s a good idea to reboot the computer to free

system resources. In some cases, you can just close some applications to free more memory, although it may just be a matter of time before the computer starts running too slow. If you are not running more than just a couple of applications, WinXP may be conflicting with Norton’s Personal Firewall program, especially if you have configured that program to start automatically by using the Registry as opposed to using the WinXP Startup Group folder.

For more information about this Symantec error (including how to configure the Personal Firewall correctly for WinXP), visit the company’s support site at [www.symantec.com/techsupport](http://www.symantec.com/techsupport) and type the following ID: 2000040412261536.

**Error Message:** “System has recovered from a serious error DRIVER\_IRQL\_NOT\_LESS\_OR\_EQUAL”

**Translation:** You have corrupted RAM installed, the wrong memory modules installed for your computer, or the Windows paging file is corrupted.

**Solution:** This error can occur just after you install new RAM chips, so the easiest solution is to remove the new RAM (after properly grounding yourself, either by using a grounding strap or touching the power supply). If you’re not sure if the RAM modules you installed work with your computer, you can visit Microsoft’s Knowledge Base and look up article number 65416.

If you know that the RAM should work (for example, if the modules came with the computer and have always worked), then you might try increasing the paging file size. First, click Start, go to My Computer, right-click, and select Properties. Click the Advanced button and, under the Performance tab, click Settings. Click the Advanced tab and, under the Virtual Memory area, click Change. Click the No Paging File option and click OK for each open dialog box. Now restart your computer. Open Properties again for My Computer and go back to the Virtual Memory area. Click Change and select the System Managed Size option. Click OK to close each dialog box again and restart.

Adjust the paging file size to prevent virtual memory errors from occurring.

**Error Message:** “System restart has been paused: Continue with system restart. Delete restoration data and proceed to system boot menu.”

**Translation:** During hibernation, the computer accessed memory incorrectly.

**Solution:** This error occurs on notebooks occasionally after returning from hibernation, the sleep mode in WinXP. There’s no option for returning to the Desktop, so you may lose your work. Use the option to Delete Restoration Data And Proceed To System Boot Menu, which will cause WinXP to reboot. Microsoft will fix this problem in a future WinXP update. For now you can set the power management features on your notebook to use standby mode but not hibernate, but only if the error occurs frequently.

**Error Message:** “STOP: 0x00000074 (0x00000003, 0x00000002, 0x80087000) BAD\_SYSTEM\_CONFIG\_INFO” or “The following file is corrupted: *toside.sys*”

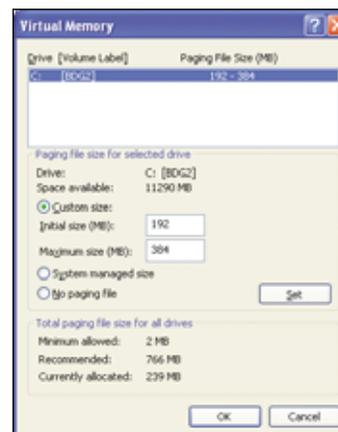
**Translation:** One of the RAM modules on your computer is corrupted or won’t work with your computer correctly.

**Solution:** If you recently upgraded your RAM, try removing the new chips you installed. (Make sure you have properly grounded yourself, either with a grounding strap or by touching the power supply.) If you are using the RAM that came with your computer, try removing one module at a time and rebooting each time to see if the error reappears. If the error doesn’t occur, replace the RAM module

that is causing the error.

(NOTE: The “*toside.sys*” error only appears if you try to boot from the WinXP installation CD as a way to correct the problem. WinXP won’t boot normally or from a CD if a RAM module is corrupted.) **RS**

by John Brandon



Windows XP lets you specify how much space Virtual Memory uses.

# Windows XP Network & Online Error Messages

## Get Connected & Stay Connected

**T**ired of cryptic error messages that invade your screen and ruin your day, often without providing any real advice on how to prevent their return? We understand. Here are explanations for some of the more common and/or more frustrating Windows XP error messages and situations that occur in WinXP. For more detailed information on these errors, as well as errors and difficulties that aren't covered here, visit [support.microsoft.com](http://support.microsoft.com).

Oh, and if you're as sick of those annoying sounds as you are the error messages themselves, here's a quick and easy fix: Click Start, Control Panel, and then Sound, Speech, And Audio Devices. Click Sound, And Audio Devices, then select the Sounds tab. At the bottom of that panel, under Program Events, you can assign new, more pleasant sounds (or even silence) to almost any Windows event imaginable, including those pesky errors. Enjoy.

### General Networking Errors

**Error Message:** "An error has occurred during configuration of home networking on this computer. For more information, see the home networking log file."

**Translation:** An unknown error has occurred during WinXP's attempt to configure your network automatically.

**Solution:** The steps attempted by the wizard, along with notations of success or failure for each step, are contained in a log file called Hnetwiz.log, found in your SystemRoot, which is C:\WINDOWS by default. You can read this file with a text editor such as Notepad, but the information therein may be hard to understand. If you're forced to turn to Microsoft for tech support, the log file will help them solve the problem.

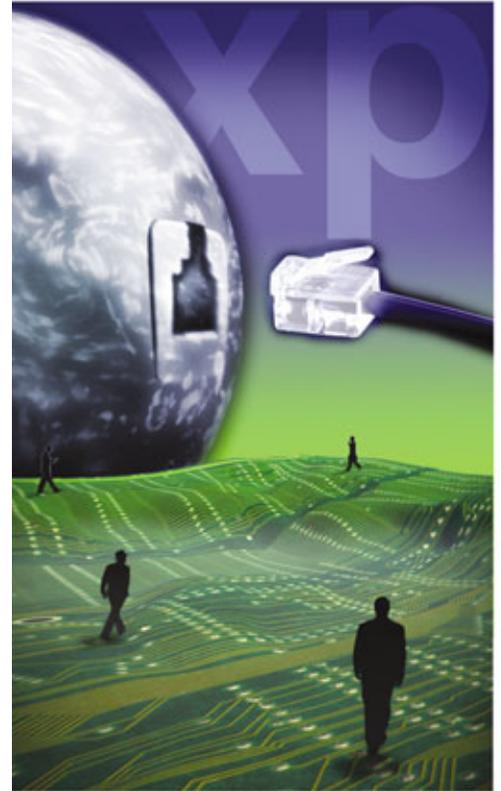
**Error Message:** "Windows cannot find file 'XX.' Check the spelling and try again, or try searching for the item by clicking the Start button and then clicking Search."

**Translation:** Straightforward is the translation on this one. Windows can't find the file you've specified, represented here by XX. It could be a network error, a mistyped file location or name, or the file could be missing.

**Solution:** Verify that your network is working by browsing to another known file. If the network is not working, check cabling and power to any hubs or routers in the path. If the network is working, verify the file does exist.

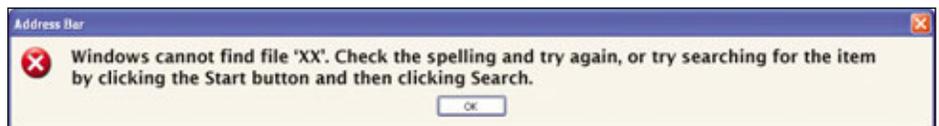
**Error Message:** "An unexpected error occurred."

**Translation:** This message may appear when opening the properties of a network connection in the Network Connections folder. It's possible that Registry settings for the network connection may be damaged.



**Protocol) diagnostic utility included in Windows. The utility runs in a command-line interface reminiscent of the Days of DOS, and we've heard many users express frustration over the fact that the command-line window disappears far too quickly to be of use.**

**Translation:** By default, as soon as a command window-based task finishes, the window closes itself.



**This error may indicate a missing file, or it may be a symptom of a nonfunctioning network.**

**Solution:** Click Start, Run, and type `regsvr32 %systemroot%\system32\netshell.dll`. Click OK and try again to open the properties for the affected network connection. If it still doesn't work, click Start, Run, type `regsvr32 %systemroot%\system32\ole32.dll`, click OK, and then restart the computer and try to open the properties for the network connection.

**Error Message:** Many network troubleshooting explanations involve the use of IPCONFIG, an IP (Internet

**Solution:** To run a command line-based diagnostic tool, click Start, Run, and type in the appropriate command; click OK. To prevent the window from closing itself, preface the command with `CMD /K`. For example, to run IPCONFIG, click Start, Run. Type in `cmd /k ipconfig` and click OK.

**Error Message:** "Explorer.exe has encountered a problem and needs to close. We are sorry for the inconvenience."

**Translation:** This error may occur, alongside an Explorer crash, in a multitude of situations. One documented situation is when you attempt to map a drive letter to a network share, either on the LAN (local-area network) or on the Web, if the name of the mapped to resource is over 300 characters long. A name of that length is unlikely with a network resource on the LAN, but it could easily happen when mapping to a Web-based resource.

**Solution:** Install the latest WinXP service pack at [www.windowsupdate.com](http://www.windowsupdate.com). Click Scan For Updates and Microsoft will determine what your machine needs. Click an update from the list to install it and follow the directions the update presents.

**Error Message:** “Cannot load Remote Access Service Connection Manager.”

**Translation:** Attempting to create a new network connection or installing a network adapter may generate this error message. Certain services that are required for the task are probably disabled.

**Solution:** Click Start, Run, type `services.msc`, and click OK. In the right viewing pane, find and double-click the Telephony entry. If the service is stopped, click Start and change Startup Type to Automatic. Repeat this process for both the Remote Access Connection Manager service and the Remote Access Auto Connection Manager service.

**Error Message:** Various error messages reference an error regarding “Remote Procedure Call” after which the computer mysteriously shuts down.

**Translation:** You probably have the Blaster virus.

**Solution:** Go to [www.microsoft.com/security/incident/blast.asp](http://www.microsoft.com/security/incident/blast.asp) and follow the instructions to remove the virus.

**Error Message:** “Not enough server storage is available to process this command.”

**Translation:** Norton AntiVirus or another third-party application may have corrupted a Registry entry on the computer you’re trying to connect to over a LAN.

**Solution:** This fix must be implemented on the computer you’re trying to connect to, for it’s there that the problem exists, even though the error message is being displayed on your local machine. Warning: This solution requires changes to the Windows Registry. Do not attempt this if you are unfamiliar with the

## Most Common Error Message

The ubiquitous 404 Error message has been annoying surfers for a decade now, with its headache-inducing “The page cannot be found” declaration. Be sure you typed in the URL (Uniform Resource Locator) correctly. Mistyping is easy, especially on long addresses. And remember: Internet addresses use forward slashes (/), not backslashes (\). □



Registry editing process, and do not edit your Registry without first backing it up. Do not edit your Registry without first understanding how to restore the Registry from a backed up version. Treat Registry entries as case sensitive.

Click Start, Run, type `regedit`, and click OK. Use the navigation tree in the left pane to browse to `HKEY_LOCAL_MACHINE\SYSTEM\CURRENTCONTROLSET\SERVICES\LANMANSERVER\Parameters` and then look in the right pane for an `IRPStackSize` entry. If it exists, double-click it.

If the `IRPStackSize` entry does not exist, create it like this: Right-click in a blank area of the



**It’s possible that this error message indicates a corrupt Registry entry; proceed with caution.**

right pane, move your cursor to New, and click DWORD. Remembering that Registry entries are case sensitive, name the new entry `IRPStackSize`. Press ENTER, and then double-click the `IRPStackSize` entry.

Underneath Base, click the radio button to select Decimal, type 15 in the Value Data

field, and click OK. Exit the Registry and restart the computer.

**Error Message:** “Error 2229: An internal error has occurred.”

**Translation:** A Setup.exe software installation that uses Windows Installer, when run across a wireless network link, may fail and generate this error message because the wireless link is dropping data and Windows Installer is unable to handle the errors in a manner that allows the installation to continue.

**Solution:** Go to [www.windowsupdate.com](http://www.windowsupdate.com) and install Windows XP SP1 (Service Pack 1).

## Internet- & Email-Related Errors

**Error Message:** “The page cannot be displayed. Cannot find server or DNS error.”

**Translation:** The first part of this message is found at the top of an Internet Explorer error page, the second part at the bottom. There are two likely causes. First, the server may not exist. Second, the server may exist, but your system can’t connect to it because your DNS (Domain Name System) server can’t translate the domain name.

**Solution:** Try refreshing the page, via either the Refresh button on the IE toolbar or the F5 function key. If that doesn’t work, check the URL (Uniform Resource Locator; the Internet address that you type in) to be sure you entered it correctly. If you’re certain it’s right, you may need to change your DNS server to one that sees more domain names. The standard DNS servers are government-run and translate only a portion of the available domain extensions. Go the Open Root Server Confederation at [support.open-rsc.org/servers](http://support.open-rsc.org/servers) and follow the instructions there. After you’ve changed your DNS server to one of the more

“open” ones, test the change by trying to view the [www.atlantic.ocean](http://www.atlantic.ocean) Web site.

**Error Message:** “The page cannot be found. HTTP 404 - file not found.”

**Translation:** The first sentence is typically at the top of an IE error page, while the

second sentence is usually found at the bottom, following a page of boilerplate text. Perhaps the most common error message on the Internet, the 404 error code's meaning is straightforward: The file to display that page cannot be found.

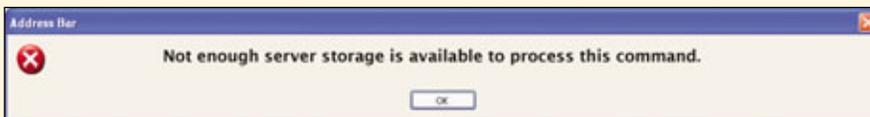
**Solution:** Check the URL. Common mistakes are using backward slashes (\) when you should use forward slashes (/) and mistyped filename extensions. The most common extensions are .HTM and .HTML, but there are many others, such as .PHP, .CGI, and .ASP. If you have indeed entered the address correctly and still get the 404 error even though you can successfully load other pages, the file probably doesn't exist and you will need to contact the administrator of that site.

**Error Message:** When viewing Web pages, you receive error messages denoting a "Runtime Error" and asking if you wish to debug.

**Translation:** The problem is in the code for the Web pages, not your computer, so there is nothing you can do to correct the actual error.

### Most Confusing Error Message

**H**UH? The "server storage" error cries out for an explanation, especially because it may appear when the task you're attempting opening a file, for example has nothing to do storage in the traditional sense. The most likely culprit is a corrupted Registry entry on the remote computer.



You can, however, disable these annoying error messages.

**Solution:** From IE, click the Tools menu and select Internet Options. Click the Advanced tab and check the Disable Script Debugging entry in the list of options. Now find and uncheck the entry that says Display A Notification About Every Script Error. Click OK. If the error messages persist, close all IE windows and restart the program.

Another way to slow down the proliferation of IE crashes and error messages is the practice of regularly updating both your WinXP and IE software. You can set your computer to automatically keep itself up-to-date (click Start, Control Panel, and double-click Automatic Updates), or you can manually check for updates at any time by going to [www.windowsupdate.com](http://www.windowsupdate.com).

**Error Message:** "Unable to establish a connection with the activation server. Please check your network settings and confirm that you are able to connect to the Internet, then try again."

**Translation:** WinXP, as well as many other Microsoft applications including the Office family, require activation, either via the Internet or telephone. If you're sure that you have a valid Internet connection, yet you are receiving the above error message, your system clock may be incorrectly set, which causes the connection between your computer and the activation server to fail.

**Solution:** Double-click the time in your System Tray at the bottom right corner of your screen. Set your calendar and clock to the correct date and time, click OK, and try the activation again.

**Error Message:** "Access was denied because the user name and/or password was invalid on the domain."

**Translation:** This is a common error message when a WinXP attempt to connect to an

**Translation:** This is not an indication of a problem on the ISP computer, but rather a notice that the connection cannot be established between that computer and your computer using the logon credentials you provided.

**Solution:** Verify that you've entered your username and password correctly, including the proper case. Once verified, you may need to turn off the Require Secured Password setting for that dial-up connection. Click Start, Control Panel, Network And Internet Connections, and Network Connections. Click the dial-up connection in question and click Change Settings Of This Connection underneath Network Tasks in the top of the left pane. Click the Security tab and verify that Typical (Recommended Settings) is selected. In the Validate My Identity As Follows section, be sure Allow Unsecured Password is checked. Click the Options tab and be sure the Include Windows Logon Domain box is not selected. Click OK twice to exit and try the connection again.

**Error Message:** "The local policy of this system does not allow you to log in interactively."

**Translation:** VPN (virtual private network) connections, which allow many employees to access their company computers from remote locations, have become much more popular over the past couple of years. When attempting to log in to a remote machine via a VPN connection, you will receive this message if the remote machine is configured to allow logins only from the physical remote computer itself.

**Solution:** Ask the administrator of the remote computer to enable remote login by editing that computer's Group Policy. Do note that many administrators are reluctant to enable this level of remote access due to security concerns.

**Error Message:** "Error 691: Access denied because username and/or password is invalid on the domain."

**Translation:** You are unable to connect to your ISP because your dial-up connection settings don't match the logon settings required by the ISP.

**Solution:** Several different steps may be required in order to remedy this situation, and before beginning, you should contact the ISP to verify the correct settings. First, verify that your username and password are correct,

bearing in mind that at least the password is case sensitive. "PASSWORD" and "Password" are two different words to the ISP's computer. With these credentials verified, click Start, Control Panel, and double-click Network Connections. Right-click the connection in question and then click Properties.

Under the Options tab, be sure the Include Windows Logon Domain choice is unchecked. Under the Security tab, be sure the Require Secured Password setting is set to match the requirements given to you by your ISP. Click OK and try the connection again. If it still doesn't work, ask your ISP to assign a new username and create a new dial-up connection from scratch.

**Error Message:** "Modem in use by another application" or "Port already open."

**Translation:** Another application is using the modem and/or the communication port needed by the modem, or you have a hardware error.

**Solution:** Use CTRL-ALT-DELETE to bring up the Windows Task Manager. The Applications tab will be selected by default, so look first at the list of running applications to see if an application is running that is likely to use a modem. If so, select that application, click End Task, and try your connection again. If you get the same error message, perform an End Task on all running applications. If the error persists, restart your computer. If the error still persists, restart your computer again and check the Com Port settings in your computer's BIOS (Basic Input/Output System). If the com port that the modem needs is set in the BIOS to power an external com port, disable that setting to return use of the com port to WinXP and your modem.

**Error Message:** "Windows Media Player Error C00D10B3 - unable to access the network."

**Translation:** This error occurs when Windows Media Player attempts, and fails, to connect to the Internet.

**Solution:** WARNING: This solution requires changes to the Registry. Do not attempt this if you are unfamiliar with the Registry editing process, and do not edit your Registry without first backing it up. Registry entries are case sensitive.

Click Start, Run, type **regedit**, and click OK. Using the navigation tree in the left pane, navigate to HKEY\_CURRENT\_USER\

SOFTWARE\MICROSOFT\MEDIAPLAYER\Preferences and click to highlight the Preferences folder in the left pane. Now right-click a blank area of the right pane, select New, and click DWORD. A new entry will be created in the list in the right pane, and it will be highlighted, ready for you to name it. Type **ForceOnline** and press ENTER. Now double-click the ForceOnline entry and type a **1** in the Value Data field. Click OK, exit the Registry, and restart your computer.

**Error Message:** "Error 769: The specific destination is not reachable."

**Translation:** This error may occur when attempting to connect to the Internet via a PPPoE (Point-To-Point Protocol over Ethernet) connection, a connection type often used with DSL (Digital Subscriber Line) Internet connections, as a result of a disabled network card.

**Solution:** From the Desktop, right-click My Computer and choose Properties. Click the Hardware tab and click the Device Manager

services must be thus configured in order to use ICS:

- Application Layer Gateway Service
- Network Connections
- Network Location Awareness (NLA)
- Plug And Play
- Remote Access Auto Connection Manager
- Remote Access Connection Manager
- Remote Procedure Call (RPC)
- Telephony

After verifying and/or configuring Automatic startup for each of these services, close the Services window and restart the computer before attempting again to enable ICS.

**Error Message:** "Windows Media Player is not configured for the Internet. Before you can use the Media Guide or Radio Tuner features, you must be connected to the Internet. To connect to the Internet, run the Internet Connection Wizard and try again."

## Most Hilarious Error Message

This one's good for a chuckle. Explorer *needs* to close. Who cares? You need to get your work done, right? Oh well, at least the Microsoft Error Authors are polite about it. They're sorry.



button. Once the list populates, use the plus sign (+) beside Network Adapters to expand that branch of the navigation tree. Find your network card, which will probably have a yellow exclamation mark beside it. Double-click the network card and choose Use This Device (Enable) from the Device Usage drop-down list. Click OK, close the Device Manager, and try your PPPoE connection again.

**Error Message:** "An error occurred while Internet Connection Sharing was being enabled. The dependency service or group failed to start."

**Translation:** A service needed by ICS (Internet Connection Sharing) is not running.

**Solution:** Click Start, Run, type **services.msc**, and click OK. To enable a service, find it in the right pane and double-click its entry. Be sure its Startup Type is set to Automatic and click OK. All the following

**Translation:** Even if you're already connected to the Internet, Windows Media Player may not be able to "sense" the connection.

**Solution:** For Windows Media Player version 9, first try this quick solution. Click the Tools menu and select Options. Be sure the Connect To The Internet checkbox is selected. If that doesn't solve the problem, or if you're using an earlier version of Windows Media Player, proceed to the next paragraph.

Exit Windows Media Player and run the Internet Connection Wizard by clicking Start, Run, and typing **inetwiz**. Click OK and proceed through the wizard. If your Internet connection is actually already working, be sure to make choices in the wizard that match your current settings. After completing the wizard, restart Windows Media Player.

**Error Message:** "Internet Explorer has encountered a problem and needs to

close. We are sorry for the inconvenience.”

**Translation:** IE has crashed.

**Solution:** Unfortunately, there is no universal cause for IE crashes and, therefore, no universal solution. One of the most common causes, however, is a software conflict between IE and third-party IE extensions or add-ons. Examples are the Google Toolbar and the Yahoo! Companion Toolbar, as well as many other convenience-enhancing toolbars. If you're experiencing frequent IE crashes, try disabling all third-party toolbars by clicking IE's View menu, Toolbars, and unselecting any that are checked. If this eliminates most of your IE difficulties, try re-enabling the third-party toolbars one at a time until you find the specific one that causes the frequent crashes to resume.

**Error Message:** “Msimn.exe has generated errors and will be closed by Windows. You will need to restart the program. An error log is being created.”

**Translation:** Msimn.exe is the executable program file for Outlook Express, the email client included with WinXP. The .DBX files that contain your messages may be marked as Read Only.

**Solution:** Be sure Outlook Express is not running. Click Start and Search. Click All Files And Folders, and set the Look In field to include Local Hard Drives. In the Name field, type \*.dbx, and then click Search. When the search completes, find a file in a folder name that begins with C:\DOCUMENTS AND SETTING\XX, substituting your actual username for the XX. Right-click the file and click Open Containing Folder. Windows Explorer will open, already navigated to the appropriate folder, which will contain a number of DBX files.

Right-click the first file in the list and click Properties. Be sure the Read Only checkbox is not checked and click OK. Repeat this procedure for each DBX file in the folder. Restart Outlook Express.

**Error Message:** “Unable to open your default e-mail folders. The .DLL file for the information service could not be found. MAPI was unable to load the information service Pstprx.dll. Be sure the service is correctly installed and configured.”

**Translation:** This error generally indicates a problem with a profile (which lets several

### Most Unusual Error Message

Despite the wording, plenty of people see this error message even though they are in fact connected to the Internet at that very moment. No use fighting, though: To make it go away, you may well have to run the Internet Connection Wizard anyway. □



users maintain separate inboxes in the same copy of Outlook) in Outlook 2002.

**Solution:** Go to [www.officeupdate.com](http://www.officeupdate.com) and obtain the latest service pack for Office XP.

**Error Message:** “Error 623: The system could not find the phone book entry for this connection.”

**Translation:** VPN connections can use existing dial-up connections in order to make the link between your computer and the Internet, so the VPN can then be established between your computer and the remote computer. When trying to connect to a VPN using a VPN connection previously defined in Network Connections, the connection is attempting to use a dial-up connection that has been deleted.

**Solution:** Click Start, Control Panel, and then Network And Internet Connections. Click Network Connections. Be sure that a valid dial-up connection exists. If not, create one by clicking Create A New Connection underneath Network Tasks in the left pane and following the resulting instructions. Once the valid dial-up connection exists, right-click the affected VPN connection and click Properties. Select the Dial Another Connection First checkbox and then choose the valid dial-up connection.

(NOTE: If your VPN connection doesn't require a dial-up connection, be sure the Dial Another Connection First checkbox is unchecked and click OK.)

**Error Message:** Using programs or features that require an automatic on-demand connection to the Internet (automatic Windows Update and the Help And Support Center are two examples) may fail to work properly, and may return any of these error messages:

- Internet Connection is Required
- To view this page, you must be connected to the Internet. To connect to the Internet now, click Connect.

- Internet Connection Could Not Be Established
- There was a problem in connecting to the Internet. To attempt to connect again, click Try Again.

**Translation:** The failure-followed-by-error-message scenario described above can happen even though IE is able to automatically connect to the Internet as needed when you have a LAN adapter (network card) and use dial-up networking. An example would be a PPPoE connection in which a dial-up connection uses the network card to establish the Internet connection.

**Solution:** Click Start, Control Panel, and then Network And Internet Connections. Click Network Connections and click Dial-up Preferences on the Advanced menu. Choose the Autodial tab and find the checkboxes underneath Enable Autodial By Location. Clear all of these checkboxes. Now be sure the checkboxes for Always Ask Me Before Autodialing and Disable Autodial While I Am Logged On are both checked. Click OK.

You will now have to manually connect to the Internet, via Start, Control Panel, Network And Internet Connections, and Network Connections. Double-click your Internet connection and follow instructions. Although the convenience of automatic connection upon demand is lost, other programs and features that need an Internet connection should now function properly as long as you're connected to the Internet before they're invoked. Microsoft has confirmed that this is a problem, so hopefully it will be addressed in future Windows updates.

**Error Message:** Every time you shut down WinXP, you are prompted to disconnect from the Internet.

**Translation:** Your Internet connection is being shared with other users on the network.

**Solution:** Click Start, Control Panel, Network And Internet Connections, and Network Connections. Right-click your

Internet connection and click the Advanced tab. Uncheck the checkbox for Allow Other Network Users To Control Or Disable The Shared Internet Connection. Click OK.

Other network users will still be able to share your Internet connection when it is active, but they will not be able to disable or control it from their computers.

**Error Message:** Certain Web pages fail to load, followed by various error messages, particularly when using shared DSL service that connects via a PPPoE connection.

**Translation:** Client computers that access a PPPoE DSL connection over a network may not be configured for optimum broadband performance.

**Solution:** Dramatic improvement in online performance can be realized by properly configuring a computer to match the type of Internet connection in use. Virtually all of these settings involve making changes to the Registry, a task that you should never, ever undertake without first backing up your Registry and having a thorough understanding of how to restore that backup should the need arise.

With that firmly in mind, take heart in the fact that there are now a number of easy-to-use “tweaker” programs that vastly simplify this optimization process. One popular such program is DrTCP, available free of charge at [www.dslreports.com/front/drtcp.html](http://www.dslreports.com/front/drtcp.html).

## LAN-Specific Errors

**Error Message:** “Network path not found.”

**Translation:** Assuming your LAN is working, this particular location is not showing up as a valid path on your network.

**Solution:** If you’re certain the network resource exists, the most logical culprit is a mistyped network address, and slash errors are the most common. Internet addresses use forward slashes as directory separators, but Windows LANs use traditional backward slashes just as you use when typing a file path on your own machine. LAN server names are preceded by two slashes, like this: \\HomeServer\InkjetPrinter

**Error Message:** “Server service is not started.”

**Translation:** When sharing files, printers, or other resources from your computer on the network, the software service that allows this kind of sharing, the server service, must be active.

**Solution:** Click Start, Run, type `services.msc`, and click OK. Find the Server service in the right-pane list and double-click it. If the service is stopped, click Start. Set the Startup Type to Automatic.

**Error Message:** “Spooler subsystem app has encountered a problem and needs to close.”

**Translation:** The print spooling system (which lets multiple users print from the same printer by queuing print jobs) can generate a conflict that interrupts the wizard.

**Solution:** Before launching the wizard, click Start, Run, type `command`, and click OK to launch a command prompt window. At the prompt, type `net stop spooler` and press ENTER. Run the wizard. After the wizard has completed, go back to the command prompt, type `net start spooler`, and press Enter.

**Error Message:** “The folder you entered does not appear to be valid. Please choose another.”

**Translation:** This error typically occurs when you use the Add Network Place Wizard, signaling that the network location you’ve entered is not valid.

**Solution:** When adding a location in WinXP, you must list both ServerName and ShareName in the wizard’s Location box, not just the ServerName. The correct convention in the Location box is \\servername\sharename instead of the \\servername convention allowed in earlier versions of Windows.

**Error Message:** “Could not start print job.” (Printing to a network printer.)

**Translation:** Your computer is unable to establish contact with the print server.

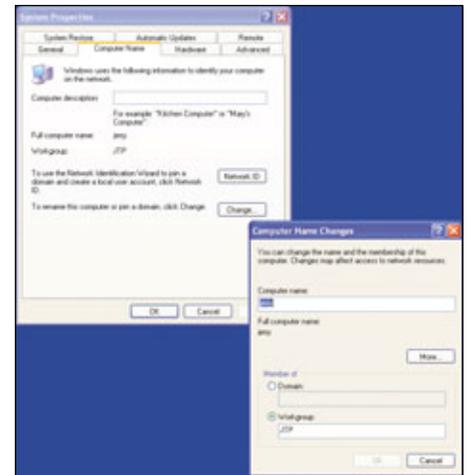
**Solution:** Be sure the printer is powered on and online. Then be sure it’s properly installed by right-clicking it in the Printers window, clicking Properties, and then clicking Print Test Page. If the test page does not print, check all connections. If the test page still does not print, repeat the printer installation procedure.

**Error Message:** “Duplicate name exists. The name ‘XX’ could not be registered on the Interface with IP address XXX.XXX.XXX.XXX. The machine with the IP address YYY.YYY.YYY.YYY did not allow the name to be claimed by this machine.”

**Translation:** Each computer on your LAN must have a unique name. The name you have given your computer, represented here by XX,

is already in use by an existing computer on the network at IP address YYY.YYY.YYY.YYY.

**Solution:** Change the network name of your computer to something unique. Click Start, My Computer, and then View System



To give your computer a unique name on the network, go into System Properties.

Information underneath System Tasks. Click the Computer Name tab, click the Change button, and type a new name.

**Error Message:** “User has not been granted requested login type.”

**Translation:** The computer you’re attempting to access via the network is not configured to allow a network login.

**Solution:** On the computer you’re trying to access, not the client machine where the error message is being displayed, click Start, Control Panel, and double-click Administrative Tools. Now double-click Local Security Policy and expand Local Policies in the left pane by clicking the plus sign beside that entry. Single-click to select User Rights Assignment. In the right pane, double-click Deny Access To This Computer From The Network. If your username and/or group isn’t listed in this window, you will not be able to access this computer from the network, regardless of other settings. If present, single-click to select your username and/or group and click Remove. Click OK.

Now double-click Access This Computer From The Network and be sure your username or group is listed. If not, click Add User Or Group, type your username or group name and click OK twice. Now go back to the client computer and try the logon. If still unsuccessful, restart the computer and try again. [R]

by Jerry Hatchett

# Windows 98 Installation Error Messages

## Get Windows Up & Running

**A**lthough Windows XP is the version of choice among today's Windows users, we know there are still a lot of Windows 98 installations taking place, too. In certain situations Win98 is actually a viable solution when WinXP is not. For example, there are DOS applications that have been chugging along for years, programs that still perform admirably when called upon. Many of these applications require a real-mode DOS environment, and Win98 Second Edition was the last version of Windows to provide a real-mode DOS prompt. So, with a hearty salute to the workhorse known as Win98, here we go.

### General Installation Error Messages

**Error Message:** "Warning SU0010 — Setup has detected a Boot Manager partition on your computer. If you set up Windows, you will not be able to use Boot Manager. For more information, quit Setup, and read SETUP.TXT on Setup Disk 1 or the Windows CD-ROM."

**Translation:** If you currently have boot manager software installed that allows you to boot into different operating systems, Win98 will probably disable it by making its own changes to the hard drive's boot record.

**Solution:** Be very careful here. Boot record changes can render a hard drive unable to boot, and repairing the damage can be difficult. The best solution is to install Win98 onto a hard drive without a boot manager installed and then install and configure the boot manager. We also recommend going to the Microsoft Knowledge Base at support.microsoft.com and reading article 289283, concerning multiboot configurations.

**Error Message:** "Warning SU0011 — Setup has detected a password-protected partition on your hard disk. To set up Windows 95 (or Windows 98), you first need to remove the password protection. For more information, see SETUP.TXT on Setup Disk 1 or the Windows CD-ROM."

**Translation:** The Windows setup process cannot run successfully on a password-protected hard drive or partition.

**Solution:** Disable the password protection, install Win98, and then re-enable the protection. To disable password protection on newer

file system partition on your hard disk. Files on this partition will not be available when you use Windows 95 (or Windows 98). For more information, see SETUP.TXT on Setup Disk 1 or the Windows CD-ROM."

**Translation:** Hard drives are divided into sections called partitions. The most



Warning SU0010



Warning SU0011

hard drives that provide this security feature, refer to the hard drive manufacturer's instructions. For older machines that offer drive or partition protection at the BIOS (Basic Input/Output System) level, you will have to enter the computer's BIOS configuration utility and look for security settings that can be adjusted. On most computers instructions for entering BIOS setup are displayed on the screen early in the boot process. Common keys for entering BIOS setup are DELETE and F2.

**Error Message:** "Warning SU0012 — Setup detected an OS/2 or Windows NT

common partitioning configuration is that of a single partition that uses all available space on the hard drive, but it is also possible to create multiple partitions on a single hard drive. The computer recognizes these partitions and essentially treats each one as if it were a separate hard drive. Different partitions can contain different file systems, such as FAT16, FAT32, NTFS (used by Windows NT/2000/XP), OS/2, and others. Both OS/2 and WinNT use file systems that will not be recognized or read by Win98.

**Solution:** Although a FAT32 partition (the type used by Win98) can certainly exist on a

hard drive alongside partitions that contain different file systems, Win98 will not be able to see or access those partitions. If you need access to the files on those partitions, you will also need an operating system(s) capable of accessing those partitions and files.

**Error Message:** “Warning SU0016 — Setup has detected OS/2 files on your computer. If you set up Windows 95 (or Windows 98), you may not be able to use OS/2. For more information, quit Setup and read SETUP.TXT on Setup Disk 1 or the Windows CD-ROM.”

**Translation:** The Win98 installation may make changes to the hard drive’s MBR (Master Boot Record) that render existing OS/2 installations unable to run.

**Solution:** Install Win98 first and then install boot manager software that will allow you to run multiple operating systems from the same hard drive.

**Error Message:** “Error SU0018 — Setup could not create files on your startup drive and cannot set up Windows.”

There may be too many files in the root directory of your startup drive. For more information, see SETUP.TXT on Setup Disk 1 or the Windows CD-ROM.”

**Translation:** The “top” directory on a hard drive, such as the C: directory, is known as the root directory. Older drives may be formatted with an older file structure, such as FAT16, that allows a maximum of 512 files or directories within the root directory. You may be so close to this limit that Win98 Setup cannot create the files and directories it needs in order to complete the installation.

**Solution:** First, it’s simply bad housekeeping to have a large number of files in your root directory. Consider cleaning up and reorganizing any existing data. Or, if you don’t need the existing data, you can also reformat the drive to the newer and more efficient FAT32 file system.

Running Windows Setup from DOS will allow you to make decisions about formatting and partitions. You may have to configure your computer’s BIOS settings to boot first to the CD. On most computers instructions for entering BIOS setup are displayed on the screen early in the boot process. Common keys for entering BIOS setup are DELETE and F2. Once you have configured the computer to boot to the CD-ROM, restart and follow the on-screen instructions for Setup.

**Error Message:** “Warning SU0019 — Setup has found commands in your AUTOEXEC.BAT or CONFIG.SYS files that are not compatible with Windows.”

**Translation:** AUTOEXEC.BAT and CONFIG.SYS are special startup files that issue instructions to your computer during the boot process. Win98 Setup has found such instructions in your startup files that are incompatible with Win98.

**Solution:** After obtaining permission from you, Setup will create backup copies of your existing AUTOEXEC.BAT and CONFIG.SYS files and then create new ones that are compatible with Win98. Do note that

**Error Message:** “Warning SU0133 — Setup was unable to determine your system configuration by using full detection. Would you like to try again using minimal detection?”

**Translation:** This error, as well as other error messages related to hardware detection, or even “freezes” or “hangs” that don’t generate an error message at all, can be caused by a variety of issues, including excessive size of certain files, missing files, and hardware that is not compatible with Win98.

**Solution:** First, answer Yes to the question and let Setup try again, with a less aggressive hardware-probing routine. If this also fails, proceed to the next paragraph.



Warning SU0016



Warning SU0019



Warning SU0133

if existing software or hardware requires entries that were in the old startup files, you may have to make changes to the new versions after Setup has completed, in order to render that software or hardware useable again.

**Error Message:** “Error SU0129 — Setup was unable to determine your computer’s hardware configuration. Setup cannot continue and will now close.”

**Translation:** This error message occurs primarily during reinstallations of Win98 or Windows Me, specifically during the phase in which Setup probes the computer’s hardware in an attempt to identify it and install the drivers needed for proper operation.

**Solution:** Run Setup again and, when presented with the option, choose Safe Recovery. Also, note the discussion about Error Message SU0133 later in this article, which may contain information relevant to this issue.

Look in your root directory (C: on most systems) for the presence of a file called Setuplog.txt. If that file is larger than 64KB, rename it to Setuplog.bak and run Setup again. If the file size is less than 64KB, proceed to the next paragraph.

Restart your computer and immediately after the POST (Power On Self Test; a startup routine during which core hardware components are tested for proper operation, and often listed on-screen), press and hold the CTRL key. When the Win98 Startup Options screen appears, choose Safe Mode.

Once Windows loads in Safe Mode, click Start, Run, and then type `msconfig`. Click OK. On the General tab, click Selective Startup and be sure the following checkboxes are all unchecked:

- Process Config.sys File
- Process Autoexec.bat File
- Process Winstart.bat File
- Process System.ini File

- Process Win.ini File
- Load Startup Group Items

Click OK and then allow the requested restart. If Setup finishes, click Start, Run, and then type **msconfig**. Click OK. Click to place a check mark in the Normal Startup checkbox and then confirm the requested restart. If the computer operates properly, you're done. If it hangs again proceed to the next paragraph.

Run **msconfig** again, recheck Selective Startup, and clear all the checkboxes except one. Restart the computer. If it doesn't run properly, you know the problem lies within the settings of the one checked startup file. Make a note of which startup file was selected, uncheck it, check a different one, and then restart the computer. Continue this cycle until you locate the startup file causing the problem. Go to the Microsoft Knowledge Base and search for articles related to Win98 and that startup file.

If all the above steps fail to yield a completed setup and smooth operation, you probably have a hardware incompatibility. Shut down the computer, power it off, and physically disconnect the power cable from the computer. Now, disconnect or remove all nonessential hardware. Reconnect power and restart the computer. If Setup completes successfully and smooth operation follows, shut the computer down, power it off, remove the power cable, and reconnect or reinstall a single piece of hardware. Continue this cycle until you find the offending device. Either replace that device with a compatible version, or visit the



**Warning SU0141**

Microsoft Knowledge Base to see if there is a solution to the problem.

**Error Message:** "Warning SU0153 — Drive X, the host drive for the compressed Y drive, must have at least Z bytes free to set up Windows. Free some disk space, and then run Setup again."

**Translation:** This computer is using disk compression to increase available space. The host drive X (the drive letter for the host drive will be listed in an actual error message) is the real, physical hard drive, and it must have enough space to create the Y drive (again, you would see

a drive letter here in an actual error message), which is a virtual drive that you can use as if it were a real drive. Clear as mud? Read on.

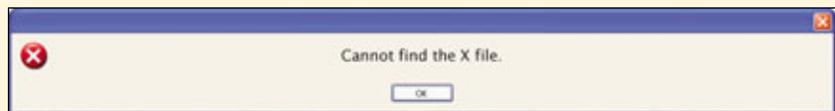
**Solution:** Fortunately, hard drive space has gotten so affordable that there's rarely a real-world need for a compressed drive. Nonetheless, if you're working with an old system and you don't want to install a new hard drive, simply free up some space by

### Most Hilarious Error Message

**Error Message:** "Error SU0409  
Cannot find the X file."

**Translation:** Golly gee, we just couldn't help ourselves.

**Solution:** It would appear that Mulder and Scully are forever relegated to rerun status. Sad but true. Give it up.



deleting unnecessary files. Note that even though you may be installing Win98 to the virtual drive, the host drive is where you'll need to delete files.

**Error Message:** "Warning SU0141 — Setup could not copy files needed for your startup disk. You can still continue with Setup without creating the startup disk. Click OK to continue."

**Translation:** Copying startup files to the floppy disk failed.

**Solution:** Although the quickest solution is to skip the creation of a startup disk, this is also the riskiest path. Try changing to a new diskette, one without any existing data on it. Be sure the write-protect tab is set to the Write position by finding the sliding plastic tab and ensuring that it's closed. If there's an open space around the tab, slide it closed. If the procedure still fails, try cleaning out your floppy drive with a can of compressed air. If this fails your floppy drive may need to be replaced.

**Error Message:** "Warning SU0151 — Setup could not verify that your

computer has the minimum amount of memory (RAM) required to run Windows 95 (or Windows 98). Do you want to continue with Setup?"

**Translation:** Your computer has less than 16MB of RAM or you have defective RAM.

**Solution:** Add more RAM or replace defective RAM. The more RAM you have, the smoother and faster your computer will run.

Fortunately the price of RAM has dropped significantly over the past few years.

**Error Message:** "Warning SU0159 — The directory X you specified contains a Windows NT installation. Setup cannot install Windows in this directory. Please choose a different directory."

**Translation:** The directory you have chosen for the Win98 installation, which will be listed in the error message instead of the X, contains an installation of WinNT.

**Solution:** Choose another directory, and bear in mind that multiple installations of Windows on the same hard drive or partition can cause confusion and difficulty, especially when the installations are different versions. We also recommend going to the Microsoft Knowledge Base and reading article 289283 concerning multiboot configurations.

**Error Message:** "Warning SU0160 — The directory X which is needed to install Windows into already contains a Windows installation. Please choose a different installation directory."

**Translation:** You're trying to install on top of an existing Windows installation.

**Solution:** Unless you *intend* to install on top of an existing installation for repair purposes (in which case, the versions need to be identical), choose another directory, and bear in mind that multiple installations of Windows on the same

hard drive or partition can cause confusion and difficulty. We also recommend going to the Microsoft Knowledge Base and reading article 289283 concerning multiboot configurations.

**Error Message:** “Warning SU0167 — The specified directory contains a directory named ‘desktop’ that you must move or rename before Setup can continue. For more information, see SETUP.TXT on Setup Disk 1 or the Windows CD-ROM.”

**Translation:** The Desktop directory is a key component of any Windows installation. Win98 must create its own Desktop directory within the installation directory, and cannot do so if a Desktop directory already exists there.

**Solution:** Choose another installation directory, or rename or move the existing

the installation directory, and there is no D: drive, the installation will fail. Also be sure that you haven’t specified a drive/directory combination that contains existing directories or files of the same names that Windows will be creating during the installation. In best practice all new installations of Windows should point to a fresh, empty directory, where no possibility of conflict exists.

**Error Message:** “Warning SU0344 — The Windows directory X you have specified does not currently exist. Please verify that the path is correct.”

**Translation:** This is another self-explanatory error message.

**Solution:** Be sure you typed the path correctly. One common mistake when entering paths on a local drive is the use of forward slashes (/)

`copy c:\windows\license.txt c:\windows\help`

Press **y** when you are prompted to overwrite the file and then restart the computer.

**Error Message:** “Error SU0358 — Setup detected one or more MS-DOS-based programs running on your computer. Close your MS-DOS programs, and then click OK to continue. Or, click Cancel to quit Setup.”

**Translation:** Setup cannot run properly while DOS-based programs are running.

**Solution:** Shut down any DOS programs that are running on your computer and then click OK.

**Error Message:** “Warning SU0361 — A Windows registry file was found. If Windows 95 (or Windows 98) is installed in another directory, continuing with Setup will disable it. Do you want to continue?”

**Translation:** Setup has found what appears to be an existing Windows installation in a different directory on the hard drive and wants you to understand that the new installation is going to disable the old one.

**Solution:** Multiple installations of Windows on the same partition can lead to confusion and difficulty. Consider installing to a different hard drive, or use a nondestructive partition manager to create a new partition for the new installation. We also recommend going to the Microsoft Knowledge Base and reading article 289283 concerning multiboot configurations.



Warning SU0167



Error SU0350



Error SU0515

Desktop directory. Also, note that having multiple installations of Windows on the same hard drive or partition can lead to confusion and difficulty. We recommend going to the Microsoft Knowledge Base and reading article 289283 concerning multiboot configurations.

**Error Message:** “Warning SU0343 — Setup could not create X. Make sure you specified a valid drive letter and directory name. Also make sure the directory name does not conflict with existing files on your drive.”

**Translation:** Setup has tried to create a needed directory on the installation hard drive or copy needed files onto the installation hard drive, and failed.

**Solution:** Be sure you specify an installation path that exists. If you specify D:\WINDOWS as

instead of the correct backslash (\) that is always used when referring to a local drive and path.

**Error Message:** “Error SU0350 — Setup was unable to display the Nondisclosure Agreement. Setup will now close.”

**Translation:** Being low on memory can generate this error or there may be an actual problem with your License.txt file.

**Solution:** Restart the computer and run Setup again. If it fails again, proceed to the next paragraph.

Restart the computer. As soon as the computer starts to boot, press and hold the CTRL key until the Win98 Startup menu appears. Choose Safe Mode Command Prompt Only and press ENTER. When the command prompt appears, type the following line, and press ENTER:

**Error Message:** “Warning SU0366 — This option disables some of the commands in your AUTOEXEC.BAT and CONFIG.SYS files to ensure that Windows 95 (or Windows 98) installs correctly and uses the fastest drivers.”

**Translation:** AUTOEXEC.BAT and CONFIG.SYS are special startup files that issue instructions to your computer during the boot process. Setup is warning you that changes are about to be made to your startup files.

**Solution:** No action is required. Setup will make the needed changes to the files, but you should be aware that existing software or devices may not function properly after those changes are made.

**Error Message:** “Error SU0515 — Setup was unable to configure your network

components. To continue without network support, click Yes. To quit Setup, click No.”

**Translation:** During Win98 installation, Setup probes your hardware, including network adapters, and attempts to configure your network automatically. This attempt has failed.

**Solution:** Click Yes, allow Setup to complete the installation, and then use Win98’s Network Troubleshooter.

**Error Message:** “Warning SU0516 — Setup ran into problems while trying to set up the following device on your computer: X

Setup will attempt to install this device later. If problems persist, run Setup again and choose Safe Recovery when prompted. Click OK to continue.”

**Translation:** During Win98 installation, Setup probes your hardware and attempts to install all drivers needed in order for your hardware to function. This attempt has failed on one particular hardware device, the name of which will replace the X in the actual error message.

**Solution:** If the device is nonessential, shut down the computer, disconnect the power cable, and remove the device. Restart the computer and run Setup again. After completing Setup, shut down the computer, disconnect the power cable, and reinstall the device, following manufacturer instructions.

**Error Message:** “SU5038 — Error in command line.”

**Translation:** When it is run from a DOS command prompt, Setup can be configured to handle a number of installation tasks automatically, without requiring the user to answer questions throughout the process. An incorrect option has been specified.

**Solution:** To obtain the correct command-line option in DOS, go to the directory where Setup.exe resides, type `setup.exe /?`, and press ENTER.

**Error Message:** “There is a crosslinked file on drive X. Please run SCANDISK.EXE from Setup disk 1 or the Windows CD-ROM to fix the problem. Setup cannot continue.”

**Translation:** Setup has encountered a disk error on the installation hard drive (X) that must be corrected before Setup can proceed.

**Solution:** From a DOS command prompt, type `y`, substituting the actual drive letter for

### Most Confusing Error Message

**Error Message:** “Warning SU0362  
It is not recommended that Setup continue without the proper amount of disk space free. If you continue, Setup may run out of disk space and not complete successfully.”

**Translation:** Win98 Setup will perform a check to be sure your hard drive is working properly and has enough free space for the install. And if, by chance, the hard drive doesn’t have enough free space, Setup may give you the option to continue the install anyway. Why? We don’t know.

**Solution:** If you don’t have enough drive space, abort the installation and create the needed space. Run Setup again.



the CD-ROM drive that contains the Win98 Setup disk, and press Enter. Now type `scandisk` and press ENTER. Follow on-screen progress and interact with any user prompts as needed. Once Scandisk has repaired the drive error, run Setup again.

You may use an alternate disk repair utility, such as Norton Disk Doctor, if you prefer. To run the DOS version of Norton Disk Doctor, navigate to the directory that contains NDD.EXE, type `ndd`, and press ENTER. As

**Error Message:** “Warning SU0409 — Windows Setup was unable to update your system files. This may be caused by virus detection that is built in to your computer, or by virus detection software running on your computer.”

**Translation:** Antivirus software has detected Setup’s attempts to modify system files, has interpreted those attempts as malicious, and has prevented Setup from being able to carry out the necessary modifications.



There is a crosslinked file on drive X



Warning SU0409

with Scandisk, monitor the on-screen progress and interact through user prompts as needed to complete the operation.

**Error Message:** “A Product Identification Number is required to set up Windows 95 (or Windows 98).”

**Translation:** Win98 installation requires entry of the 25-character product key that came with the setup disc.

**Solution:** When requested, enter the 25-character product key and press ENTER.

**Solution:** Before attempting a Win98 installation, whether a fresh installation or upgrade, disable any antivirus software that is running. In upgrade situations you should be able to run the antivirus software from the existing version of Windows and turn off the antivirus protection.

Also note, however, that some antivirus packages also run outside the Windows environment. Some run in DOS, checking boot records during the earliest part of the boot process. Some are even configured with the computer’s

BIOS setup utility so that they run immediately after the computer's POST routine runs.

Before running Setup, locate and disable all instances of antivirus protection on your computer. After completing the Win98 installation, be sure to re-enable the protection. You may or may not be required to get updated versions of the antivirus software, but we highly recommend the use of good antivirus protection in this virus-laden era.

## Upgrade-Specific Error Messages

**Error Message:** "Warning SU0164 — Setup cannot upgrade the version of Windows in X, because you are running Windows from a different directory. Please choose a different directory."

**Translation:** You are trying to install a Win98 upgrade into a different directory, X (the directory name will be specified in the actual error message), from the currently active Win95 installation.

**Solution:** Change the Win98 upgrade installation directory to the directory where the instance of Win95 that is currently active is installed.

Or, you can run Setup from DOS and specify a directory other than the one in which the currently active Win95 installation is

system installed, which cannot be upgraded by this version of Setup."

**Translation:** Setup has found an existing operating system on your computer, but that operating system is not eligible for the upgrade you're trying to install.



Warning SU0168

**Solution:** Obtain an upgrade disc that is valid as an upgrade path from your current operating system. If you believe this to already be the case, contact Microsoft's customer support.

**Error Message:** "Warning SU0346 — Setup cannot upgrade Windows. The directory X does not contain a valid Windows installation. Please specify another directory."

**Translation:** Setup will only run from a Win98 upgrade disc if the computer already contains an operating system that is eligible for upgrade to Win98, namely, a valid lower-version Windows installation. For example, you can install a Win98 upgrade on a comput-

er that contains a valid installation of Win95, but you cannot install that same disc onto a computer that contains only an MS-DOS operating system.

**Solution:** Obtain an upgrade disc that is valid as an upgrade path from your current operating system. If you believe this to already be the case, contact Microsoft's customer support.

**Solution:** If the foreign-language version of Windows is the one you need, obtain a Win98 upgrade disc in that language. If Standard English is what you want, choose a new, fresh installation directory.

**Error Message:** "Error SU0013 — Setup could not create files on your startup drive and cannot set up Windows. If you have HPFS or Windows NT file system, you must create an MS-DOS boot partition. If you have LANtastic server or SuperStor compression, disable it before running Setup. See SETUP.TXT on Setup Disk 1 or the Windows CD-ROM."

**Translation:** Hard drives are divided into sections called partitions. The most common partitioning configuration is that of a single partition that uses all available space on the hard drive, but it is also possible to create multiple partitions on a single hard drive. The computer recognizes these partitions and essentially treats each one as if it were a separate hard drive. Different partitions can contain different file systems, such as FAT16, FAT32, NTFS (used by WinNT/2000/XP), OS/2, and others. Both OS/2 and WinNT use file systems that will not be recognized or read by Win98. This error message indicates that the installation hard drive contains other partition types, but no FAT32 partition as required by Win98.

**Solution:** You must create a FAT32 partition on your hard drive. The simplest way is to boot directly to the Win98 Setup CD-ROM and let Setup handle creation of the needed partition. You may have to configure your computer's BIOS settings to boot first to the CD. On most computers, instructions for entering BIOS setup are displayed on the screen early in the boot process. Common keys for entering BIOS setup are DELETE and F2. **[RS]**

by Jerry Hatchett

## Most Frustrating Error Message

**Error Message:** "An unknown error has occurred."

**Translation:** We're good, but we're not that good.

**Solution:** When all else fails, reboot and try again.



located. To run Setup from DOS, you may have to configure your computer's BIOS settings to boot first to the CD. On most computers instructions for entering BIOS setup are displayed on the screen early in the boot process. Common keys for entering BIOS setup are DELETE and F2. Once you have configured the computer to boot to the CD-ROM, restart and follow the on-screen instructions for Setup.

**Error Message:** "Warning SU0168 — Your computer already has an operating

system installed, which cannot be upgraded by this version of Setup."

**Solution:** Obtain an upgrade disc that is valid as an upgrade path from your current operating system. If you believe this to already be the case, contact Microsoft's customer support.

**Error Message:** "Warning SU0139 — The directory you specified contains a version of Windows with a different

# Windows 98 Startup & Shutdown Errors

## Enter & Exit On Your Terms

**S**tarting up and shutting down Windows 98 can be a harrowing experience. Windows attempts to connect to its various files, devices, and processes at startup and if it finds problems, generates error messages that are generally less than self-explanatory. The same can happen when Windows attempts to shut down. Here is a collection of the error messages that can show up at startup and shutdown, along with their explanations, and possible solutions.

### Fatal Exception Errors

**Error Message:** "A fatal exception XX has occurred at xxx:xxxxxxx"

**Translation:** You may see this error when you shut down your computer, start it up, or even when you start a program. XX indicates the error number, while xxx:xxxxxxx indicates the code segment.

**Solution:** "Clean boot" your computer (start your computer with a minimal set of files). If you've worked with Win98 for some length of time, you've undoubtedly seen a fatal exception error. There can be many causes for this type of error, but the first step is to narrow the focus by trying a clean boot of your computer.

**Error Message:** "A Fatal Exception 0E Has Occurred at 0028:<XXXXXXXX> in VXD SYMEvt(02)+XXXXXXXX."

**Translation:** This behavior can occur if an older version of a Symantec program (such as Norton AntiVirus) is installed.

**Solution:** To resolve this issue, disable the Symantec Symevnt.386 file by performing the following steps:

- Use Registry Editor to delete the following Registry key, if it exists: HKEY\_LOCAL\_MACHINE\SYSTEM\CURRENTCONTROLSET\SERVICES\VXD\SymEvt.

- Click Start and Run, type **sysedit**, and then click OK. On the Window menu, click System.ini. On the Search menu, click Find. In the Find box, type **symevnt.386**, and then press ENTER. Place a semicolon at the beginning of the line that contains "symevnt.386." On the File menu, click Save and then click Exit. Restart your computer. After Setup has finished successfully, you can reinstall the affected Symantec program. If you still have a problem, contact Symantec ([www.symantec.com](http://www.symantec.com)).

**Error Message:** "Fatal Exception 0D" Using ATI All-in-Wonder Pro Video Adapter

**Translation:** After you install one of the ATI All-in-Wonder Pro video adapter drivers version 5.0 or later provided by ATI, you may receive this error message on a blue screen. This can happen under either of the following conditions:

- You are using a program written to use features of the Windows 3.x 16-bit video device drivers that aren't available in the 32-bit video device drivers used in Windows 98/Me.
- You are using a program that installs an older version of a multimedia program.

**Solution:** Contact ATI Customer Care ([www.ati.com/support](http://www.ati.com/support)) to get the correct drivers for your video adapter. To work around this behavior, follow these steps: Restart your computer in Safe mode. Click Start and Run, type **msconfig**, and then click OK. Click the System.ini tab, double-click the [boot] branch to expand it, and then right-click Display.driv=Pnpdrv.driv. Click Clear, OK, and then Yes when you are prompted to restart your computer. Repeat steps 2 and 3. Click Select and OK, and then click No when you are prompted to restart your computer.



Click Start, point to Settings, and then click Control Panel. Double-click Display, click the Settings tab, and then click Advanced. Click the Adapter tab, Change, Next, and then click Display A List Of All The Drivers In A Specific Location, So You Can Select The Driver You Want. Click Next and then click the ATI All-In-Wonder Pro dated 5/11/98. Click Next, click Next, and then click Finish. Click Apply and Close, and then restart your computer.

**Error Message:** "A Fatal Exception 0E has occurred at 0028:C001AEEB"

**Translation:** When you try to shut down your Win98-based computer with a Compaq FX-series monitor, you may receive an error message like this one.

This can happen because the version of USB (Universal Serial Bus) support software included with some FX-series monitors isn't completely compatible with Win98.

**Solution:** Get the most current version of the USB support software for FX-series monitors from HP/Compaq ([www.hp.com](http://www.hp.com)).

**Error Message:** "A fatal exception 0E has occurred at 0028:C02A0201 in VXD IOS(04)+00001FC9"

**Translation:** When Setup restarts your computer for the last time during Win98 installation, you could get this error message on a blue screen. This can happen if Corel CD Creator 2.0 is installed on your computer. Windows isn't compatible with the Cdraspi.vxd file installed by Corel CD Creator 2.0.

**Solution:** Start Windows in Safe mode (Mode). Click Start, point to Find, and then click Files Or Folders. In the Named box, type `cdraspi.vxd`, and then click Find Now. In the list of found files, right-click the `Cdraspi.vxd` file, and then click Rename. Type a new name for the `Cdraspi.vxd` file (such as `Cdraspi.xxx`) and then press ENTER. Restart your computer normally.

**Error Message:** “Fatal Exception 0E at 0028:c028bac6 in VXD Vwin32(05)+0000281a dmistart timed out waiting for INIT-COMplete message from c:\programfiles\intel\ldcm\win32sl.exe -i -r ia error, ..\..\dmispio.cpp::320 unable to register with service provider.” or “Microsoft visual C++ runtime library: runtime error! c:\program files\intel\ldcm\ci\ia\ciamngr.exe abnormal program termination.” or “dmistart caused an IPF in module dmistart.exe at 015f:00401a0c”

**Translation:** After upgrading to Win98, you could receive one or more of these error messages. You could also receive a series of “Invalid page fault” error messages in files with the .AC extension. This can show up if your computer automatically starts the third-party DMI (Desktop Management Interface) Start utility.

**Solution:** Contact the manufacturer of the DMISStart utility to inquire about the availability of a fix for this issue. To work around this issue, disable the DMISStart utility. Restart the computer in Safe Mode, click Start, point to Programs, point to Accessories, point to System Tools, and then click System Information. On the Tools menu, click System Configuration Utility. On the Startup tab, click to clear the checkbox next to DMISStart. Click OK. When you are prompted to restart the computer, click Yes.

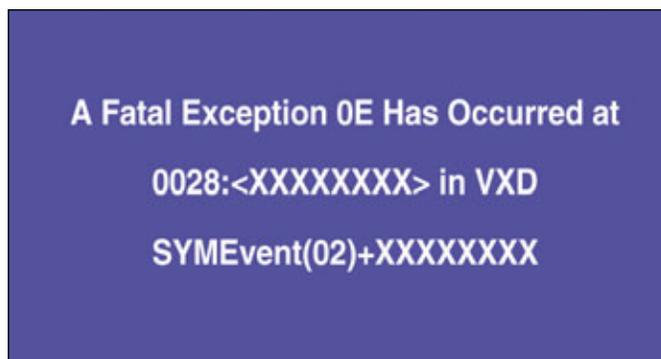
**Error Message:** “A Fatal Exception 0E has occurred at 0028:C00082CD in VxD VMM(01)+000072CD”

**Translation:** When you attempt to shut down or restart your computer, you may get this error message if you are using a Matrox video adapter. This issue can show up if you have an incompatible or early version of a Matrox video driver installed on your computer. The VxD in the error message refers to a virtual device driver (a simulation buffer between applications and hardware that ensures that the

correct application gets the correct information from the hardware).

**Solution:** Download and install the latest Matrox video driver for your video adapter from the Matrox Web site ([www.matrox.com](http://www.matrox.com)).

**Error Message:** “A fatal exception 06 has occurred at xxxx:xxxxxxxx. The current application will be terminated.”



Fatal Exception Error

**Translation:** If you press CTRL-ALT-DELETE twice on a USB keyboard in Windows, you may receive this error message on a blue screen.

**Solution:** Don't do that. Restarting Windows by pressing CTRL-ALT-DELETE twice causes Windows to halt most processes and should be used only when the normal shutdown process is not possible. Use the Shut Down command on the Start menu to restart your computer.

**Error Message:** Win98 Shutdown Generates “Fatal 0E” Error Messages with Alps Electric USB Server

**Translation:** On Compaq computers with Alps Electric USB Server, you may receive a “Fatal 0E” error message when you shut down the computer. Win98 supports USB, and the Alps server isn't required, but Windows doesn't disable this program during installation.

**Solution:** Contact Compaq for information about an update to correct this behavior. You can also disable this software. However, doing this affects your ability to control some features on the monitor. To disable this software, click Start, click Run, type `msconfig`, and then click OK. In the System Configuration utility, click the Startup tab, click to clear the Alps Electric USB Server checkbox, and then click OK. After you make this change, restart your computer.

**Error Message:** “Fatal Exception Error Message in VXD IOS(04). The current application will be terminated”

**Translation:** When you start your computer, you may receive this error message on a blue screen. This issue can occur if the `Sb16.vxd` file is located in the `C:\WINDOWS\SYSTEM\Iosubsys` folder.

**Solution:** Rename the `Sb16.vxd` file in the `C:\WINDOWS\SYSTEM\Iosubsys` folder by following these steps: Restart your computer in Safe Mode. Click Start, point to Find, and then click Files Or Folders. In the Named box, type `sb16.vxd` and click Find Now. In the list of found files, right-click the `Sb16.vxd` file that is located in the `C:\WINDOWS\SYSTEM\IOSUBSYS` folder, and then click Rename. Type `sb16.old`, press ENTER, and then restart your computer.

## Windows Protection Errors

**Error Message:** “While initializing device XX Windows Protection Error”

**Translation:** Windows Protection error messages can occur under a number of conditions.

**Solution:** Start Win98 in Safe Mode. If you do not receive the error message when you start your computer in Safe Mode or when you shut down your computer from Safe Mode, search the Microsoft Knowledge Base for the error message code. If you receive the error message when you attempt to start the computer in Safe Mode, follow the steps listed below to restore the Registry. Boot the computer from an EBD (Emergency Boot Disk). If you do not have an EBD, view one of the following articles in the Microsoft Knowledge Base ([support.microsoft.com](http://support.microsoft.com)):

- 267287 How to Create a Startup Disk in Windows
- 187632 How to create a Win98 Startup Disk Follow the steps in the following articles that correspond to your Operating System.
- 221512 How to Manually Restore the Win98 Registry

Or, if your computer is a Plug and Play computer, reinstall Windows by using the `setup /p I` command.

Verify that the computer's CMOS (complementary metal-oxide semiconductor) settings are correct. For information about how to change CMOS settings on your computer, view the computer's documentation or contact the computer manufacturer.

**Error Message:** “Windows Protection Error,” or your computer may stop responding (hang) while displaying the “Windows is Shutting Down” message.

**Translation:** When you try to shut down a computer that is running Win98 and the floppy drive light is on, you may experience one or more of these symptoms. Your antivirus program is causing the computer to stop responding when you shut down.

**Solution:** Contact the manufacturer of your antivirus program to inquire about the availability of a fix for this issue.

To work around this issue, configure your antivirus program not to scan floppy disk drives when you shut down your computer.

## File Missing Or Damaged

**Error Message:** “The Windows registry or SYSTEM.INI file refers to this device file, but the device file no longer exists. A Windows virtual device driver (VxD) referenced in the System.ini file or registry is missing or damaged.”

**Translation:** At startup, you may receive the error message stating a file is missing. (NOTE: The specific file may not be named.)

This error message can occur for either of the following reasons:

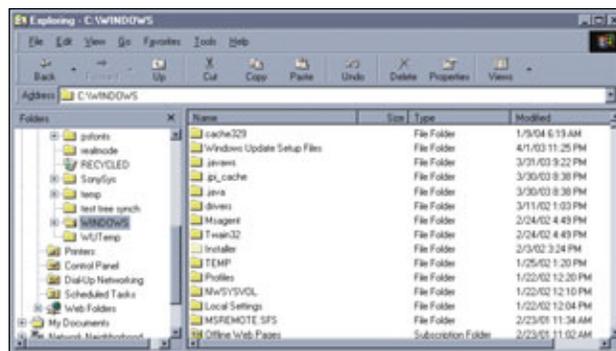
- One of the StaticVxD values in the Registry contains invalid data. For example, the value is blank or contains only spaces. In this case, the missing device driver is not named in the error message.

**Solution:** Follow each step below until you don't get the error any longer:

- If you have recently removed a program or component, reinstall the program or component, and then run the uninstall tool, if one is available. If no uninstall tool is available for the program or component, contact the manufacturer to obtain instructions on uninstalling.
- If the missing device driver has a .386 extension, disable the line referring to this device driver in the System.ini file by placing a semicolon at the beginning of the line. For example, where XX is the file name and the line referencing the missing device driver reads: device=XX.386, change the line to read: ;device=XX.386.
- If the missing device driver has a .VXD extension, it is a driver designed for use with Win98 and is referenced in the Registry. In

most cases, a program or component with drivers designed for use with Win98 will also be listed in the Add/Remove Programs tool in Control Panel. Following the instructions in the first step should correct the problem.

- If the error message still occurs after following the instructions above, or it does not apply, extract the missing file from the Win98 CD-ROM as follows: Click Start, point to Programs, point to Accessories, point to System Tools, and then click System Information. On the Tools menu, click System File Checker. Click Extract One File From Installation Disk, type the name of the file you want to extract in the Specify The System File You Would Like To Restore box, and then click Start. In the Restore From box, type the path to the Win98 folder on the Win98 CD-ROM. Type the destination folder in the Save File In box if necessary, and then click OK.



**Applications as seemingly stable as Windows Explorer can trigger an error when shutting down Window 98. The program itself is not the real culprit; you'll need to look for any error codes that show up in order to hunt down the real problem.**

Click OK, click OK, and then click Yes when you are prompted to restart your computer.

**Error Message:** “VMM32.VXD Is Required to Run Windows. . .”

**Translation:** This problem may happen if the C:\WINDOWS\System folder is missing or renamed, or if the PATH line in the Autoexec.bat file is missing or does not include the C:\WINDOWS\System folder.

**Solution:** Try this first: At the command prompt, type `dir vmm32.vxd /s`. If the Vmm32.vxd file is not found, you must install Win98 again. If the Vmm32.vxd file is found, note the folder in which it is located and then continue with the next step.

At the command prompt, type the following commands; press ENTER after each command:

```
cd windows
ren [folder] system
```

([folder] should be the name of the folder you took note of.) Restart your computer. If this method doesn't work, try this: Using a text editor (such as Notepad), edit the Autoexec.bat file and add or modify the PATH line so that it includes the C:\WINDOWS\System folder. For example, add the following line to your Autoexec.bat file: `path=c:\windows\system`.

**Error Message:** “TASKMON caused an invalid page fault in module KERNEL32.DLL,” or “EXPLORER caused an invalid page fault in module KERNEL32.DLL.”

**Translation:** When you attempt to start or shut down Win98 or start Windows Explorer, you may receive one of the error messages.

This can happen if log files in the C:\WINDOWS\Applog folder are damaged. When you shut down Win98, the Task Monitor tool attempts to update the log files, and when it can't, the error message occurs.

**Solution:** Double-click My Computer on the Desktop. Double-click the drive that contains the Windows folder. On the View menu, click Folder Options.

Click the View tab. Under the Hidden Files section, click Show All Files. Click OK.

Double-click the Windows folder. Right-click the Applog folder, click Rename, type a new name for the folder (such as Applog2), and then press ENTER. Restart your computer. The Applog folder and log files are recreated automatically.

**Error Message:** “Msgsrv32 Caused a General Protection Fault in User.exe”

**Translation:** This error message may show up when you shut down. This behavior can occur if you have faulty computer hardware or a damaged driver or program, or if Windows' core files are damaged.

**Solution:** To work around this behavior, you must first determine whether it is caused by software or hardware. If you restart your computer in Safe Mode and the error message does not occur, the origin is more likely to be a driver or program. If you restart your computer in Safe Mode and the error message does occur, the issue is more likely to be hardware or damaged Windows core files. Restart your computer in Safe Mode. Test your computer in Safe Mode. If you don't get the error message, use the following steps with the System

Configuration utility to identify which program or driver is causing the error message: Click Start, point to Programs, point to Accessories, point to System Tools, and then click System Information. On the Tools menu, click System Configuration Utility. On the General tab, click Selective Startup, and then click to clear the following checkboxes:

- Process Config.sys File
- Process Autoexec.bat File
- Process Winstart.bat File (if available)
- Process System.ini File
- Process Win.ini File
- Load Startup Group Items

Click OK and restart your computer. After you restart and test your computer, if you still do not receive the error message, try the next steps:

- Identify the entry that is causing the error message.
- Run the System Configuration Utility again. Click to select one check box under Selective Startup, click OK, restart your computer, and then test.
- Continue this process until you have selected all of the items under Selective Startup.

If you select an item and the issue occurs, click the tab for the corresponding Selective Startup item, clear half of the check boxes, click OK, and then restart your computer. Continue this process until you locate the setting that is causing the issue.

If you can restart your computer successfully when all of the items are selected, run the System Configuration utility, click Normal Startup, click OK, and then restart your computer.

## Reinstall Windows Errors

**Error Message:** “Error Loading User.exe. You Must Reinstall Windows”

**Translation:** You may get this error if the Ddeml.dll file is missing or corrupted.

**Solution:** Start your computer with the Windows Startup disk. Choose Start Win98 With CD-ROM Support from the Startup menu and then press ENTER.

Type the following command and then press ENTER: `extract [drive]:\win98\win98_xx.cab ddeml.dll /I c:\windows\system` ([drive] is the CD-ROM drive containing your Win98 CD-ROM and xx is 28 if you are running Win98 Second Edition, or 31 if you are running Win98). Remove the Startup disk and restart the computer.

**Error Message:** “Error Loading Kernel. You Must Reinstall Windows.” Then, after you receive this error message, Windows quits.

**Translation:** You may get this error message when you start Windows.

**Solution:** To resolve this situation, extract a new copy of the Kernel32.dll file from your original Windows disks or CD-ROM. To do so, follow these steps:

- Restart your computer. Press and hold down the CTRL key while your computer restarts until you see the Win98 Startup menu, and then choose Command Prompt Only. Type the following commands, pressing ENTER after each line:  
`cd \windows\system`  
`ren kernel32.dll kernel32.xxx`
- Extract a new copy of the Kernel32.dll file from your original Windows disks or CD-ROM to the C:\WINDOWS\System folder by typing `extract [drive]:\win98\kernel32.dll /I c:\windows\system` (where [drive] is the CD-ROM drive containing your Win98 CD-ROM). Press ENTER and restart your computer.

**Error Message:** “Error Loading GDI.EXE. You Must Reinstall Windows”

**Translation:** Windows may stop responding (hang) when you start up. The Bootlog.txt

file shows a “loadfail” status for all font files. This error can occur if the Fonts folder is removed from the Windows folder.

**Solution:** To resolve this situation, reinstall Windows or boot the computer with a Win98 Startup disk with CD-ROM support. (Or choose Command Prompt Only from the Windows 95/98 Startup menu if you have real-mode CD-ROM drivers installed or if you have a copy of the Windows source files on your hard disk). Type the following commands, pressing ENTER after each command:  
`md c:\windows\fonts`  
`attrib +s c:\windows\fonts`  
`extract /a d:\win98\win98_22.cab *.fon /I c:\windows\fonts`  
`extract /a d:\win98\win98_22.cab *.ttf /I c:\windows\fonts`

Reboot the computer. If the Fonts folder exists, just use the extract commands to extract the fonts into the folder.

**Error Message:** “Error Loading GDI.EXE. You Must Reinstall Windows”

**Translation:** When you start Win98, you may receive this error message. After you receive this error message, the computer may stop responding (hang) or restart. This behavior may also occur when you start Win98 in Safe Mode.

## Most Hilarious Error Message

### Reload Windows

There’s actually nothing hilarious about having to reinstall Windows, but the recommendation shows up quite often in Windows error messages.

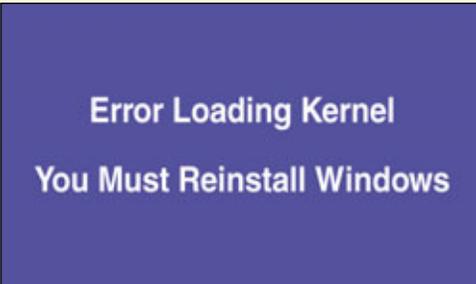
Fortunately, reinstalling Windows doesn’t always mean starting over with a newly formatted hard drive and losing all your work. Reinstalling Windows doesn’t change your currently installed programs

unless one of those programs has previously replaced a Windows system file. If a program does not work correctly after you reinstall Windows, reinstall the program, but remember that the program may be replacing one or more Windows system files.

To reinstall Win98 system files, reinstall Windows from your original installation media.

Often, using the System File Checker utility (sfc.exe) will leave your Registry settings intact.

Alternatively, it may be possible to simply replace a Windows OS file that is damaged by extracting it from the installation CD. □



Error Loading Kernel  
You Must Reinstall Windows

This behavior can occur if you are using a VGA video adapter driver and one or more of the following files are missing or damaged:

Vgasys.fon  
Vgaoem.fon  
Vga850.fon

**Solution:** To resolve this issue, rename the Vgasys.fon, Vgaoem.fon, and Vga850.fon files (if they exist) in the C:\WINDOWS\FONTS folder, and then extract new copies of the Vgasys.fon, Vgaoem.fon, and Vga850.fon files from your original Win98 CD-ROM to the Windows\FONTS folder (using the method outlined in the above error message).

### Device Failed Errors

**Error Message:** "VFAT Device Initialization Failed. A device or resource required by VFAT is not present or is unavailable. VFAT cannot continue loading. System halted."

**Translation:** You may receive the error message on a blue screen when you start your computer. It can be caused if: the Ifshlp.sys file is missing from the Windows folder; if the Config.sys file contains a line that points to a previous version of the Ifshlp.sys file; if the following Ifshlp.sys statement is deleted from the Config.sys file after you reinstall Windows: DEVICE=C:\Windows\Ifshlp.sys; if the [Paths] section in the Msdos.sys file is incorrect; if a Winboot.ini file from a previous incomplete installation is present in the root folder on your Startup disk; or if a "maxfilecache = 4096" line is present in the System.ini file.

**Solution:** Extract a new copy of the file from your original Windows CD-ROM to the Windows folder using the System File Checker utility outlined in the "The Windows registry or SYSTEM.INI file refers to this device file, but the device file no longer exists. A Windows virtual device driver (VxD) referenced in the System.ini file or registry is missing or damaged" error message above.

**Error Message:** "Cannot Find a Device File That May Be Needed to Run Windows or a Windows application." After you acknowledge this error message, Windows starts normally, but without Dial-Up Networking functionality.

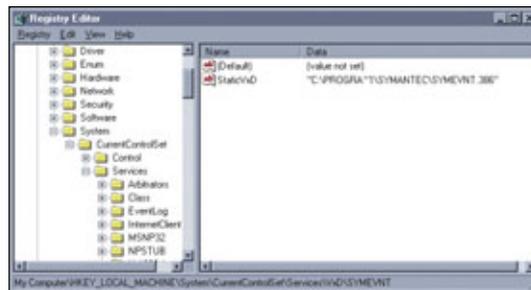
**Translation:** You may see this if you install Dial-Up Networking, Dial-Up Adapter, or Virtual Private Networking and then cancel

Setup while the Copying Files dialog box is displayed. The Dial-Up Networking files are not copied to the hard disk, but the file names are added to the Registry. When the computer is restarted, the files are requested and cannot be found. This is followed by a list of missing files.

**Solution:** Copy down any of the information you have your dialup configurations; it will all be lost when you reinstall the dialup adapter.

To resolve this problem, remove and then reinstall Dial-Up Networking. To do so, follow these steps: Click Start, point to Settings, and then click Control Panel. In Control Panel, double-click Add/Remove Programs. Click the Windows Setup tab, and then click Communications. Click Details, and then click to clear the Dial-Up Networking check box.

**NOTE:** If you receive the Ndiswan.vxd error message, click to clear the Virtual Private Networking checkbox only.



Some fixes to startup and shutdown problems require editing Win98's Registry. Use regedit.exe to first make a copy of your current version with the File/export function, then carefully follow the instructions provided for the fix.

Click Close, click OK, and then click Apply. When you are prompted to restart Windows, do so.

Click Start, point to Settings, and then click Control Panel. In Control Panel, double-click Add/Remove Programs. Click the Windows Setup tab, and then click Communications. Click Details, and then click to select the Dial-Up Networking check box.

**NOTE:** If you cleared the Virtual Private Networking checkbox, click to reselect it.

Click Close, and then click OK. If you are prompted to restart Windows, do so. If any additional protocols are necessary, add the protocols by using the Network tool in Control Panel.

**Error Message:** "Your display adapter is not configured properly."

**Translation:** You may see this particular error message when you start Win98 after a new installation. It can appear for the following reasons:

- A PCI display adapter or ISA display adapter may appear as a disabled device in Device Manager.
- When your computer automatically restarts for the second time during Win98 Setup, but before Win98 is completely started, the information displayed on the screen may appear distorted. Even though you may not be able to read the information on the screen, Win98 starts successfully. This can happen if the ISA display adapters may not be detected properly when you upgrade a Win95-based computer with an integrated PCI display adapter.

**Solution:** To resolve this issue, verify that your integrated PCI display adapter is disabled and then reinstall your ISA display adapter. To do so, use the following steps:

- Verify that your integrated PCI display adapter is disabled. For information about how to do so, view the manufacturer's documentation included with your integrated PCI display adapter.
- Click Start, point to Settings, click Control Panel, and then double-click Add New Hardware. Windows should find the new display adapter and install it.

**Error Message:** "Hard Disk Errors Caused by Damaged Data or Physical Damage" or "Serious Disk Error Writing Drive <XX>" or "Data Error Reading Drive <XX>" or "Error Reading Drive <XX>" or "I/O Error" or "Seek Error - Sector not found"

**Translation:** You may receive one of these error messages when you are starting or using your computer. These error messages indicate either damaged data or physical damage on the hard disk.

**Solution:** To test the hard disk (where XX is the drive name), run ScanDisk. To run ScanDisk from within Windows, click Start, point to Programs, point to Accessories, point to System Tools, and then click ScanDisk. Click the drive you want to examine for errors.

Click Thorough and then click Start. Running ScanDisk with the Thorough option selected examines the hard disk for physical damage. If damaged data is detected, ScanDisk gives you the option to save the damaged data to a file or to discard the data. Be prepared to let the ScanDisk run for a long time if you have a large disk.

To run ScanDisk from a command prompt outside of Windows, click the Start button,

click Shut Down, Restart The Computer In MS-DOS Mode, and then Yes.

Type **scandisk <XX>**: at the command prompt (where <XX> is the letter of the hard disk you want to check) and press ENTER. When ScanDisk finishes its initial check, it prompts you to perform a surface scan on the drive. Click Yes or press ENTER.

If ScanDisk is unable to repair damaged data or indicates that the hard disk has physical damage, you may need to have the disk replaced.

### **Error Message: "Cannot Shut Down Windows with USB Modem and ATI Rage 128 Video Adapter"**

**Translation:** If you connect an external US Robotics 56K USB modem to your computer and install the latest drivers and you have an ATI Rage 128 video adapter installed, you may not be able to shut down Windows and you may receive errors.

This issue can occur because of an incompatibility with some US Robotics 56K USB modem drivers and earlier ATI Rage 128 video drivers.

**Solution:** Install version 4.11.6114 or later of the ATI Rage 128 video drivers (available at [www.ati.com](http://www.ati.com)).

### **Error Message: "Problems Restarting Computer with Device Using IRQ 12"**

**Translation:** When you try to restart your computer using the Restart The Computer option in the Shut Down Windows dialog box, your computer may stop responding (hang). You might experience this on computers with a BIOS (Basic Input/Output System) that expects IRQ 12 to be in use by a PS/2-style mouse port, but instead have a software-configurable hardware device (such as a Plug and Play adapter) using IRQ 12.

**Solution:** To work around this problem, reserve IRQ 12 in Device Manager, or change the IRQ for the software-configurable device in Device Manager. If you are able to upgrade the BIOS in your computer to a later version, this would be a better solution.

To reserve an IRQ with Device Manager, follow these steps:

- In Control Panel, double-click System. On the Device Manager tab, double-click Computer. On the Reserve Resources tab, click the Interrupt Request (IRQ) option, and then click Add. In the Value box, click the IRQ you want to reserve.
- Click OK until you return to Control Panel.

## **Most Common Error Message**

**W**indows Protection errors are common for many reasons, as they are a kind of catch-all for problems in various parts of Windows.

You'll see Windows Protection error messages under any of these conditions:

- If a real-mode driver and a protected-mode driver are in conflict
- If the Registry is damaged
- If either the Win.com file or the Command.com file are infected with a virus, or if either file is damaged
- If a protected-mode driver is loaded from the System.ini file and the driver is already initialized
- If there is a physical I/O (input/output) address conflict or a RAM address conflict.
- If there are incorrect CMOS (complimentary metal-oxide semiconductor) settings for a built-in peripheral device.
- If the Plug and Play feature of the computer's BIOS (Basic Input/Output System) is not working correctly.
- If the computer contains a malfunctioning memory.
- If the computer's motherboard is not working properly.
- If you installed Microsoft Office 97 and you are using the Novell Client 32 software

While initializing device XX  
Windows Protection Error

### **Error Message: "MSGSRV32.EXE Caused a General Protection Fault in module CM8330SB.DRV," or "EXPLORER caused a general protection fault in module CM8330SB.DRV," or "Iexplor caused a general protection fault in module cm8330.drv"**

**Translation:** When you shut down or restart your computer, you may receive one of these error messages and your computer may stop responding (hang). This issue can occur if your computer uses a sound card or a modem that is based on the C-Media CMI8330 sound chip. This sound chip is used as the basis for several sound cards and some modems.

**Solution:** Contact the manufacturer of your sound card or modem to inquire about the availability of an updated driver for your sound card or modem.

*NOTE: You can also try to use the C-Media Win98 sound card driver version 4.10.00.0152 or later. This driver is available at [www.cmedia.com.tw](http://www.cmedia.com.tw).*

Restart your computer in Safe mode and press and hold down CTRL until you see the Win98 Startup menu and then choose Safe Mode. Click Start, point to Settings, click Control Panel, and then double-click System. Click the Device Manager tab.

Double-click the Sound, Video And Game Controllers branch to expand it.

Click your sound card and then click Properties. On the Drivers tab, click Driver File Details. Check to see that you are using the Cm8330sb.drv driver. On the General tab, click to select the Disable In This Hardware Profile check box. Click OK, and then click Close. Restart your computer normally.

### **Error Message: There is no specific message, but your computer stops responding when you try to shut it down.**

**Translation:** This problem can occur if your computer uses ACPI (Advanced Configuration and Power Interface) and the Fast Shutdown feature is disabled.

**Solution:** This fix is contained in late versions of Windows Service Packs. Install all service packs by going to . To work around this problem, enable the Fast Shutdown feature. To do this, click Start, point to Programs, point to Accessories, point to System tools, and then click System Information.

On the Tools menu, click System Configuration Utility. On the General tab, click Advanced. Click the Disable Fast Shutdown check box to clear it, click OK, and then click OK again. Click Yes when you are prompted to restart your computer. 

by Scott Koehler

# Windows 98 Hardware Errors

## Decipher The Undecipherable

**W**hen it was introduced, Windows 98 was a step up from Windows 95, offering new features, new errors, and new annoyances. But that was six years ago; ancient, by technology standards. Microsoft still offers support for Win98, but many third-party developers do not, which creates a troublesome situation for any computer user still using Win98. Getting new drivers or updated products can be all but impossible. That much aside, the fact that some people still use Win98 makes a clear statement about the venerable operating system's staying power and its ability to perform as needed in most situations.

But, let's face it: Few things can be more discouraging than trying to figure out a problem whose solution repeatedly escapes you. No end of stress and frustration can come from a critical error that crashes your computer every time you fix it. Win98 was good for its time, but for every good feature it had, there was a major bug just around the corner waiting to be found; a problem some users still deal with today. Fortunately, Microsoft's Support Center and Knowledge Base both continue to provide some help in correcting errors and problems with Win98. Compiling a list of every error found in Win98 and how to correct them all is a monumental task, but read on for a variety of different hardware-related errors that most users will encounter sooner or later.

### Driver Errors

Computer drivers are system files that dictate how a computer interacts with its hardware; these files enable the computer to communicate with and control all of its installed hardware. Errors with malfunctioning hardware are commonly caused by problems with drivers, so it is important to keep drivers current and monitor them for conflicts with more recently-installed drivers.

**Error Message:** "CD-RW is not under Direct CD's control"

**Translation:** This error may show up if you try to perform a write action and you have a Ricoh CD-RW drive and are running Adaptec's DirectCD software. Your system lacks an up-to-date Adaptec driver, which prevents it from communicating properly with the CD-RW drive.

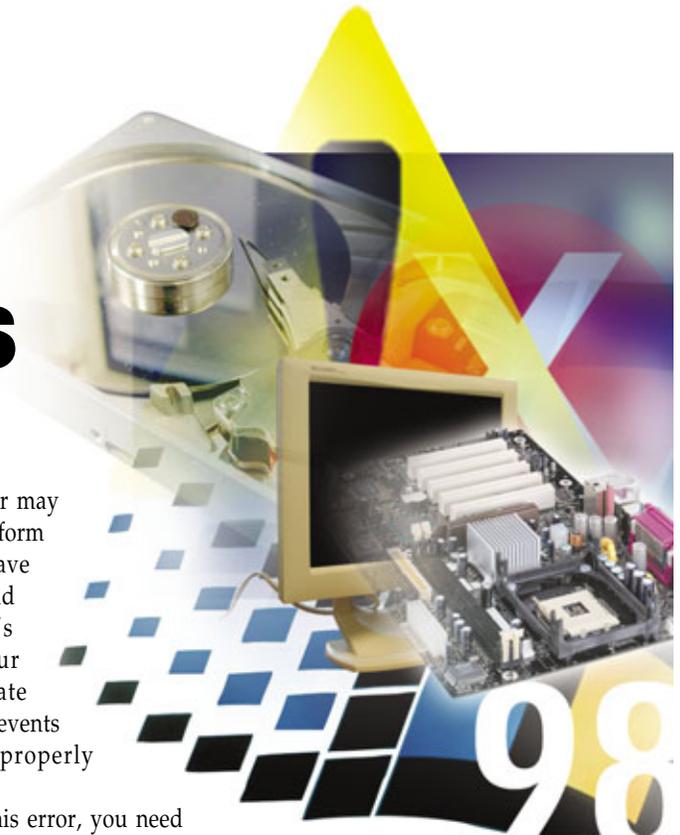
**Solution:** To correct this error, you need to get a current version of the Adaptec driver. Many of Adaptec's programs are now handled by Roxio, however, so you'll need to contact them to get the driver. When Roxio took over programs in the Adaptec product line, it bundled DirectCD into the Easy CD & DVD Creator software package. All of this may seem a bit confusing, but the good news is that support for this program hasn't gone away, it has simply switched names and locations.

To download the updated driver file for DirectCD, go to [www.roxio.com/en/support/ecdc/software\\_updatesv6.jhtml#A](http://www.roxio.com/en/support/ecdc/software_updatesv6.jhtml#A) and click the bottom download link. You will need to register at the Roxio Web site in order to access the download, but once that is done, run the EXE file that downloads to your computer.

After all of this, the issue should be fixed. If not, you may want to consider upgrading to a more current product, such as Roxio's Easy CD & DVD Creator 7.

**Error Message:** "Error writing to LPTx for Printer XX, there may be a problem with the Network or password is incorrect." Or when you install a printer, you may not be able to print after you restart the computer.

**Translation:** This problem can happen when devices have drivers that were loaded into the [386Enh] (which stands for 386 Enhanced Mode, an operational mode in older Windows versions) section of the



Registry files. According to Microsoft's Support Center, the following devices are known to have this problem:

- Cis1284.386 from Canon Multipass
- Lex01.386 from Lexmark
- Lexsw2.386 from Lexmark
- Mpass.386 from Canon Multipass
- Okiport.386 from Okidata laser printers
- Sumovmi.386 from Panasonic KXP-6100 laser printers
- Vcpd.386
- Vecpd.386 from Netscape Navigator
- Hpypeppy.386 from HP

**Solution:** To fix this problem, you need to change your system.ini file to correct the way the devices were entered. To make this change, open the Start Menu and go into the Program section. Click the Accessories sub-menu, and you should be able to open the Windows Explorer. Within the Windows Explorer, click on the Windows folder, and locate the System.ini file.

Right-click System.ini, and choose to open it with Notepad. (Be careful not to make any other changes to the file.) Find the [386Enh] section, and then Microsoft Support Center suggests disabling the following lines by adding a semicolon (;) at the beginning of the line:

- DEVICE=<path>\Cis1284.386
- DEVICE=<path>\Lex01.386
- DEVICE=<path>\Okiport.386
- DEVICE=<path>\Sumovmi.386

- DEVICE=<path>\Vcpd.386
- DEVICE=<path>\Vecpd.386

After making any necessary corrections, save and exit the file. Then restart your computer. If the problem persists, return to the system.ini file and disable any line in the [386Enh] section that ends in an extension .386.

### **Error Message: "Spool32 caused an invalid page fault in module WNPP32.DLL" when trying to print on a LANtastic network printer.**

**Translation:** This error is caused by a driver problem with your printer, causing a communication error between your computer and the network printer. It can be caused by either an error in your real-mode LANtastic drivers, or your Artisoft Lantnet drivers may be out-of-date.

**Solution:** To correct the possible errors, you need to either fix your LANtastic drivers or you need to get an updated version of the Artisoft Lantnet driver.

To fix the LANtastic drivers, you will need to edit the Startnet.bat file in order to disable its "net use lptx" statement. To find the file with the search tool, go into the Start Menu and select Find. Click on the Files or Folders option, and type **startnet.bat** into the Name box. Click Find Now. After a quick search, the file should appear in the list of found files.

Right-click this file and select Properties from the menu of options. If Read Only is checked, click it to remove the check and allow the file to be edited. Then right-click the file again and open the file with the Notepad text editor. Inside the editor, press CTRL-F to bring up the search tool. In the find field, type **net use lptx** and click on the Find button. This should place the cursor at the proper statement; if it does not, make sure the case-sensitive box is not checked and the phrase was typed correctly. When you find the statement, type **rem** before it to edit the statement out. Save and close the file, and then restart your computer. (If this change causes errors, you can easily undo the change by deleting the newly added "rem.")

If this doesn't work, you may need to change the driver. To get an up-to-date Lantnet driver, you will need to contact

Artisoft. Contact information is available at [www.artisoft.com](http://www.artisoft.com), though we could not find updated drivers on that site.

### **Error Message: "Please insert an audio compact disc," or "Data or no disc loaded" when trying to run the Microsoft CD player.**

**Translation:** Your computer is unable to read the CD in your CD drive. This may mean there is a problem with your CD or your CD drive, but most likely it means that there's a problem with your driver.

**Solution:** The first thing you should check in an instance such as this is the condition of the CD in the drive. If there is no CD in the drive, or the CD is damaged or contains an error with the data, then the fault isn't with your hardware; you simply need to replace the compact disc. If you have multiple CD drives, try putting the disc in a different drive and check to see if the player will read it then.

If everything with the physical media seems to be in order, it's worth reinstalling the driver to correct any possible errors with it. Access your Control Panel (go to the

Start Menu, click Settings, and then select the Control Panel). Select the Multimedia icon and click the Devices tab. Find the Media Control Devices branch in the displayed tree and click it to expand it. Then select the CD Audio Device control, and click the Properties button.

From this point, click Remove and then Yes when prompted. Click OK twice, and you will have to restart your computer.

When your computer has been restarted, go back into the Control Panel (from the Start Menu, click Settings and the Control Panel). Instead of going back to Multimedia, this time double-click the Add New Hardware icon. Click Next twice, and choose the option to select the new hardware from a list. Select the sound controllers from the list and click the Next button. Then, in the list of manufacturers select Microsoft MCI, and in the list of models click the CD

Audio Device. Then click Next and Finish, then select Yes.

Go back into the Control Panel once again and select the System icon this time. Go into the Device Manager by selecting the appropriate tab at the top, and then click the plus sign (+) next to the CD-ROM branch to expand its options. Select the CD-ROM drive from the available options, and select the Properties button. From there, click the Settings tab and choose the option to clear the DMA (direct memory access). Then click OK twice. Now your driver should be successfully reinstalled, which should correct any problems you're having with the CD-ROM drive.

If none of this worked, however, it is quite possible you have a problem with the CD drive itself. If this turns out to be the case, the easiest solution would just be to replace the defective drive with new hardware.

## **System Registry Errors**

The system Registry files dictate what programs are installed and loaded upon startup. Errors in these files can cause software to be loaded improperly, and can cause malfunctions with different hardware interfaces. Changing these files can be dangerous if done carelessly because it can remove integral parts of your operating system. It is always a good idea to make a backup copy of these files before changing them, and take care to only make specific changes.

### **Error Message: "Cannot find autorun.exe" when trying to access a hard drive; the hard disk icon in My Computer appears as a CD drive icon.**

**Translation:** This error occurs when you have an autorun file in

the root directory of your hard drive. Autorun files are files that cause a CD to automatically load up and start running a program when a disc is placed in the CD drive.

**Solution:** Fixing this problem is relatively simple. All that is required is to find the affected file and rename it.

The file should be located in the root directory (the very first folder in the drive,



**A malfunctioning CD drive can cause this error.**



**Use Windows 98's Find command to track down critical system files.**

which contains all the other folders and files on the hard drive; typically labeled "C:") of the affected hard drive. To find the file, you can do one of two things: Search for the file manually, or use Win98's built-in search capabilities.

To find it manually, first go into My Computer (go to the Start Menu and click the My Computer icon). Within the My Computer folder, open the affected hard drive, which should put you in the root directory. In the list of files shown, you should be able to find Autorun.inf.

To find the file with the search tool, go into the Start Menu and select Find. Click the Files or Folders option, and type **autorun.inf** into the Name box. Click Find Now. After a quick search, Autorun.inf should appear in the list of found files. Right-click this file and select Properties from the menu of options. If Read Only is checked, click it to remove the check and allow the file to be edited. Then, right-click the file again and select the Rename option. Rename the file to **autorun.x** and press ENTER. This will hide the file from any processes looking for it without deleting any necessary data.

When you restart your computer, your hard drive should resume working normally.

**Error Message:** Windows does not detect Some Plug and Play pointers, and running the Add New Hardware Wizard does not correct the problem.

**Translation:** Certain Plug and Play devices (such as the Microsoft Plug and Play Serial Mouse, Microsoft EasyBall, Microsoft IntelliMouse) don't work with Win98 because the system does not automatically recognize them when they are first installed. This problem occurs because your computer's Registry files still contain entries for a different kind of pointing device, so Windows does not install the new ones.

**Solution:** Correcting these problems requires editing your Registry files. Always make a backup copy of your Registry files (System.dat, User.dat) before editing them, whatever the circumstances.

The first step to correcting your Registry files is to save them. Click the Start button and select the Run option. In the text box, type **regedit** and click OK. This will bring up the Registry menu; select Export Registry File. When saving the Registry file, be sure to save it in a location you are familiar with and use frequently, such as the Desktop or a

### Most Hilarious Error Message

**Error Message:** Win98 reboots continuously or locks up with more than 1.5GB of memory.

**Translation:** Win98 was never designed to handle as much memory as is commonly available today; 1GB is too much for it and actually causes it to become less stable, even causing critical errors like a perpetual reboot cycle or simply locking up.

**Solution:** The easiest solution to this problem is to not install so much memory on a machine running Win98: If your computer's processor is capable of dealing with that amount of RAM, you should consider upgrading to a more suitable operating system. However, if you have already invested in the superfluous RAM, and can't upgrade to Windows 2000 or XP, then there is a solution for you.

If you add "MaxPhysPage=400000" to the [386enh] section of the System.ini file, you will limit the amount of RAM that Win98 has access to. This intentionally disables the additional RAM, making it even more worthless with the older OS. To make this change, go into the Start Menu and go into the Programs section. Click on the Accessories submenu, and you should be able to open the Windows Explorer. Within the Windows Explorer, click the Windows folder and locate the System.ini file.

Right-click System.ini, and choose to open it with Notepad (be careful not to make any other changes to the file). Find the [386Enh] section, and add the line "MaxPhysPage=400000" in it. Save the file, close it, and restart your computer. □



**Tread lightly in the Registry Editor, and always back up your Registry before making changes.**

folder of personalized documents. Name the file something meaningful that will be easy for you to remember, such as Registrybak, and save it.

*NOTE: Taking the extra minute to perform this backup before any Registry change, no matter how minor the change may seem, can save you quite a lot of heartache down the road. We recommend that you always back up the Registry before attempting any Registry fix.*

The next step is to remove the Registry entries that no longer apply to your computer's current setup. The entries to look for, according to the Microsoft Support Center, are:

HKEY\_LOCAL\_MACHINE\SYSTEM\CURRENTCONTROLSET\SERVICES\CLASS\MOUSE<nnnn>, where <nnnn> is an incremental four-digit number that starts at 0000.

If they exist, also remove:

HKEY\_LOCAL\_MACHINE\ENUM\ROOT\MOUSE<nnnn>; again, where <nnnn> is an incremental four-digit number that starts at 0000.

Both of the following Registry keys also need to be removed, if they are there: HKEY\_LOCAL\_MACHINE\ENUM\Serenum

HKEY\_LOCAL\_MACHINE\SOFTWARE\LOGITECH\Mouseware

Then go back to the Desktop, right-click the My Computer icon, and select Properties. Select the Device Manager section from the tabs above. In the list of system devices, select each pointing device and press the Remove button, and then click OK. When you restart Windows, the system should automatically detect the connected pointers and they should begin to work.

**Error Message:** "Unable to open port" when trying to use the Angia PCMCIA (Personal Computer Memory Card International Association) modem.

**Translation:** This error occurs because the software included with the modem has created an invalid entry in your computer's System.ini file (which is an initialization file that stores configuration data). Correcting

the error involves editing this file to repair the software's error. Be as careful with this file as you would be with a Registry change.

**Solution:** To make this change, open the Start Menu and go into the Program section. Click the Accessories submenu, and you should be able to open the Windows Explorer. Within the Windows Explorer, click on the Windows folder, and locate the System.ini file.

Right-click System.ini and choose to open it with Notepad (be careful not to make any other changes to the file). Press down CTRL-F to start Notepad's search tool, and type [Boot] in the Find field. Run the search, which should set the cursor at the [Boot] section of the System.ini file. In this section, locate the line "Comm.driv=" and change it to read "Comm.driv=Comm.driv." Save and close the file, and then restart Windows.

### Loading Errors

Load processes on your system can create problems if they are in error, as they can load components of your computer improperly. This can create errors in the way your system reads from the different drives to which it is connected. Fortunately, these errors are often easy to correct.

**Error Message:** "Cannot copy file to disk, the disk may be full or write-protected," when trying to write data with

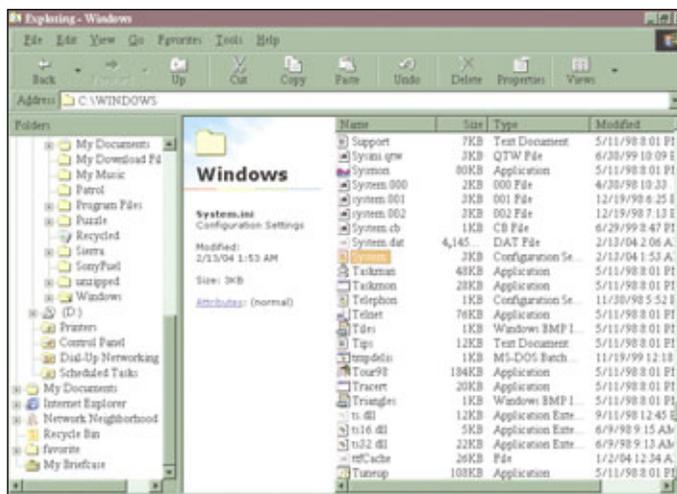
an LS-120 drive, despite having additional space on the drive and having it set as write-enabled.

**Translation:** A file called 'Pgrmcvsd.vxd' is being improperly loaded from your computer's hard drive, which is preventing the drive from writing data properly.

**Solution:** Fixing this problem is relatively simple, and quite comparable to the "Cannot

Properties from the menu of options. If Read Only is checked, click it to remove the check and allow the file to be edited. Then, right-click the file again and select the Rename option. Rename the file to Pgrmcvsd.x and press ENTER. This will hide the file from any processes looking for it without deleting any necessary data

When you restart your computer, your LS-120 drive should resume working normally.



Windows Explorer can help you find the System.ini file, which may be the cause of an "Unable to open port" error.

find autorun.exe" error above; as with that error, all you need to do is find the file that's causing the problem and rename it. To find the file with the search tool, go into the Start Menu and select Find. Click the Files or Folders option, and enter Pgrmcvsd.vxd into the Name box. Click Find Now. After a quick search, the file should appear in the list of found files. Right-click this file and select

**Error Message:** "Invalid Drive Specifications" after booting your computer from a floppy boot disk.

**Translation:** This problem occurs when you do not follow the proper instructions for booting from a floppy diskette while using a drive-overlay program. The drive overlay prevents users from accessing the hard drive if booting from a floppy.

**Solution:** To correct this problem, you need to load the drive overlay program before booting the computer from the floppy diskette; refer to the manuals and

documentation that came with the overlay software for assistance in doing this.

### Hardware Setup Errors

Some of the most common and most simple errors can stem from setup and connection errors. These typically result from hardware being installed improperly, either in the physical connection or the way the hardware was integrated into the system. Plug and Play and USB (Universal Serial Bus) ports have eliminated some of the issues with hardware integration, but in earlier systems running on Win98 they can still be problems.

**Error Message:** "While initializing device vxd - Windows Protection Error - You need to restart your computer" upon startup.

**Translation:** This means that the keyboard failed to initialize on startup, and is generally a good indication of a failed piece of hardware, or possibly a simple connection issue.

**Solution:** Turn off the computer, and then disconnect the keyboard from the machine before reconnecting it. Be sure to insert the plug securely into the port. If the error

### Most Common Error Message

**Error Message:** "The Windows 98 CD was not found in your CD-ROM drive."

**Translation:** This error occurs when Win98 tries to update its system files (usually to add or modify a driver) and cannot find the necessary files, either on the system or on the Win98 CD. This error may be as simple as not having the right CD in the CD drive, but it typically happens when Win98 was installed from a source other than the CD, such as a shared network installation.

**Solution:** If you have access to the Win98 CD, insert it into your CD ROM drive and click Retry. If you installed Win98 from a different source, you will have to locate the necessary folders manually. Click the Browse button and select the file folder Win98 was originally installed from. If the file cannot be found in either the original Windows directory or the Win98 CD, you may need to contact Microsoft ([www.microsoft.com](http://www.microsoft.com)), or the third-party producers of your software to acquire the necessary driver files. □

## Most Unusual Error Message

**Error Message:** “An error occurred while Windows was working with the Control Panel file ...SYSTEMJOY.CPL” when trying to open the Game Controllers application in the Control Panel.

**Translation:** This error occurs because a DLL (Dynamic Link Library) file is corrupt or missing. These files typically contain functions required for applications, although they may also contain data used by those applications. The specific file in this case is Dinput.dll.

**Solution:** First step in repairing this DLL file is finding out whether it is missing or damaged.

To find the file with the search tool, go into the Start Menu and select Find. Click the Files or Folders option, and type **dinput.dll** into the Name box. Click Find Now. After a quick search, the file should appear in the list of found files. If it does not, then the file is missing. If the file does appear, then it needs to be renamed because it is corrupt.

Right-click this file and select Properties. If Read Only is checked, click on it to remove the check and allow the file to be edited. Then, right-click the file again and select the Rename option. Rename the file **dinput.x** and press ENTER. This will hide the file from any processes looking for it without deleting any necessary data.

Next, you must find a fresh version of the file. Insert your original Win98 CD-ROM. If Windows setup automatically loads, close the program. Go through the process of finding the DLL file again, but this time search on the CD instead of the hard drive. Once you find the file, go into the Start Menu and click Run. Type **sfc** into the command prompt to extract a file from the Windows CD. Select the option to extract a single file and then select Browse to locate the file, or type in the path name for the file if you previously found it. Once the proper file is selected, click OK and follow the directions to finish extracting the file. □

repeats itself, try your keyboard on another computer, and try another keyboard on that computer; if the keyboard doesn't work on either computer, then it must be damaged and should be replaced.

**Error Message:** Setup does not always retain information on your current monitor type when upgrading to, or reinstalling Win98.

**Translation:** When you upgrade to Win98 from Win95, or if you just reinstall Win98, it's possible that your monitor data could be lost and your monitor will show up as 'Unknown Monitor' in the device settings.

**Solution:** To correct this problem, you must manually pick your monitor type. First, go into the Control Panel by going through the Start Menu and then the Settings icon. Select the Display icon and click the Settings tab, and click the Advanced button to bring up your monitor's advanced settings. Select the Monitor tab and click Change. Then, in the Manufacturers box, select the manufacturer for your monitor and move on to

the Models box. Click the model of the monitor you are using and select OK twice, and the problem should be corrected.

**Error Message:** “Error writing to drive C:” displayed on a blue screen at startup.

**Translation:** The computer is telling you that there is a problem with your BIOS (Basic Input/Output System). More than likely, Windows has created a problem with the IRQ (Interrupt Request Line, which allows the BIOS to communicate with the hard drive) by assigning another device to the same IRQ and creating a critical device conflict.

**Solution:** One of the ways to correct this problem is to disable your computer's IRQ steering. This will require you to start your

computer up in Safe Mode first, to access your system settings.

To enter Safe Mode, restart your computer and hold down the CTRL key. This should bring up the Win98 Startup menus, which gives you a set of boot options for Win98. (If the CTRL key does not bring up the Win98 Startup Menus, restart and try the F8 key instead.)

Select Safe Mode, which disables most Windows functions but grants enough access so that users can troubleshoot and fix their computers. Your Desktop will load with a minimal set of drivers, which may mean your desktop will look quite a bit different. Don't panic; everything is still there, but sometimes certain video drivers will not load, which explains the odd appearance of your Desktop.

Go to the Start Menu and click the Control Panel. Then select the System icon and bring up the Device Manager by clicking on the matching tab at the top. In the list of devices, locate the System Devices branch, and click the plus sign (+) to expand it. Find the PCI Bus device and click it to bring up its details.

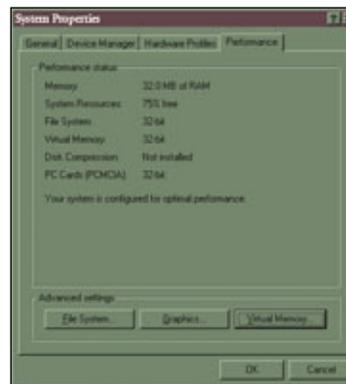
Select the Properties button to bring up the in-depth details for the PCI (Peripheral Component Interconnect) Bus, and click the IRQ Steering tab. The Use IRQ Steering checkbox should be selected; you'll want to click this checkbox to deselect it (remove the check mark). That done, click the OK button and restart your computer.

Once IRQ steering is disabled, the BIOS will be able to assign its own IRQ and take precedence over other hardware.

## Memory Errors

Memory is an integral part of your computer, storing the details and processes needed to run its operating system and other programs. If there is a problem accessing either your computer's RAM or its storage devices, it may be unable to

load the information needed to run properly. These errors can be mild or severe, from corrupt data sectors and bad file information to an inability to run at all. Here we present a sampling of common memory errors and how to solve them.



Click the Virtual Memory button to free up more system memory.

**Error Message:** “Drive converter unable to find the drive partition” when using the Microsoft Drive Converter to change a file system from FAT16 to FAT32.

**Translation:** This error shows up when you try to convert a drive configured using the FAT16 file system that starts above the 8GB point into a FAT32 drive.

**Solution:** To fix this problem, you must remove any partitions above the 8GB limit and repartition them in allowable spaces. Before changing the partitions on your drive, it’s important to remember to back up all of your data to prevent the possibility of losing it in a mistake. You’ve heard it before, and we’ll say it again: Always make regular backups of your data, especially when attempting to fix an error.

To change the partitions of your hard drive, go into the Start Menu and into Programs. Select the MS-DOS prompt. Once at the command prompt, type **fdisk**. Press **Y** when you are asked whether or not you would like to enable large disk support. Select option 4, and then press **Y** to view the partition information for all the drives available. Press **ESC**, and then enter 3. Now enter the letter that matches the last drive listed in the extended partition. Enter the volume label displayed to the left of the drive and press **ENTER**. Press **Y**, then **ENTER**, followed by **ESC** twice. Afterwards, press 1 and 3, both followed by **ENTER**. When prompted to use up all of the remaining space, press **Y** and press **ENTER**. Finally, press **ESC** and type **exit** to finish up. Press **ENTER** and restart your machine. After you restart your computer, go into My Computer (through the Start Menu, if it isn’t available on your Desktop) and select the last hard drive. Click **Format**, select **Full**, and click on **Start** to finish up.

**Error Message:** Win98 becomes unstable after disabling virtual memory.

**Translation:** Win98 requires at least 16MB of RAM to run steadily (the more RAM you have, however, the better Win98 will perform). Disabling the virtual memory forces Windows to use more real memory, which cuts into its minimum requirements and causes it to run much less reliably.

**Solution:** There are two ways to solve this problem: Install more memory or enable your computer’s virtual memory again. Doing both of these will also help make your computer more stable.

Installing more memory is simple; check your computer’s documentation to find out what kind of memory your computer uses. A quick trip to the local computer store and a few minutes spent snapping memory modules into place can easily fix several memory errors.

To enable the virtual memory on your computer, you must restart it and hold down the **CTRL** key as Win98 loads (or, as noted before, possibly the **F8** key); this will send it to the Win98 Startup menu, where you can select the mode that Windows boots in. For this fix, select the **Safe Mode** option. Then, once the

operating system loads, click the Start Menu, and go through Settings to get to the Control Panel. Select the System icon, and go to the Performance section by clicking the Performance tab. Then click **Virtual Memory** and select the option to let Windows manage your virtual memory.

Click the **OK** button and then close the tool. It will prompt you to restart your computer; do so at the soonest opportunity to resolve the memory issue and hopefully make Windows more reliable.

by Andrew Stuart

## Most Confusing Error Message

**Error Message:** “Setup has detected the following decoding error: ‘Could not decode this setup (.CAB) file.’ Setup will attempt to recover from this situation, click OK to continue.” Or “Setup (.cab) file error Setup has detected the following decoding error: Setup has detected a corrupt setup (.cab) file. Setup will attempt to recover from this situation” when trying to install Win98, or Win98 components from the original CD.

**Translation:** As it tried to install some necessary files, Win98 encountered corrupted, unusable files. Without those files, the setup process may or may not be able to continue. The files usually become corrupted through the process of reading them from the CD-ROM, which can be caused by several different things. There may be a malfunction in your CD-ROM drive that is preventing the CD from being read properly, or the disc may be damaged. Your computer may also be overheating as a result of overclocking or a malfunction in the cooling devices within your computer; the extra heat can cause errors in the way files are decoded, which prevent them from being read properly. It could also be caused by a malfunction in your computer’s memory, resulting from mismatched RAM or BUS speeds. Other standard potential problems could also be a factor, such as a virus or an improperly installed piece of hardware.

**Solution:** The first step in trying to correct this error is to check the CD in the CD-ROM drive. Remove it and clean it with a soft cloth. Reinsert the CD in the drive and see if the system can properly read the files on the CD.

Run a virus scanner on your computer as an initial solution. Viruses can create a number of problems for Windows users, and running a scanner is usually a simple (if time-consuming) process.

If the problem persists, try installing real-mode CD-ROM drivers, which should be available on the Win98 Startup Disk. Boot your computer in DOS and run Windows Setup from the startup disk.

If you are able to access the contents of the Windows CD from within Windows, copy the contents of the disc to new folder on your computer’s hard disk and try running Windows setup from your hard drive.

If none of these methods have worked, boot Windows through the step-by-step confirmation mode. To do this, restart your computer and hold down the **CTRL** key until it brings up the Windows startup menu. Select the **Step-by-Step** confirmation method and press **Y** to accept each prompt except for **Process Your Startup Device Drivers (CONFIG.SYS)** and **Process Your Startup Command File (AUTOEXEC.BAT)**.

If none of these methods correct the problem, Microsoft’s support center ([support.microsoft.com](http://support.microsoft.com)) lists several other potential fixes, including some extensive setup methods.

# Windows 98 Software Errors

## Don't Get Shut Down

Even if they don't know the names, most Windows users are familiar with some of the more deadly errors commonly encountered during routine use: general protection fault, fatal exception error, invalid page fault, illegal shutdown, insufficient memory, runtime error, and the infamous "blue screen" error. Often, the only way around these errors is to reboot your system and hope for the best.

There is hope, however. Some error messages are clearly defined, and using resources included with your computer or support services provided by Microsoft can actually help resolve the problem. In the pages that follow, we'll discuss some common Windows 98 errors, what they mean, and common solutions. These are not all of the problems that Win98 can present; however, the steps below can serve as a guide to point you in the right direction.

### System Maintenance Error

Routine system tasks can cause errors. These errors are fairly innocuous and have straightforward solutions, and they are also the errors you are most likely to encounter. Some situations that can cause these errors are:

- Renaming or deleting files
- Installing or uninstalling files
- Incorrect characters in filenames
- General drive errors
- Directory errors

Though there are many types of these errors, below is a short list of errors and their solutions.

**Error Message:** "Can't open uninstall log file XX"

**Translation:** This error occurs when you use Add/Remove Programs from the Control Panel to remove a file that has already been deleted. If the log file (X) has been previously deleted, the error can also occur.

**Solution:** Because the uninstallation routine cannot proceed without the log file, you must manually delete the file. If you still can't

delete the file, try reinstalling the program and then use Add/Remove Programs to completely uninstall the offending program.

**Error Message:** "An error occurred while trying to remove X. Uninstallation has been cancelled."

**Translation:** If you click a program in the Install/Uninstall tab in Add/Remove Programs that has already been deleted, you will get this error. Windows may abort the procedure if the program is no longer present or has been renamed.

**Solution:** Software in the Install/Uninstall box is harmless, though it may be a nuisance. You would be wise to leave the software alone, as removing it will require editing the Registry, which is a tricky procedure. If you must remove it, back up the Registry before beginning. Click the Start menu and click Run. Type `regedit` and press ENTER. Click Registry and then click Export Registry File. Name the file and save it on the Desktop. Next, drill down through the Registry and locate the following line of text: `HKEY_LOCAL_MACHINE\SOFTWARE\MICROSOFT\WINDOWS\CURRENTVERSION\Uninstall`. The line directly under this is the name of the software that you want to delete. Delete the line containing the name of the file and the software will be gone.

**Error Message:** "Unable to create directory."

**Translation:** You have tried to name a file or folder using more than 67 characters while in DOS mode.

**Solution:** Start your computer in Windows and rename the file using Windows Explorer. To access Windows Explorer, right-click the Start button on the Windows taskbar and then click Explore. Find the file, right-click it, and click Rename. Type in the new file name and press ENTER.



**Error Message:** "Program does not run under Windows."

**Translation:** Variations of this message occur when you try to run a program in Windows that is designed to run only in DOS.

**Solution:** First, verify the software works by running it in DOS mode. Start DOS by clicking Start, Shut Down, and Restart in MS-DOS Mode. Run the software from the prompt to determine whether it works. Return to Windows. Create a shortcut by right-clicking the icon in Windows Explorer and clicking Create Shortcut. Right-click the shortcut and choose Properties; on the Program tab, click Advanced, check the MS-DOS mode box, click OK, and exit. If the application will not launch because Windows is running, repeat the earlier steps and check the Prevent MS-DOS-Based Programs From Detecting Windows box and exit.

**Error Message:** "Error starting the program. The XX file cannot start. Check the file to determine the problem"

**Translation:** A program you have installed (XX) has replaced a Windows file with a file of its own.

**Solution:** You must eliminate the new file and replace it with the old one. Possible files that need to be substituted are: `Comctl32.dll`, `Comdlg32.dll`, `Shell32.dll`, `Iz32.dll`, `Version.dll`, and `Winmm.dll`. Copying these files from the Windows/Sysbckup folder is probably the easiest way to restore them. Find the old file in the folder, right-click it, and click Copy. Drill into the Windows/System folder, right-click an empty area, and click Paste. Now, locate and delete the improper file in this same folder.

**Error Message:** “The following system files have been replaced with older versions by a program you recently ran. These files are currently in use and cannot be automatically repaired. Windows may not run correctly until you exit and restart Windows so that the files can be automatically repaired. C:\Windows\System\XX”

**Translation:** Software that you have installed has overwritten some system files. The file name in the error is the file that’s been overwritten. Any erroneous files should be shown in the error message.

**Solution:** Rename the overwritten file by changing the file extension to, for example, \*.old. Go to the Windows\Sysbckup folder, find the files that correspond to the ones you renamed, and copy them to Windows\System (as in the tip above). If your system has frozen and you cannot replace the file, reboot the system. Press the F8 key to access the Startup Menu. Choose Command Prompt Only and type `cd \windows\system, ren XX XX.old, cd \windows\sysbckup, and copy XX \windows\system\XX` at the command prompt, inserting appropriate file names in place of XX.

**Error Message:** “Cannot delete: Cannot find the specified file. Make sure you specify the correct path and filename.”

**Translation:** Variations of this message can occur when you click a file in Windows Explorer to open, delete, or drag it to the Recycle Bin. The file or folder may contain invalid characters, even though they may not appear in the filename.

**Solution:** Create a temporary folder, copy the file or folder’s contents to it and delete the old folder’s contents by pressing CTRL-A and pressing DELETE. Restore all the files except the improperly named one to the old folder. Use a single-character wildcard question mark to replace the invalid character (i.e. to rename a file named \*eadme.txt, type `ren ?eadme.txt readme.txt`).

**Error Message:** “Error Deleting File. Cannot delete XX. Access is denied. Make sure the disk is not full or write-protected and that the file is not currently in use.”

**Translation:** When you attempt to delete a file (XX) that another program is using (for

example, if you have an Excel document open and you try to delete that file using Windows Explorer) this error will occur. Attempting to delete a temporary file in Windows Explorer while Windows is using it will also cause this error.

**Solution:** Close the file that is causing the error. If Windows is using a system file, rebooting your system will release the file and allow you to delete it.

**Error Message:** “Cannot find the file X or one of its components”

**Translation:** If you move, delete, or uninstall a program or clear a drive of unnecessary files, you may have mistakenly deleted a file necessary to run the application or load a file.

**Solution:** Check the Recycle Bin. If the file is present, restore it (right-click the file and click Restore). If not, reinstall the software that contains the file.

**Error Message:** “Drive X contains errors that must be corrected before the drive can be compressed.”

**Translation:** This error and ones similar to it may be a result of a folder name with more than 66 characters. DOS will not allow long folder names, while Windows will. Running ScanDisk on a drive (X) using the Automatically Fix Errors option treats the system as if it’s running in DOS.

**Solution:** Run ScanDisk to determine the troublesome file and deselect Automatically Fix Errors. Determine the offending folder if the message reappears and rename it. If an application created the name, keep it but try moving the folder to a temporary location with a shorter name. Return the file to its original location after ScanDisk has completed.

### Invalid Page Fault Error

When programs and the Windows operating system pass invalid parameters among them, an error known as an invalid page fault will occur. An invalid page fault results when an invalid parameter within a program causes the program to run invalid instructions. The following are some situations that may cause invalid instructions:

- If the virtual memory becomes unstable due to a shortage of RAM
- If the virtual memory becomes unstable due to a shortage of free disk space

- If the virtual memory area is damaged by a program
- If a program attempts to access data that is being modified by another running program

The following is a list of examples of some invalid page fault errors and possible solutions.

**Error Message:** “This program has performed an illegal operation and will be shut down. If the problem persists, contact the program vendor.”

**Translation:** Clicking Details on this error message will show a possible explanation, such as “X caused an invalid page fault in module Y at Z,” where X is the name of the program; Y is the name of the module and Z is the address within the memory. After you click OK, the program shuts down.

**Solution:** Identify when the error message first occurred. Also, determine if you recently made changes to the computer; for example, you installed software or changed the hardware configuration. Clean booting your computer can help you identify the cause of the message. To Clean Boot, follow these steps:

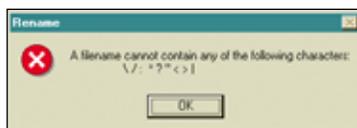
- Restart your computer. When the Starting Windows dialog box is displayed, press the F8 key and choose Step-By-Step Confirmation from the Startup menu.
- When you are prompted, load the following items (if you are prompted to load any other items, type n):
  - Dblspace driver
  - Himem.sys
  - Ifshlp.sys
  - Dbldbuff.sys
- Load the Windows GUI (graphical user interface), and choose to load all Windows drivers.

**Error Message:** “XX caused an invalid page fault in module HHCTRL.OCX at Y”

**Translation:** This behavior can occur when you try to use the Help feature in programs and system tools that are included with Win98, such as WordPad, Notepad, Net Watcher, or Paint. The error usually happens if you are using the Windows swap file and there isn’t enough free space on the drive.

**Solution:** To resolve this behavior, uninstall programs you do not use and use the Disk Cleanup tool by following these steps:

- Double-click My Computer, right-click the hard disk you want to clean, click Properties, and then click Disk Cleanup.



When Windows encounters a character in a file name that is not allowed, it shows this error message.

- Under Files To Delete, click to select all the appropriate checkboxes for the items you want to delete, click OK, click Yes, and then click OK.

### Windows Protection Error

When your computer attempts to load or unload a VxD (virtual device driver), a Windows Protection error may occur. This error message lets you know that a device driver in your system has a problem. The VxD that is causing the problem will often be mentioned in the message; however, in other cases you may not be able to determine the VxD that caused the error. In such cases, you should be able to use clean boot troubleshooting to find the cause of the error message. Windows Protection errors may result in any of the following situations:

- If a real-mode driver and a protected-mode driver are in conflict
- If the Registry is damaged
- If either the Win.com file or the Command.com file are infected with a virus, or if either of the files is damaged
- If a protected-mode driver is loaded from the System.ini file and the driver is already initialized
- If there is a physical I/O (input/output) address conflict or a RAM address conflict
- If there are incorrect CMOS (complementary metal oxide semiconductor) settings for a built-in peripheral device such as cache settings, CPU timing, hard disks, and so on.
- If the Plug and Play feature of the BIOS (basic input/output system) on the computer is not working correctly
- If the computer contains a malfunctioning cache or malfunctioning memory
- If the motherboard on the computer is not working properly
- If you installed Microsoft Office 97 and you are using the Novell Client 32 software

Below are some examples of Windows Protection errors and their solutions.

**Error Message:** While backing up the system registry, make sure you have

enough space on the drive for three copies of the file `c:\windows\user.dat`. This error should not cause any loss of information, but if space is not made on the drive you may experience additional problems.

**Translation:** You may receive this error when you start Windows. It can occur because there is not enough free space on the hard disk, or a damaged driver is being loaded from the `Config.sys` or `Autoexec.bat` file.

**Solution:** To resolve this issue, use the appropriate method from the two following methods.

- Free additional space on the hard disk containing Windows
- Identify which drivers are causing the problem by following these steps:
  - Restart the computer. As the computer starts, press and hold down the CTRL key until you see the Windows 98 Startup Menu, and choose Step-By-Step Confirmation.
  - Type `y` at each prompt

except for the Process Your Startup Device Drivers (`Config.sys`) and Process Your Startup Command File (`Autoexec.bat`) prompts.

If the error message no longer occurs, the problem is with a driver being loaded from `Config.sys` or `Autoexec.bat`. Repeat the steps above, this time typing `y` at the Process Your Startup Device Drivers (`Config.sys`) prompt. If the problem returns, the `Config.sys` file is

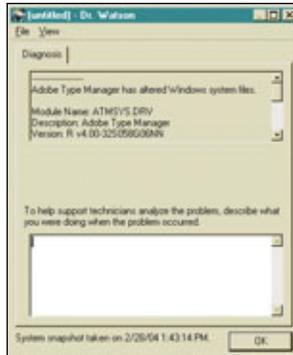
damaged. If the problem does not occur, repeat the steps above, this time typing `y` at the Process Your Startup Command File (`Autoexec.bat`) prompt. Once you have identified the defective driver, contact the manufacturer of the driver or reinstall the driver from the original disk.

**Error Message:** "Initializing Device IOS: Windows Protection Error"

**Translation:** When you start your computer (in either normal or Safe Mode) you may receive this message. This issue can occur if a virus hooked the INT21h or INT13h chain before Windows is loaded, an unsafe device driver is detected, or a protected-mode driver is missing or damaged in the `Iosubsys` file located in the `C:/WINDOWS/SYSTEM/Iosubsys` folder.

**Solution:** If you installed new software or hardware, the installation process may have performed some action that may be the cause of your computer's current problem. The same situation may have occurred if you removed outdated software or hardware. Try reinstalling the previous version of the software. Restart your computer and observe whether the message is resolved. If the message is gone, contact the manufacturer of the hardware to ensure that you are using the most recent BIOS for your computer.

After you have eliminated the possibility of a faulty driver as a potential source of the error, try to restart your computer in Safe Mode. You can start your computer in Safe Mode by holding down the F8 key during startup and selecting Safe Mode from the menu. If you can restart your computer in Safe Mode, clean boot your computer to identify the cause of the error. If you restart your



**Dr. Watson diagnoses your system and displays a "snapshot" of your system, highlighting errors and possible solutions.**

### Most Common Error Message

In Windows 98, the following is an error that is seen more often than any other and is easily remedied.

**Error Message:** "A filename cannot contain any of the following characters: \/:\*? "<>|"

**Translation:** You have tried to rename a file using an invalid character. For various reasons, Windows doesn't let you use certain characters in a filename (often because Windows uses those characters to denote something else, such as a file path or command switch).

**Solution:** It's simple—just rename the file without using characters that Windows says you can't. □

computer and the same error message appears, make a `Bootlog.txt` file and examine it to find the cause of the error. Restart the computer as before and click Step-By-Step Confirmation. Press `y` and then `ENTER`, after each line is displayed. Restart your computer and click Command Prompt Only.

Use the command prompt to view the `C:\Bootlog.txt` file to identify the problem. At the prompt, type `edit bootlog.txt`. Examine the `Bootlog.txt` file for `Initcomplete=` entries. Each entry must have a matching `initcompletesuccess=` entry on a successful start up. If the last line in the `Bootlog.txt` file displays an `InitFailure` or `LoadFailure` message for a driver, write down the drive's name, exit the `Bootlog.txt` file, press `ALT-F`, press `x`, click `OK`, and then search for the driver. Some virtual drivers are required for Windows to run properly. If one of the drivers in the Sidebar entitled Required Windows Drivers comes up as `LoadFailure`, try to install Windows into a new folder to determine whether it is compatible with your current hardware configuration. If the driver is not listed in the sidebar, try to rename the driver and restart Windows. At the prompt, type `dir /s X`, where `X` is the driver name that shows the failure. Type `cd path` and `ren XX.old`. (`XX` indicates that the driver name is typed twice.) If you do not find any unsuccessful attempts in the `Bootlog.txt` file, or, if after you rename a file you still receive the error, try to locate an `Ios.log` file in the Windows directory. The `Ios.log` file may help you identify a virus or it may contain information describing why the protected-mode disk driver could not load. If none of the preceding steps work, try to install Windows in another folder.

## General Protection Fault

A GPF (general protection fault) can indicate a problem with software or that you need to update a device driver that you have installed on your computer. If the Microsoft Knowledge Base ([support.microsoft.com](http://support.microsoft.com)) does not contain an article to address the specific GPF, the Dr. Watson tool included with Windows can help you identify the cause of the error message.

Dr. Watson is a diagnostic tool that takes a snapshot of your computer whenever a fault occurs. The program intercepts faults, identifies the faulty software and offers a detailed description of the cause of the error. Starting Dr. Watson will help you catch the error the next time it occurs. After using one of the methods

## Most Unusual Error Message

This error packs a double threat; you won't see it often, and it is relatively serious.

**Error Message:** "A fatal exception 00 has occurred at X"

**Translation:** A divide error has occurred. If the processor divides a number by zero in a register, this error pops up. The register is the location where calculations are performed. The error results because division by zero is mathematically impossible. Therefore, your computer forgot how to do basic math.

**Solution:** Close the message and attempt to continue the operation. If this fails, close the application and restart your machine. If the error persists, shut down the computer, wait at least 30 seconds, and reboot. □

listed below to start Dr. Watson, an icon will appear in the system tray at the bottom right of your screen. Double-clicking the icon will gather information about the operating system and a Dr. Watson dialog box is displayed.

If Dr. Watson detects a program fault it will generate a snapshot of the environment. Clicking the Details button in the message will allow you to view the information that is generated.

- Method 1:
  1. Click Start, click Run, type **Dr. Watson**, and click `OK`.
- or
- Method 2:
  1. Click Start, point to Programs and Accessories and click System Tools.
  2. Click System Information, Tools, and Dr. Watson on the menu.

Some examples of GPFs and their solutions are listed below.

**Error Message:** "System Busy" appears on a blue screen.

**Translation:** This error is often accompanied by information telling you that a GPF has occurred. This almost always indicates that a program, or even the entire system, has frozen. Waiting for the system to "catch up" won't usually help.

**Solution:** The most common solution to this problem is to reboot your system. Further instances of this error should be handled in a similar manner.

**Error Message:** "Rundll caused a general protection fault in `krnl386.exe`"

**Translation:** You may receive this error message when you try to open the Network

tool in the Control Panel. This behavior can occur if the `Netdi.dll` file or the `Netos.dll` file is missing or damaged.

**Solution:** To resolve this issue, extract a new copy of the `Netdi.dll` and `Netos.dll` file from your original Windows disks or CD-ROM. To extract the necessary files from your Windows disks, click Start and Run. Type `sfc` and press `ENTER`. Once the menu appears, click Extract One File From Installation Disk, and in the Specify The System File You Would Like To Restore box, type `<drive>:\windows<path>\<file>` (where `<drive>` is the drive where the Windows folder is installed [generally `C:`], `<path>` is the destination of the file that you want to extract, and `<file>` is the file that you need). Click Start, browse to the Restore From box, and locate the installation files. The files are located on the hard disk in the `C:\Cabs` folder by default. You can also insert the Windows CD into your CD-ROM or DVD-ROM drive and locate the files in the folder named `Win9x`.

**Error Message:** "Explorer caused a general protection fault in module `qtw32.cpl` at X"

**Translation:** You may receive this error message when you open the Control Panel if one or more Apple QuickTime for Windows files is missing or damaged.

**Solution:** Remove QuickTime for Windows. First, restart the computer. Press and hold the `F8` key after your computer completes the POST (Power On Self Test) and choose Safe Mode Command Prompt Only from the Startup menu. At the prompt, type the following commands, pressing `ENTER` after each command:

```
cd \windows\system
ren qtw16.cpl qtw16.xxx
```

ren qt32.cpl qtw32.xxx

After restarting your computer normally, click Start, point to Settings, click Control Panel, and then double-click Add/Remove Programs. On the Install/Uninstall tab, click QuickTime for Windows, and then click Add/Remove.

**Error Message:** "Rundll32 caused a general protection fault in module Macw4.drv"

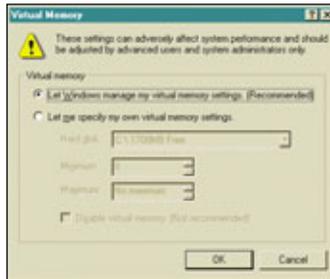
**Translation:** This error can occur if you are using outdated or damaged drivers for a video adapter when you click the Security tab in the Internet Properties dialog box or you attempt to browse online.

**Solution:** To resolve this behavior, obtain and install updated video drivers from the manufacturer of your video driver (most have these available on their Web sites). To work around the behavior, reduce your video graphics acceleration setting. Click Start, point to Settings, click Control Panel, and double-click System. Click the Performance tab, and then click Graphics. Move the Hardware Acceleration slider to one notch from the left (the Basic Accelerator Functions setting), click OK, and then click Close. Click Yes when asked to restart your computer.

**Error Message:** "Rundll caused a general protection fault in module MMSYSTEM.DLL at X."

**Translation:** This error message is most likely to occur after you use the Add New Hardware tool in Control Panel if the Drivers=mmsystem.dll line is missing from the [boot] section of the System.ini file.

**Solution:** Use any text editor (such as Notepad) to edit the System.ini file. Type **drivers=mmsystem.dll** into the [boot] section of the file. Save and close the System.ini file and restart your computer.



**Changing Virtual memory settings is not recommended, but it can help increase system performance for the experienced user.**

### Fatal Exception

There are many types of Fatal Exception error messages. The BSOD (Blue Screen of Death) often accompanies these errors. These exception messages are codes that are returned by a program in the following situations:

- If access to an illegal instruction has been encountered
- If invalid data or code has been accessed
- If the privilege level of an operation is invalid

The processor returns an exception to the operating system when any of these situations occurs, which in turn is handled as a Fatal Exception error message. The exception is non-recoverable in many situations and you must either shut down or restart the computer, depending on the severity of the problem.

Though this list is not extensive, listed below are examples of these exception errors and their solutions.

**Error Message:** "An exception 0E has occurred at X"

**Translation:** A page fault has occurred. An error is generated if a stack instruction tries to use memory outside the stack. A stack is a memory area reserved for programs to process hardware events.

**Solution:** Close the message and try to continue your work. If that fails, close the software and restart it. If all else fails, reboot the computer.

**Error Message:** "MPREXE.EXE caused an exception 03h in module USER32.dll at X."

**Translation:** This can occur if a program is running that prevents Windows from upgrading files on your computer.

**Solution:** Restart your computer using the Startup Disk A Startup Disk is a tool that will start your computer from the floppy drive if the hard drive will not start. Create a Startup Disk by inserting a floppy disk into the floppy drive, click Start, Settings, Control Panel, and then Add/Remove Programs. Click the Startup Disk tab and click the Create Disk button. Once you've made the disk, restart your computer with the disk in the floppy drive. On the Startup menu, choose the correct CD-ROM support for your computer and type the following commands (where <windows> is the name of your Windows folder and <ramdrive> is the virtual drive created by the boot disk (probably e: or f:), pressing ENTER after each command:

```
C:
cd <windows> \system
ren user32.dll user32.dlx
ren gdi32.dll user32.dlx
ren winmm.dll winmm.dlx
<ramdrive> \ext.exe
```

Then, type <CD-ROM drive>:\win98, where <CD-ROM drive> is the drive letter assigned to your CD-ROM drive. Type **user32.dll gdi32.dll winmm.dll**, followed by <drive>:\<windows>\system, and ENTER after each line (where <drive> is the drive on which Windows is installed and <windows> is the folder containing Windows). If the information shown is correct, type **y**. Type **cd** and press ENTER and then type **ren Cmapieng.vxt Cmapieng.vxx** and press ENTER. Restart your computer and run the defragmentation application (Start, Programs, System Tools, and Disk Defragmenter). When Ext.exe (the final command you typed) has finished extracting the files, remove the Startup disk and restart your computer. Press and hold down the

### Most Humorous Error Message

Though uncommon and quite easy to avoid, the phrasing of this error is amusing. Fortunately, it can be quite easily replicated and remedied.

**Error Message:** "Windows cannot find "search". You may have typed the name incorrectly in the Run dialog, or another open program cannot find a system file. To search a file, click the Start button, and then click Search."

**Translation:** Typing Search into the Run dialog in the Start menu has told the computer to look for a file named "search". Because most computers don't contain a file named "search", the system tries to find it and fails.

**Solution:** Click OK and rephrase the parameters of your Run command. Or, if you're actually trying to launch the Search feature, click Start and Find. □

F8 key as your computer restarts. On the Windows Startup menu, select Safe Mode. After Windows starts, click Start, point to Settings, click Control Panel, and then double-click Add/Remove Programs. Click any utility that you have installed on the Install/Uninstall tab and then click Add/Remove until any utilities you have installed are removed. On the toolbar click Start, point to Settings, click Taskbar And Start menu, Start Menu Programs tab, and then click Remove. Double-click Startup, click the appropriate entry, and click Remove, Close, and OK, and then restart your computer. In Microsoft System Information, on the Tools menu, click System File and Settings; on the Advanced tab, click Restore Defaults; then click OK. Restart your computer.

**Error Message:** "A fatal exception 06 has occurred at X."

**Translation:** This behavior can occur if an earlier version of antivirus software is being loaded from the Autoexec.bat in Win98 or Win98SE Setup.

**Solution:** Disable the antivirus software by restarting your computer, holding down the F8 key until the Windows 98 Startup menu appears and choose Command Prompt only. At the command prompt, type `edit c:\autoexec.bat` and press ENTER. Type `rem` at the beginning of the line containing the name of your antivirus software. Save and close the file. Restart your computer.

### Kernel32.dll

The Kernel32.dll file is a 32-bit DLL (dynamic link library) file that is found in Windows 95/98/WinMe. The Kernel32.dll file handles memory management, I/O operations, and interrupts. Other programs will not take over the memory space occupied by the Kernel32.dll file because it is a protected space. You may receive an IPF (invalid page fault) error message, which occurs when a program tries to access the Kernel32.dll protected memory space. The error message can be caused by one particular program or by multiple files and programs. If the problem results from running one program, the responsible program must be replaced. If, however, multiple programs cause the problem, the damage is likely caused by damaged hardware. Clean-booting the computer can help you identify the particular third-party memory-resident software, but programs that are not memory-resident can also cause IPF

## Most Confusing Error Message

**Error Message:** "Cannot open file."

**Translation:** This error occurs when you open a file by clicking on the filename on the list at the lower part of the File menu and there is not enough memory available in Windows. It's not terribly helpful that the error is ambiguous and does not describe why it cannot open the file or how to correct it. A different message can even be displayed, depending on how you attempted to open the file.

**Solution:** There may not be enough memory available to Windows. You may need to close down programs to give Windows enough memory to run the program or open the file. Another possibility might be to configure Windows to use more virtual memory. To change virtual memory settings, click Start, Settings, Control Panel, and System; go to the Performance tab and click Virtual Memory. It is recommended that you let Windows decide how much to use, but you can change the settings as necessary to eliminate the error. □

error messages. Kernel32.dll errors can be generated by any number of conditions, including a damaged Registry, incorrect hardware drivers, a damaged or missing TEMP folder, a CPU that is running too hot, low disk space, a damaged Kernel32.dll file, and more. Below is a list of Kernel32.dll errors and their solutions.

**Error Message:** "Mplayer2 caused an invalid page fault in module kernel32.dll"

**Translation:** An incompatible display adapter or display adapter driver causes this error when you try to play a movie in Microsoft's Windows Media Player. Your computer may display a black screen, instead of active video content, or simply not respond.

**Solution:** You must obtain an updated display driver by contacting your hardware manufacturer. If an updated display adapter does not resolve the behavior, Windows sending information to your video card faster than the card can process it may cause the error. This behavior mainly occurs with older video cards and can be resolved by turning down the hardware acceleration in Windows.

To turn down the hardware acceleration, double-click System in the Control Panel. Click the Performance tab and then Graphics. Select the proper setting out of the four possible Hardware Acceleration settings: Full, Most, Basic, and None. Click OK and restart your computer. Repeat the procedure as nec-

essary, selecting different settings if you continue to experience the problem.

**Error Message:** "SmartHeap Library. MEM\_BAD\_POINTER. This program has performed an illegal operation and will shut down. If the problem persists, contact the program vendor. X caused an invalid page fault in module Kernel32.dll at X."

**Translation:** If you:

- Have Symantec's Norton Navigator for Win95, version 1.0b, installed and running
- Have the File Popups and/or Drive Popups options in the Norton Navigator Control center enabled
- Display any dialog box as a list of files in one of the programs included with Microsoft Office 97
- Right-click any file in the dialog box

**Solution:** To prevent this problem from occurring, you must download and install a patch for Norton Navigator from Symantec's Web site. The update will be applied the next time you restart your computer. If you cannot download and install the patch, you can prevent the problem by turning off the File Popups, Folder Popups and Drive Popups options in Norton Navigator by clicking the Start menu, pointing to Programs, Norton Navigator and Norton Navigator Control Center, Norton Explorer Extensions. Click to clear the appropriate options and click Apply and OK. **RS**

by David Miller

# Windows 98 Networking & Online Errors

## Stay Online & Productive



### Networking-Related Errors

Networking errors can leave you without any method for archiving your data to a remote server. If a crash occurs on your own computer, you run the risk of losing all your important files. And, you may not be able to access important information stored offline, so you'll have to rely solely on local data. In some ways networking errors are less critical, though, than a desktop problem because you can sometimes keep working and resolve the issue later. And you can fix most networking errors just by enabling an option either on the server or on your own computer.

It's also reassuring to know that, at least in an office setting, you can usually contact the tech support department to ask about network problems, but trying to have someone come out to your desk is sometimes much more difficult. Networking errors will also occasionally go away all on their own as network resources become available, servers automatically reboot themselves, or a password cache clears itself as part of routine system maintenance chores. Of course that's not helpful when you really need to download the latest Excel spreadsheet for your boss, so it's good to know that you can address some common networking problems with these fixes.

#### Error Message: "Invalid local device."

**Translation:** The computer does not have any more drive letters available for network mapping.

**Solution:** There are three quick and easy solutions to this problem. The quickest solution is to just map a drive letter, which is within the first few letters of the alphabet, such as F or G. (By mapping a drive letter, you're making a network drive accessible in Windows 98.) If you have run out of drive letters, you'll need to edit the Config.sys file, so use the DOS command line. Click Start and Run. Type `cmd` and

press ENTER. Now type `c:`, press ENTER, type `cd\`, and press ENTER to make sure you are in the root C: drive. Type `edit config.sys` and press ENTER.

In the editor look for the `LAST-DRIVE=` statement. The first solution is to just remove the entry altogether. The second solution is to make the drive letter Z so that you can map drives for the entire alphabet, if need be. Now, exit the command prompt and reboot your computer. You should be able to map a network drive.

#### Error Message: "The computer you have dialed in to has denied access because the username and/or password is invalid on the domain."

**Translation:** The username or password, domain name, or preferred server name are incorrect when you try to use dial-up networking. Or the password cache files on the network server are damaged. In some cases the error occurs when a password is not required at all.

**Solution:** If the network server does not require a password, just leave that field blank. Otherwise you'll need to restart the computer and enter Safe Mode. Press the CTRL key as Win98 starts up. Choose the Safe Mode Command Prompt Only option and press ENTER. Go to your Windows directory and type `ren na.pwl na.xxx` and press ENTER.

This resets the dial-up networking password.

#### Error Message: "There was a problem printing to the printer due to an unknown system error."

**Translation:** On a network print server, the print spool folder (which is used to hold the print files sent from client computers on a network) contains too many temporary files.

**Solution:** In a network environment where you are printing to a computer running Win98, the print server has to manage a large number of temporary files. If congested, the computer won't let you print until you remove some of the files. To do so you'll need access to the computer running the print server. Start Windows Explorer and browse to the `C:\WINDOWS\SPOOL\PRINTERS` directory. Delete all of the files and reboot the computer.

#### Error Message: "XX is not accessible. Unknown Error 2114"

**Translation:** Occurs when Client for Microsoft Networks is installed without the file and print sharing component.

**Solution:** Click Start, Settings, and Control Panel. Double-click the Network icon. Click Add, Service, and Add. Click File And Printer Sharing For Microsoft and click OK. Click OK again and restart your computer.

#### Error Message: "The driver or network connection that the shortcut 'target.lnk' refers to is unavailable. Make sure that the disk is properly inserted or the network resource is available, and then try again."

**Translation:** Occurs when you try to connect to the Shared Documents directory in the My Documents folder on a computer running Windows Me.

**Solution:** Copy the files from Shared Documents to the `C:\DOCUMENTS` folder.

Another option is that you can run the Home Networking Wizard on the WinMe computer and select the option to share both the Documents and My Documents folders.

**Error Message:** “The network is not accessible. Unable to find the device on the network.”

**Translation:** There is no computer on the network configured as the browse master. The browse master maintains a list of all the attached computers, including all of their network settings.

**Solution:** Make one of the computers on the network the browse master. On that computer click Start, Settings, and Control Panel. Double-click Network and select File And Printer Sharing For Microsoft Networks on the configuration tab. Click Properties. In the Property box, click Browse Master, select Enabled in the Value box, and click OK twice as prompted. Click Yes when you are prompted to reboot the computer. Incidentally you need to have File And Printer Sharing installed on the computer for this solution to work.

**Error Message:** “Error 629: You have been disconnected from the computer you dialed. Double-click the connection to try again.”

**Translation:** Occurs if the computer you are dialing with dial-up networking is using pass-through authentication, which is a method for approving passwords sent from a client computer.

**Solution:** If you’re not concerned about high-level security when you connect to a remote server, you can disable pass-through authentication. Double-click the My Computer icon on the Desktop and double-click the Dial-Up Networking icon. Go to the Connections menu and click Dial-Up Server. Look for the Server Type button and clear the checkbox next to Require Encrypted Password.

### Online-Related Errors

When you really need to get online to check email or research a topic on Google.com, an Internet-related error can be a lot more frustrating. Of course, next to a General Protection Fault or an error that appears when you start the computer, Web errors can seem trivial. Fortunately many Internet errors can be resolved quickly and without a lot of troubleshooting, as long as you understand why the error is occurring and try a few workarounds to fix the problem.

It’s important to know that, in some cases, the problem is occurring on the “other end” of the connection. If too many users try to access a Web site (such as CNN.com after a big news event), you may receive errors that will not occur later in the day. In other cases problems can occur due to flawed HTML and ActiveX programming, incompatibilities between your browser and the Web server, or network congestion in general. One of the best tips for solving Internet-related problems is to go back to the site later. Also, make sure you have the latest version of Internet Explorer, available at [www.microsoft.com/ie](http://www.microsoft.com/ie).

**Error Message:** “Cannot open Internet site...”

**Translation:** This error can occur if you are using the wrong version of Winsock, which is the system file used to establish connections between networked computers.

**Solution:** Click Start, Settings, and Control Panel. Double-click Network. Click the Configuration tab, click TCP/IP, and click Remove. Look for any other TCP/IP (Transmission Control Protocol/Internet Protocol) listings and remove those, too.

Click OK. Click OK again after you are prompted to restart. When your computer boots up again, go back to the Network control panel. Now click Protocol, Add, and then click Microsoft in the Manufacturers box, click TCP/IP, and click OK. If you are prompted about a version conflict, click No when prompted to keep the newer version of the file. Now restart the computer again.

**Error Message:** “The Microsoft Dial Up adapter is in use or not responding properly. Disconnect other connections and then try again. If this problem persists, shut down and restart your computer. Error 645.”

**Translation:** This error occurs if you are trying to use VPN (virtual private networking; the industrial strength end-to-end security protocol) to log into a corporate server using PPTP (Point-To-Point Tunneling Protocol) and establish a secure connection.

**Solution:** Click Start, Settings, and Control Panel. Double-click Add/Remove Programs. Click the Windows Setup tab, click the Communications tab, and Details. Clear the Virtual Private Networking checkbox, click OK,

### Most Difficult Error Message To Fix

**Error Message:** “Error 745: An essential file is missing. Re-install Dial-Up Networking.”

**Translation:** A DLL (dynamic-link library) file is missing or damaged.

**Solution:** This error can occur if Dial-Up Networking is not installed correctly. The best solution is to reinstall Dial-Up Networking. To remove Dial-Up Networking, go to Start, Settings, and Control Panel. Double-click Add/Remove Programs. Click the Windows Setup tab and click Communications. Click Details. Click the Dial-Up Networking checkbox and click OK at each dialog box. When prompted, restart your computer. Now you’ll also need to take a trip to the Registry and remove the following line:

```
HKEY_LOCAL_MACHINE\SYSTEM\CURRENTCONTROLSET\SERVICES\REMOTEAC-
CESS\AUTHENTICATION\SMM_FILES\PPP
```

Editing the Registry is a complicated task in Windows 98, mostly because you can accidentally delete important files and make Windows unbootable. We recommend contacting Microsoft Technical Support at [support.microsoft.com](http://support.microsoft.com).

However, even if you reinstall Dial-Up Networking and edit the Registry, another lingering problem can cause the DLL errors. For example, if you are using CompuServe’s WOW! Software (which was discontinued in 1997), you should remove it, as the software can cause DLL and Registry errors. □

## Most Confusing Error Message

**Error Message:** “Internet Explorer Script Error: An error has occurred in the script on this page” or “Microsoft Internet Explorer: Internet Explorer cannot open the Internet site XX: Invalid syntax.”

**Translation:** Windows has found an invalid default code page, which is due to Internet Explorer using a foreign language font character set.

**Solution:** Anytime an error message uses the phrase “invalid syntax,” you might wonder what’s really happening. In this case the message is confusing because it doesn’t say anything about fonts, character sets, or foreign languages and seems to be saying the problem is with the Web site you are visiting. Before you send off an email to the site owner complaining about compatibility problems, you should know that, somehow, the wrong character set is enabled on your computer. You’ll want to use the Western character set. Go to Start, Settings, Control Panel, and double-click Internet. On the General tab, click Fonts, choose Western under Character Sets, click Set As Default, click OK, and then click OK again.

and then Apply. Click the Communications tab again and, this time, enable the VPN checkbox. Click OK.

**Error Message:** “The Page cannot be displayed.”

**Translation:** The computer you are trying to attach to is running ICS (Internet Connection Sharing) and has rebooted, or the computer you are dialing into is using a proxy server (used for blocking unapproved access).

**Solution:** The simplest solution: Just wait for the computer that is running ICS to finish rebooting completely. If that doesn’t work, check to see if the computer that’s running ICS is running a proxy server. You’ll need access to that computer. Click Start, Settings, and Control Panel. Double-click the Internet icon. Click the Connections tab, LAN Settings, and see if the Use A Proxy Server box is checked. If it is, click to uncheck that option. If you are still unable to connect, on your computer, click Start, Run, type `wiupcfg`, and press ENTER. Click OK and Release All. Click Renew All and OK.

**Error Message:** “There is no dialtone. Make sure your modem is connected to the phone line.”



**Make sure the Use A Proxy Server option is not checked.**

**Translation:** Occurs when you are using a calling card and you have enabled the Wait For Dial Tone Before Dialing option. Also can occur if the phone line is not plugged in securely to your modem or the phone line is not working.

**Solution:** Check the connection between the phone line and the modem to make sure the connection is secure. You can also test a

regular phone to make sure there is an active phone line in your home. Otherwise, click Start, Settings, Control Panel, and double-click

Modems. Select your modem and click Properties. Click the Connections tab and look for the Wait For Dial Tone Before Dialing option. Disable it, click OK twice, and try dialing out again. In some cases you may need to reboot the computer.

Disable the Wait For Dial Tone Before Dialing option when you want to use a calling card for Dial-Up Networking.

**Error Message:** “Error 630: The computer is not receiving a response from the modem. Check that the modem is plugged in, and if necessary, turn the modem off, and turn it back on.”

**Translation:** Error 630 is an indication that you are using the ATI 600 Series fax modem, which does not work with Win98. Another symptom of this problem is that the error message will appear and then your computer will stop working; then you’ll have to reboot.

**Solution:** You’ll need to obtain the latest driver for the ATI 600 Series fax modem. However, the problem may still occur, in which case you’ll probably need to remove the modem card altogether and install a compatible fax modem.

**Error Message:** “Port Already Open”

**Translation:** This error can occur after you upgrade from Windows 95 or WinMe due to a conflict between a COM (communications) port and a FIR (fast infrared) port.

**Solution:** Click Start, Settings, and Control Panel. Double-click System and select the Device Manager tab. Double-click the Infrared Devices tab to expand it, click the first infrared device, click Properties, and click Disable In This Hardware Profile. Repeat this process for any other infrared port. Now double-click the

## Most Common Error Message

**Error Message:** “Error Starting Program: A required .DLL file, SUPERSUB.DLL was not found.”

**Translation:** This error can occur when you try to install America Online if you previously tried to install the online service and then canceled the install.

**Solution:** Millions of users install and uninstall AOL every day, especially those who want to try out the service for the free trial period. That’s what makes this error so common, and fortunately it’s also easy to fix. You just need to install a more recent version of the program, or revisit the original installation program, which is on your Windows 98 Setup CD at `WIN98\OLS\AOL\AOL40US`.

## Most Unusual Error Message

**Error Message:** "Runtime Error 216 at XX"

**Translation:** This error occurs when you try to start Internet Explorer and your computer is infected with the rare SubSeven Trojan virus. The error can also occur when you try to start other Windows programs, but it can more commonly occur with IE, but only if you are running Windows 98.

**Solution:** The solution is to obtain an antivirus program, such as Symantec's Norton AntiVirus, then run the virus-checking scan. The problem does not appear to be serious and won't cause serious damage to your PC. As with any virus, however, it's important to address the problem, especially if you have other viruses infecting your computer.

Network Adapters branch to expand it. Look for an Infrared port, click it, and click Remove. Click OK.

**Error Message:** "Could not initialize port"

**Translation:** This error occurs for one of three reasons. One, the Allow Caller Access option could be enabled for Dial-Up Networking. Two, you could have Microsoft Fax services set up to answer all incoming calls. Third, it could be a hardware IRQ (Interrupt Request Line) conflict, which can occur when a hardware driver is loaded incorrectly into system memory.

**Solution:** To disable Allow Caller Access, first double-click the My Computer icon.

Double-click Dial-Up Networking. On the Connections menu, click Dial-Up Server. Click the No Caller Access icon and click OK. If you are using Microsoft Fax for incoming calls, first double-click the Microsoft Fax Status icon in the Taskbar. If you don't see the status icon in the Taskbar, double-click the Inbox icon on the Desktop and select the Fax option when prompted. On the Options menu, select Modem Properties, and then select the Don't Answer option under the Answer Mode section. If neither of these fixes solves the problem, you may have an IRQ conflict. To check, click Start, Settings, and Control Panel. Double-click System and select the Device Manager tab. Look for any red exclamation marks that indicate an IRQ conflict. Remove

the driver as needed and reboot. If you still receive the "Could not initialize port" error when you try to use Dial-Up Networking, you may need to contact the hardware vendors for any devices that are causing IRQ conflicts.

**Error Message:** "Error 629: You have been disconnected from the computer you dialed. Double-click the connection to try again."

**Translation:** You are trying to use the 128-bit security update for Win98 Dial-Up Networking with Win98 Second Edition. The original 128-bit security update only works with Win98.

**Solution:** You'll need to download and install the 128-bit security update for Win98SE, available at [www.microsoft.com/windows/ie/download/128bit/intro.htm](http://www.microsoft.com/windows/ie/download/128bit/intro.htm).

**Error Message:** "No ISDN devices were found. Please install an ISDN device and run the configuration wizard again."

**Translation:** You are attempting to install an external ISDN (Integrated Services Digital Network) device using the Modems control panel for broadband access, but the wizard works with internal ISDN cards only.

**Solution:** You'll need to contact the ISDN device manufacturer directly and ask them about the installation process for Win98. Most likely, they will direct you to a support Web site with a driver and installation program that you can use, which will bypass the built-in Win98 installation process.

## Most Hilarious Error Message

**Error Message:** "The page cannot be displayed. The page you're looking for might have been removed or had its name changed."

**Translation:** The Windows Media Player is not installed on your computer, so when you visit the [windowsmedia.com](http://windowsmedia.com) Web site, Internet Explorer refuses to display the page and displays the rather verbose error message. This error only occurs with Windows 98 when you are using IE5.01.

It's great that Microsoft provides so much information in their error messages, but this particular error is just plain wrong. The page has not been removed or had its name changed. Funny, too, because it seems as though the left hand (in this case, IE) doesn't know what the right hand (Windows Media Player) is doing, even though both tools come from the same company.

**Solution:** The fix is to install the Windows Media Player component in IE. Click Start, Settings, Control Panel, and Add/Remove Programs. On the Install/Uninstall tab, look for Internet Explorer 5 and Internet Tools, and click Add/Remove. Click Add A Component, click OK, and then go through the next few prompts to install Windows Media Player.

**Error Message:** "An exception OE has occurred at XX called from XX in XX"

**Translation:** You are attempting to send a large data file over a slow modem connection. The error appears on a blue screen.

**Solution:** You'll need to reduce the maximum packet size that your modem can support. To do that, click Start, Settings, and Control Panel. Double-click Network. On the Configuration tab, select Dial-Up Adapter and click Properties. Click the Advanced tab and look for the IP Packet Size option. Click one of the following options:

Automatic: Programmatic control; this is the default setting

Large: 1,500

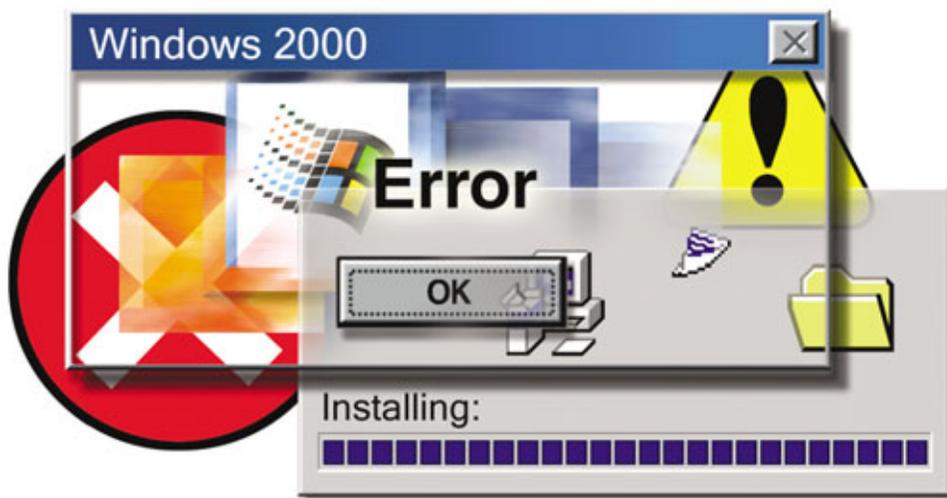
Medium: 1,000

Small: 576

by John Brandon

# Windows 2000 Installation & Setup

Solutions To Get You Off To The Right Start



**W**indows errors. They're roughly as fun as a root canal. In fact, some would argue in favor of the root canal. Windows errors can be confusing and obscure, and, all too common, happen all at once. They can also be galling and frustrating.

But what's even worse are the Windows errors you get before you've even installed Windows, that is, errors during Windows Setup and installation. And yet they abound. A quick search at Microsoft's Help And Support ([support.microsoft.com](http://support.microsoft.com)) gives dozens of results for the search terms "Setup" and "error."

So what's a user to do? Below, we've gathered some of the most common, most confusing, most useful, and most outrageous errors messages in Windows 2000 Setup, then rendered them in plain English with simple (and sometimes not so simple) solutions to each.

### General

**Error Message:** "This program cannot be run in MS-DOS mode"

**Translation:** You could see this message when you start Setup.exe from the Win2000 CD-ROM after booting from a floppy diskette

or hard drive with CD-ROM support. It occurs because the program Setup.exe is a Windows program and can't be run from an MS-DOS command prompt.

**Solution:** As a workaround, boot to an existing Windows installation and rerun Setup. If there's no existing Windows installation on your computer, start the Win2000 installation by booting to the Win2000 CD-ROM or use the Setup boot diskettes created by Makeboot.exe.

To create a set of Setup boot diskettes using Makeboot.exe, insert the Win2000 CD-ROM into your computer's CD-ROM drive, and then click Start and Run. In the Open box, type `X:\bootdisk\makeboot a:`, where X is the letter of your CD-ROM drive, and press ENTER. Follow the instructions when prompted to create four Setup boot diskettes.

**Error Message:** "Setup cannot create the folder \WINNT\TEMP"

**Translation:** When you upgrade your Windows 95/98/NT machine to Win2000, you may receive this message if a file named Temp is in the WINNT folder.

**Solution:** Fixing the problem depends on the type of file system you have. If you have a FAT 32 file system, start your computer to a command prompt. (In Win98, restart your computer,

press and hold the CTRL key until your hard drive is inactive for 10 seconds, and press SHIFT-F5. In Win95, restart your computer, press and hold F8 until your hard drive is inactive for 10 seconds, and press SHIFT-F5. Note that you may hear a number of beeps when you press F8, indicating a keyboard error. It's safe to ignore them, although you may have to tap the F8 key if the beeping continues after you've released the key. In WinNT, restart your machine with a Win95/98 (Win9x) Startup diskette and choose Command Prompt Only at the Startup menu.)

Once you've reached the command prompt, type `cd \` and press ENTER. Now type `cd Winnt` and press ENTER again. Type `ren temp tempold` and press ENTER to rename the Temp file.

If you're using an NTFS file system, start your computer with the Win2000 CD-ROM. (As an alternative, you can also use the floppies you made with the Makeboot.exe tool on the Win2000 CD-ROM.) When you're prompted to repair or continue Setup, choose Repair and Recovery Console. Switch to the WINNT folder and rename the Temp file to Tempold. Type `exit`, and Setup will continue after your computer reboots.

**Error Message:** "Setup is unable to locate temporary files"

**Translation:** You may see this error during Win2000 Setup because the hard disk on which Winnt.exe or Winnt32.exe placed temporary files is not currently visible to Win2000.

**Solution:** The resolution to the problem is tedious. You'll need to back up the hard drive, repartition the hard drive, restore the backup, and reinstall Win2000. To back up the hard drive you'll need a good, third-party backup solution, or you can back up your data online. (A quick search on Google will yield dozens of sites that let you do this for a small fee.) To repartition the hard disk, use a third-party drive partitioner such as Symantec's PartitionMagic. A partition is a logical division of a physical drive, such as your hard drive. Creating partitions can be complex, so unless

you're an expert, it's best to resort to third-party software that walks you through it.

**Error Message:** Setup fails to copy random files during text-mode Setup.

**Translation:** During text-mode Setup, you may receive one of several messages stating that a file can't be copied because it's damaged or missing. This can occur because the Windows CD-ROM is damaged or dirty, PC133 SDRAM is being used in a computer that requires PC100 SDRAM, the CD-ROM drive is malfunctioning, or the RAM is faulty or malfunctioning.

**Solution:** To resolve the problem, first clean your CD-ROM. Be sure to use a soft, lint-free cloth and not a paper towel, which can damage the surface of the disc, and wipe in a linear motion outwards from the center of the disc. (Avoid using a circular motion.) Once you've cleaned the CD-ROM, run Setup again and see if this resolves the problem.

If this fails to resolve the problem, check your computer's RAM. Make sure the RAM on your motherboard is the correct type of RAM suggested by the motherboard's manufacturer. (You'll need to consult the documentation that came with your system to find out what kind of RAM your computer needs, and then carefully open the unit to expose the motherboard and check to see if that type of RAM is in fact being used.) Also check the CD-ROM drive to be sure it's functioning properly. (You can do this by playing a music CD or trying to run another setup program to see if it works.) If you have another CD-ROM drive available, consider using it to install Win2000.

**Error Message:** The keyboard does not work properly during text-mode Setup.

**Translation:** Sometimes during the text-mode portion of Setup, your keyboard may not function correctly, and you may not be able to use it to create, delete, or format a partition.

**Solution:** This can happen if your keyboard uses a layout that's not the standard US-101 layout, such as Dvorak. While the Dvorak layout is loaded during the text-mode portion of Setup, it's ignored until the GUI (graphical user interface)-mode portion begins. There's no way to resolve the problem except to switch keyboards or randomly press keys until you find the key that maps to the US-101 key you're looking for. But beware: You could inadvertently delete a partition.

**Error Message:** "Cannot modify the drive letter of your system or boot volume"

**Translation:** You may see this error message when you attempt to change the drive letter of the system volume (the drive on which Win2000 is installed, for example) after Setup has finished.

**Solution:** The drive letter for the system volume is hard-coded in the Windows Registry and cannot be altered. In Win2000, you can reassign the drive letters linked to other drives, but not the system volume, using the Disk Management Console.

Note that when you're installing Win2000 from Winnt32.exe, you can specify the location of the folder in which Windows should be installed by choosing Advanced Options during the text-mode portion of Setup. This feature is only available when performing a clean installation of Windows, that is, when installing Win2000 on a blank hard drive or installing it in a folder other than the folder in which an existing version of Windows is installed.

**Error Message:** Setup reserves disk space for upgrading to a dynamic disk.

**Translation:** On occasion during Setup, you may choose to create a partition that uses all the remaining space on your hard drive, only to find that Setup does not let you use the maximum space available. For example, if you elect to create a 5,028MB partition on a hard drive that has only 5,028MB available, Setup will create a partition that's only 5,027MB or less in size.

**Solution:** Why does it create the partition of that size? Because Setup reserves space at the end of the disk in case you later want to upgrade the disk to a dynamic disk. Dynamic disk information is stored at the end of the disk, and the least amount that can be reserved is one cylinder, or 1MB, whichever is greater. (Depending on your drive geometry and translation, a cylinder can be up to 8MB in size.)

## Windows Registry

(NOTE: Solutions to errors in this section involve changes to the Registry. The Registry is a complex database of settings and other Windows configurations. Even the smallest change to the Registry, if performed incorrectly, can make your system malfunction. You should open, view, and edit the Registry only if you know how to back it up and restore it to its original state before you attempt to change it in any way.)

**Error Message:** "Windows 2000 Setup could not detect the version of Windows you are currently running. Setup cannot continue."

**Translation:** You may receive this error message when you attempt to run Win2000 Setup from within Win9x/NT. It occurs when your version of Win9x/NT does not contain a

## Most Confusing Error Message

**Error Message:** Setup allows invalid characters in the computer name.

**Translation:** In the GUI-mode portion of Setup, you're allowed to enter nonstandard characters such as [, +, \*, and ? when prompted to enter the computer name. When you do, Setup displays a warning about using a non-DNS (domain name system) name, but still allows you to continue. Once Setup is finished, the error log (Setuperr.log) shows the computer name has nonstandard characters.

**Solution:** Confusing? Setup tells you certain characters are invalid and then lets you use them anyway. Luckily, the solution is simple. Just avoid any use of the following characters while naming your computer, and you'll be fine: \ [ ] " ; | < > + = , ? \* . □



Product ID from Microsoft (in which case your software may be a beta version or an illegal copy and should be replaced with a fully licensed copy).

**Solution:** To fix the problem, you'll need to edit the Registry to add a Product ID. To proceed, click Start, Run, and type **regedit** in the Open box; press ENTER. In Win9x, locate the following Registry key HKEY\_LOCAL\_MACHINE/SOFTWARE/MICROSOFT/WINDOWS/CURRENTVERSION/PRODUCTID and add the number of your Product ID as the value of the Registry's key. (If you don't have a Product ID, you'll need to contact Microsoft or purchase a fully-licensed version of the software in question to obtain one.)

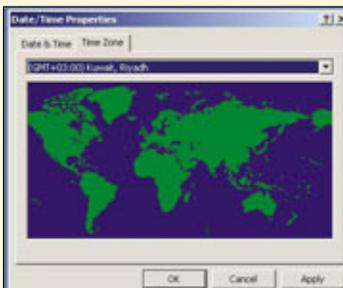
In WinNT, locate the following Registry key HKEY\_LOCAL\_MACHINE/SOFTWARE/MICROSOFT/WINDOWSNT/CURRENTVERSION/PRODUCTID and add the number of your Product ID as the value of the Registry's key.

### Most Hilarious Error Message

**Error Message:** Setup thinks you're in Baghdad (or Kuwait, or Riyadh . . .)

**Translation:** Take heart if Setup tells you it can't determine your time zone properly. Chances are you had your time zone set to Baghdad, Kuwait, Riyadh, or another time zone that seems to bamboozle Win2000 (for reasons known almost entirely to Microsoft, of course). The problem? This time zone matches more than one Win2000 time zone, and technically, Windows can't determine if you're actually in Nairobi or Kuwait.

**Solution:** So what's a world traveler to do? Simply set the time zone manually and you'll be fine.



**Error Message:** "Setup encountered an unexpected critical error . . . not all settings were transferred . . ."

**Translation:** You may encounter this error message while trying to upgrade a Win9x machine to Win2000. Specifically, you may see it while another message, "Setup is migrating Windows 95 settings to Windows NT," is being displayed. It occurs when the following Registry key is damaged or missing: HKEY\_LOCAL\_MACHINE/SOFTWARE/MICROSOFT/WINDOWS/KEY.

**Solution:** If the key is damaged or missing, the Registry cannot be reloaded during the upgrade and the error message will display. Microsoft claims this behavior is by design and that no fix is currently available for it.

### Hardware

**Error Message:** Access to the CD-ROM is lost at the start of GUI-mode Setup.

**Translation:** When you're installing Win2000, you might lose access to your CD-ROM drive after the initial portion of the Setup (known as text-mode Setup) completes and the second portion of the Setup (known as GUI-mode) begins. If this is the case you might see one of several long error messages, including the following:

"The file Nt5inf.cat on Windows 2000 Product CD-ROM is needed.

Type the path where the file is located, and then click OK.

Copy file from:  
GLOBALROOT\DEVICE\CDROM0\I386"

If you click Cancel, you receive the following error message:

"FATAL ERROR:

An error has been encountered that prevents Setup from continuing.

Setup failed to install product catalogs. This is a fatal error. The Setup log files should contain more information.

Press OK to view the Setup log file."

If you click OK to view the Setup log, you'll find that it contains this error message:

"Error: The GLOBALROOT\DEVICE\CDROM0\I386\NT5INF.CAT catalog file could not be found. The error code is 1. This is a fatal error.

Incorrect function."

Why all the trouble? These problems occur when Win2000's GUI-mode Setup looks for but can't find the CD-ROM drive because of outdated firmware on the drive itself (firmware is software embedded in hardware) or simply because the drive is not compatible with Win2000.

**Solution:** To resolve the problem, contact the manufacturer of the drive to see if there's a firmware update; most often, you can download updates from the manufacturer's Web site. If no update is available, you may need to replace the unit with one that's compatible with Win2000.

There is, however, a workaround. You can use a Win9x Startup disk with CD-ROM support to copy the I386 folder from the Win2000 CD-ROM to your hard drive. Then, run Winnt.exe from the copied folder to install Win2000.

**Error Message:** "Setup cannot access this disk."

**Translation:** You may receive this error message during a Win2000 installation immediately after you accept the license agreement. It occurs when the disk controller can't effectively communicate with the hard drive for a number of complex reasons, among them a damaged hard drive or controller, an incorrect driver for the disk controller, a bad termination on the SCSI (Small Computer System Interface) chain, or a hardware compatibility issue with Win2000. But of all these, the most common cause of the problem is simply a bad hard drive.

**Solution:** To resolve the issue, make sure the hard drive, the disk controller, and any related hardware all function correctly and are all Win2000-compatible.

**Error Message:** The computer hangs while Setup is inspecting the hardware configuration.

**Translation:** During a Win2000 installation the computer may stop responding when it displays the following message: "Setup is inspecting your computer's hardware configuration."

**Solution:** This problem can happen if a disk controller is configured to support removable media (such as Zip disks) as fixed drives. To fix the problem, turn off any feature that treats removable disks as fixed disks in



## Most Unusual Error Message

**Error Message:** "Service pack 3 Setup error. An error in updating your system has occurred."

**Translation:** This problem occurs if the version of the Windows Installer on your computer is outdated or corrupted.

**Solution:** To fix it, you'll need to disable the version of the Windows Installer currently on your system and replace it with the most current version. Click Start, Programs, Administrative Tools, and Services, and then double-click Windows Installer. Under Startup Type, select Manual and click OK. Next, click Start and Run. In the Open box, type **regedit** and press ENTER. (Note that in doing so you'll open the Windows Registry for editing. The Registry is a database of system settings that determines the configuration of Windows; any change to the Registry can result in significant damage to the system, so proceed past this point at your own risk.)

In the Registry Editor, locate and delete the following subkey: HKEY\_LOCAL\_MACHINE\SYSTEM\CURRENTCONTROLSET\SERVICES\MSIServer. When asked to confirm the deletion, click Yes and restart your computer. Next, download and install the most current version of the Windows Installer from the Microsoft Web site at [download.microsoft.com/download/WindowsInstaller/Install/2.0/NT45/EN-US/InstMsiW.exe](http://download.microsoft.com/download/WindowsInstaller/Install/2.0/NT45/EN-US/InstMsiW.exe) □



**Error Message:** The primary monitor is switched during Setup.

**Translation:** When you're installing Win2000 on a machine with multiple video cards and monitors, Setup may seem to hang and display the message "Starting up . . ." If you turn on all your monitors, you'll see that Setup has switched its activity to another monitor. The computer's BIOS is set to use a monitor using an AGP (Accelerated Graphics Port) video adapter by default, but Setup has switched to a monitor using a PCI (Peripheral Component Interconnect) adapter.

**Solution:** Microsoft claims this behavior is by design. To work around it, simply keep all your monitors on during Setup.

**Error Message:** "Setup has encountered an error and cannot continue.

Contact technical support for assistance. The following status will assist them in diagnosing the problem.

(0x5, 0x1, 0, 0)

-or-

(0x5, 0x1, 0x3, 0)

Setup cannot continue. To quit Setup, press F3."

**Translation:** You may see this error when you try to perform a fresh Win2000 installation on a hard drive that was converted to a dynamic drive. Specifically, the drive already contains four dynamic partitions. During Setup, if unallocated free space is still available on the disk and then selected, Setup tries to create another

partition from this space, which is not permitted. (Note that dynamic disks can support more than four partitions, but installing Win2000 to dynamic disks is not fully supported.) The strings of numbers (0x5, 0x1, 0, 0 and so on) are special codes that help Microsoft techs pinpoint and diagnose your problem. You can view them as "techspeak," or jargon that a trained technician will intuitively understand.

**Solution:** To work around the problem, simply install Win2000 on another pre-existing partition or on free space on a basic (nondynamic) disk.

## Partitions

**Error Message:** Setup changes drive letters after a partition is deleted and reinstalled.

**Translation:** If you delete a partition during the text-mode portion of Setup, then create a new partition using the space you've freed up and install Win2000 on the new partition, Setup may change the drive letters on your system.

For example, say you have a computer with one hard drive and two partitions: C: and D:. You also have a CD-ROM drive named E:. During Setup, you delete the D: partition and create a new partition using the unpartitioned space, on which you install Win2000. When you're done, you discover that Windows was installed on drive E: and the CD-ROM drive has become drive D:.

Why all the changes? During Setup, when you delete a partition that holds a drive (whether it's physical or logical), Windows reassigns letters to all drives that had letters after the one you deleted, then assigns the next available drive letter to the new partition.

**Solution:** To solve the problem and preserve your drive's letters, first delete and re-create the partitions you'd like, and then start Win2000 Setup. You can do this by using a boot diskette that contains partitioning software or by using third-party partitioning software itself.

**Error Message:** "You chose to install Windows 2000 on a partition that contains another operating system. Installing Windows 2000 on this partition might cause the operating system to function improperly."

**Translation:** You may receive this message when you boot your Win98/NT machine from the Win2000 CD-ROM or diskettes. It indicates that Setup did not recognize the operating system you're attempting to upgrade. (That's correct: Setup did not recognize Win98/NT.) If you choose to continue, Setup will install a new installation of Win2000, instead of an upgrade to your current OS, causing your current operating system to stop working properly.

**Solution:** Simply put, Win2000 won't support upgrading Win98/NT when booting from the Win2000 diskettes or CD-ROM. To upgrade, boot Win98/NT as you would normally, then run WinNT32.exe from the Win2000 CD-ROM.

**Error Message:** Setup cannot create a new partition in the space you selected because the maximum number of partitions already exists on the disk.

**Translation:** Hard drives are allowed four partitions, either four primary partitions or three primary partitions and one extended partition. This problem occurs because you've already created the maximum number of partitions on your hard drive and Setup is attempting to create yet another.

**Solution:** It's simple. Delete the last partition from your hard drive and let Setup combine it with any unpartitioned space on your drive to make a new partition. But note: Deleting a partition deletes all data on the partition, so be sure to back it up first if you plan to keep the data.

**Error Message:** Multiple unpartitioned spaces are displayed during Setup.

**Translation:** During the text-mode portion of Win2000 Setup, multiple unpartitioned spaces may be displayed on a single hard drive. When this happens it may seem like it's not possible to use all the available space on a single partition, and you may be unable to delete the extra (unpartitioned) space. This problem occurs if you've deleted a logical drive from an extended partition but not yet removed the extended partition itself.

**Solution:** To solve the problem, select the unpartitioned spaces (starting with the last entry first) on the drive containing them and then press **c** to create a new partition. Next, select the new partition and press **d** to delete it.

## Networking

**Error Message:** "Network component upgrade

Error copying OEM files from the specified location.

**Do you want to cancel this upgrade?"**

**Translation:** You may see this error message almost immediately after inserting the Win2000 CD-ROM into the CD-ROM drive of a computer that's running a Win2000 beta release and then clicking Setup. If you click Yes or No, you see the following error message:

"Error initializing OEM files.

The option to upgrade is not available at this time. Access is denied."

This problem occurs when the Novell client for Win2000 is installed.

**Solution:** To resolve the problem, remove the Novell client software from the beta release of Win2000. Run Winnt32.exe from the Win2000

## 2nd Most Unusual Error Message

**Error Message:** "Setup has encountered a fatal error that prevents it from continuing. Contact your product support representative for assistance. The following status will assist them in diagnosing the problem.

(0x4, 0x1, 0, 0)

Setup cannot continue. Power down or reboot your computer now."

**Translation:** This message can appear at the beginning of Setup if some or all of your drives are damaged and not working properly. In that case, Setup can't reliably count them and is forced to stop. The problem is also caused by two or more disks that contain the same disk signature (Windows keeps track of which disk is which using a unique, four-byte disk signature that's found in the MBR [Master Boot Record] of each disk) or two or more RAW disks (that is, those with no file systems) whose MBR checksums are identical. (The Master Boot Record is a small but crucial program that gets executed when a computer boots up. It starts the boot process by searching for the partition table to verify which partition to use for booting.)

**Solution:** To fix this problem you'll need to know which drive or drives are causing the error message. First, remove any drives that are not necessary to the Win2000 installation. If you have only one drive on your machine to start with, check all BIOS (Basic Input/Output System) and jumper settings, cabling, and termination, then run Setup again. (You'll need to consult your computer's documentation for the details of these tasks.) If your drive is new and has never been formatted, format it and then use the MS-DOS or Windows FDISK tool to partition it before running Setup. Remember, you can delete and recreate partitions once Setup begins. □

CD-ROM. Once the installation of Win2000 is complete, download the current Novell client from [www.novell.com](http://www.novell.com) and install it.

As an alternative, you can install the Microsoft Client for NetWare component included with Win2000. Be sure to also install CSNW (Client Services for NetWare).

**Error Message:** "Installer not responding Internal Error 2608, 1332"

**Translation:** You may see this message during installation if the system cannot locate a valid domain account. This tends to happen when the domain controller is down (the domain controller is a type of server that controls access to assets on a Windows network), when there are failures in the network, or when the user has changed his password when logging onto the current computer. In the case of network or computer failures, there could be a delay while the system waits for a response.

**Solution:** To solve the problem, contact your network administrator and ensure that your domain controller is online and there are no failures on the network. This is a fatal error to Setup, meaning it cannot continue once this error is encountered.

**Error Message:** Setup requests a DHCP IP address too early.

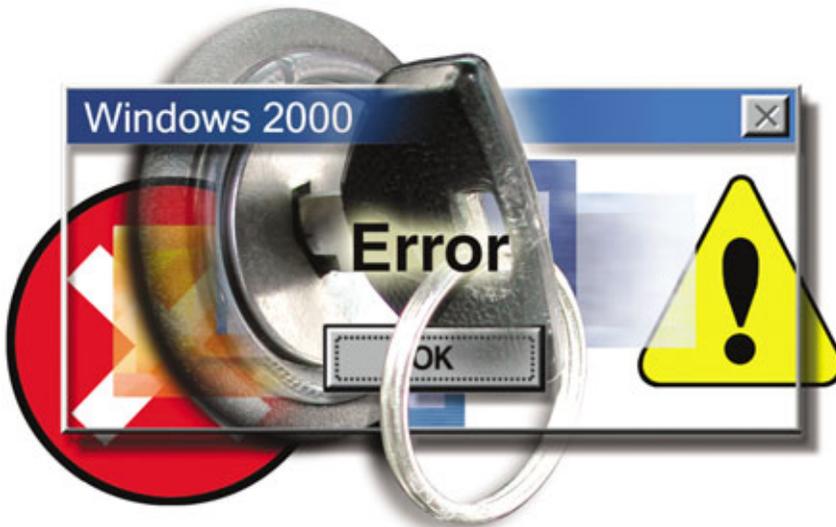
**Translation:** On occasion, when you do a clean installation of Win2000 (that is, you're not upgrading from a previous version of Windows), Setup may request a DHCP (Dynamic Host Configuration Protocol) server assigned IP (Internet Protocol) address during GUI-mode Setup before you have the choice of using a static IP address or using DHCP to automatically obtain an IP address. Otherwise put, Setup incorrectly prompts for a DHCP address before you have the chance to choose between a static IP address and a server assigned IP address.

**Solution:** To solve the problem, create a Setup answer file named Winnt.sif using the Setup Manager deployment tool from the Windows 2000 Resource Kit. The file will contain the static IP address you intend to use. For details on creating and using a Setup answer file in conjunction with Win2000 Setup, consult the Microsoft Help And Support area at [support.microsoft.com](http://support.microsoft.com). 

by David Garrett

# Windows 2000 Startup & Shutdown Errors

Say Hello & Goodbye With Ease



Few experiences are as disheartening as when the computer seems to start up or shut down fine and then, suddenly, there is that familiar error message box with an official-sounding message. Despite the chill that comes up the spine at such a moment, error messages rarely mean that all is lost. Instead, they point to a usually minor discrepancy between what the operating system expected to find and what it actually did, or didn't, discover in its search for settings.

Windows 2000 has a slew of error messages in its normal course of operations, including difficulties with external devices, user authentication problems, and simple memory snafus. Often, computers configured to launch certain applications or automatically connect to the network during Startup will see error messages that relate to different configuration options or incompatibility problems. Similarly, when a computer is shut down, it has to follow a certain path to turn off safely, which can lead to errors with networks, devices, applications, and access.

Here are some of the most common errors that crop up when the system is turned on or

shut down and some suggested methods for tackling those dreaded error messages.

## General Error Messages

**Error Message:** "An internal Windows 2000 error occurred."

**Translation:** Usually, this refers to an incompatibility with software.

**Solution:** Deselect any applications that are set to open at Startup by clicking Start, Programs, and then selecting Startup. This will indicate which applications launch automatically. If there's still a need to have certain applications open at Startup, select only one application to open and restart the computer. This should indicate which software is causing the problem. If there are no software applications selected to open at Startup, contact Microsoft technical support to determine the cause.

**Error Message:** "The server is configured without a valid user path."

**Translation:** The user path is an entry in the server's configuration file. If it doesn't find

a valid directory listing, it can't configure the server properly and this error message results.

**Solution:** Add a user path by creating the directory, if it doesn't already exist. Stop the server service and type the path of the directory as the value for USERPATH in the server's configuration file. Then start the server and Netlogon services. To do this, choose Start, Settings, Control Panel, and double-click System. Select the Advanced tab and click Environment Variables. Look for Path in the User Variables and System Variables. If you're unsure of where to add the path, add it to the right end of the Path in the User Variables. A typical value for this is: C:\j2sdk1.4.2\_<version>\bin. Click OK or Apply.

**Error Message:** "Error loading operating system."

**Translation:** When you start a computer from the hard drive, the system's code identifies the Startup disk and identifies the MBR (Master Boot Record). This is the first physical sector on a bootable disk drive and the place where the partition table is located. If the first hard drive on the system doesn't contain an active partition, or if the MBR can't locate the system partition's boot sector to start the operating system, the MBR will display this error message. Other error messages that may also be displayed because of this problem are "Invalid partition table" and "Missing operating system."

**Solution:** There might not be an active partition on the hard disk that you want to use to start the computer, or the wrong partition might be identified as the active partition. In that case, use an MS-DOS Startup diskette to start the computer and use the Fdisk tool to set or change the active partition. If the MBR is corrupted, which you'd see if the error message occurs again after using Fdisk, you might need a third-party disk that can make the change manually. The partition table field that should be changed is the System ID field.

**Error Message:** "The parent directory could not be located."

**Translation:** The parent directory is a part of the network. When your computer tries to log on to the network, it searches for the parent directory to establish permissions for the individual user.

**Solution:** Ask your network administrator about assigning permissions to the parent directory. If you're the administrator, change

permissions setting so the system will automatically be granted access at Startup or at logon. Do this by going to the Active Directory file inside the SYSTEM folder. Within that, change the information in the Permissions section.

**Error Message:** “Unable to allocate required resources. Initialization failed.”

**Translation:** There was a shortage of a resource that the system requires. Usually, resource allocation messages refer to memory shortages.

**Solution:** Close some applications that were designed to open at Startup and reboot. If the error message appears again, check the event log to find out if other errors occurred at the same time to determine if memory is the problem. If other action is needed for those errors, such as network resource allocation, take the steps necessary to correct them. Otherwise, you may need to install more memory to prevent the error in the future.

**Error Message:** “Insufficient buffer size, unable to proceed.”

**Translation:** A buffer is a temporary storage area, usually in RAM. Its purpose is to act like a holding area so the computer’s processor can manipulate the data before it’s transferred to a device. When this error appears, it means the display driver and the miniport are working on the assumption that the same buffer structure has two different sizes. This might occur because the software that opens at Startup has been compiled with more than one version of a header file.

Another possibility is that there’s insufficient space in a miniport structure to hold mode tables for all the graphics modules that are supported by a particular adapter. This might happen if support for more modes has been added or if the miniport structure has been made smaller.

**Solution:** Check memory allocation and set to default settings. To do this, press CTRL-ALT-DEL, select Task Manager, and click the Performance tab. Note the percentage numbers. Start one of your applications and run it for about 15 minutes, then quit. Go back to the Performance screen and note the percentage number again. If the system resources are significantly lower, there is a problem with the memory. At this point, you will need to contact Microsoft support. To work in the meantime, you can restart your computer, and it should allow for some operational functionality.

**Error Message:** “An internal consistency check failed.”

**Translation:** An error has been detected with a piece of software, which is preventing the system from starting up properly with the software that’s set to open automatically at Startup.

**Solution:** Locate which software applications are set to automatically open at Startup. Disable all of them and reboot. If no internal consistency checks are failing, enable one application at a time and reboot until the problem reoccurs. This way the troublesome software can be found. Either use a recovery program to fix the error with the software, or don’t enable the software to open at Startup.

**Error Message:** “Unknown error.”

**Translation:** This is a common error message that indicates there may be multiple problems with the system or simply a configuration error that the system can’t identify.

**Solution:** An error like this will require multiple troubleshooting efforts, similar to what’s needed for Stop messages. First, try restarting the computer to see if the problem is corrected. If not, check device connections and configurations, software configurations, and the event log. If the error message persists and the problem can’t be located, contact Microsoft’s technical support.

**Error Message:** “FTP Server could not initialize the socket library. The data is the error.”

**Translation:** An FTP (File Transfer Protocol) Server is a software application that runs on a computer host, using the File Transfer Protocol, and is generally used to host computer files. Sockets are software objects that connect an application to a network protocol or other computer somewhere on the Internet. The socket library keeps track of these objects,

## Most Common Error Message

**Error Message:** “While initializing device: Windows Protection Error. You need to restart your computer.”

**Translation:** This is a general message that means there’s a problem with hardware, drivers, or corrupt files. Drivers may not have loaded correctly while the system was booting, or drivers may have been unloading improperly during shutdown. It’s also possible that some drivers will try to use a separate system file, so that when Windows tries to load it at the same time, an error will occur.

**Solution:** Because it’s possible that a virus or multiple improper shutdowns is causing the error, run a virus check first. Then, check hardware settings to determine if the error could be caused by a damaged component. Because there are many areas that need to be checked to find the problem, it may be easiest to reinstall Windows if this error occurs often. □

## Most Frustrating Error Message

**Error Message:** “A general network error occurred.”

**Translation:** A failure has occurred in the network hardware. This could have occurred because of a hardware conflict, or it could have happened because of a problem with any number of server service commands.

**Solution:** It’s possible that the last network device or network software installed is what’s causing the problem. Uninstall the questionable hardware or software and do a reinstall to determine whether that’s the difficulty. This is a general message that will take time to sort out if a new piece of equipment hasn’t just been installed. If that’s the case, each piece of network hardware and software should be individually tested. □

and the socket library function makes the information active by creating a communications endpoint. When the server can't find the endpoint, this error is generated. In this case, a piece of data is suspected to be the cause.

**Solution:** Check your system resources to make sure you have enough available memory to open a socket. Also, check the bindings of the TCP/IP (Transmission Control Protocol/Internet Protocol) stack to verify that TCP/IP appears at the top of the stack. To do this, open Control Panel and select Network, then go to Bindings. Check to make sure your TCP/IP setting is correct. If you don't know your IP setting, go to Start, Programs, Accessories, and click Command Prompt. This will bring up a command line. Type **IPconfig** and this will show you the correct setting.

**Error Message:** "A corrupt extension 'path' was detected in the Registry."

**Translation:** A file extension name is incorrect, probably because it has more than three characters.

**Solution:** Use the Registry Editor to correct the corrupted extension. Open the Registry by clicking Start and then Run. Type **regedit** in the box and click OK. Delete the invalid extension under `\\HKEY_LOCAL_MACHINE\\SYSTEM\\CurrentControlSet\\Services\\Macfile\\Parameters\\Extensions`.

*NOTE: Use caution when changing the Registry. A mistyped entry can wreak havoc on your PC.*

**Error Message:** "The server could not be located."

**Translation:** The server specified as the one the computer should access doesn't seem to exist or can't be found.

**Solution:** Most often, a server location problem is the result of a misspelling. Check that the server name is entered properly. To see a list of servers in your domain, click Start, Programs, Accessories, and then Command Prompt. Type **NET VIEW** in a command line. Remember to precede computer names with backslashes, as in `\\<computer name>`.

**Error Message:** "Invalid domain or server name."

**Translation:** If your computer is set to log on to a server at Startup, it will automatically look for the name of the server or domain that it's been set to find.

**Solution:** Make sure you have the correct domain name or server name. One possibility is that the server or domain name has been

### Most Confusing Error Message

**Error Message:** "The specified extended attribute handle is invalid."

**Translation:** A file that opens at Startup contains a reference to an attribute that doesn't exist. This could be caused by damage to the disk partition or improper modification of the extended attribute system file.

**Solution:** Run ScanDisk, a disk analysis and repair tool that checks a drive for errors and corrects the problems it finds. To do this, select Start, Programs, Accessories, and Command Prompt. Type **SCANDISK**.

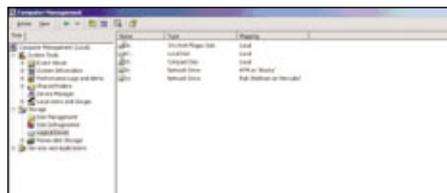
changed in the time between when the computer was shut down and when it has been started again. If that's the case, the new name should be entered into the computer and the computer should be restarted.

### Device & Driver Errors

**Error Message:** "Not enough memory was available to allocate internal storage needed for the device."

**Translation:** Most likely, a third-party driver starts up at the same time as Windows and conflicts with your printer driver.

**Solution:** Locate and disable the third-party driver so it doesn't conflict at Startup. Do this by going into the Control Panel and selecting Add/Remove Hardware, and then locating which driver has been chosen for Startup. Choose the option to disable it and reboot.



This screen shows a list of the drives that are found by the system and what type of drives they are.

**Error Message:** "Registry Startup information is missing or invalid."

**Translation:** A problem with the Registry is usually due to missing or corrupt files that are the result of drivers loading or unloading incorrectly.

**Solution:** Try booting into Safe Mode and replacing the file manually from your CAB files. It may also be necessary to reinstall Windows into a new directory for testing purposes.

**Error Message:** "Computer is too fast for current driver software."

**Translation:** The driver software that's been installed is incompatible with Windows 2000.

**Solution:** Upgrade the device driver for the device that's indicated in the error message to one that's compatible with the computer.

**Error Message:** "The device is being accessed by an active process."

**Translation:** If you're shutting down and have designated a certain drive for deletion, this error is an indication the drive specified is the one that's currently being used.

**Solution:** Check the drive that you're trying to delete and make sure it's not the current drive in any of your sessions. If it is, and you still want to delete or redirect it, end the session so the error doesn't keep the computer from deleting it.

**Error Message:** "The drive letter is in use locally."

**Translation:** A drive letter is a letter that's assigned to a drive on a PC. For example, A: and B: usually refer to floppy drives and C: refers to a hard drive. This message indicates that on Startup, the computer was trying to assign a local drive letter to a shared resource.

**Solution:** Make sure the shared resource being accessed doesn't have the same drive letter that's being used on an individual computer.

**Error Message:** "The UPS driver could not be opened."

**Translation:** The UPS (uninterruptible power supply) is a device used to power a computer in the event of an outage. On Startup, the system checks to make sure the UPS hardware is in place in case there's a problem with the computer's regular power supply while it's in operation. This error message indicates that the UPS service couldn't be started because the driver that accompanies your UPS hardware couldn't be opened. Either

you don't have permission to open the file or the file may be corrupt.

**Solution:** Make sure you have the necessary permissions on the driver file and all directories in the path to that file. If the error message still occurs after you confirm your permissions, you might need to reinstall the UPS driver in the relevant hardware.

**Error Message:** "An inconsistency was encountered on the tape in drive letter X:. Do not append to this tape."

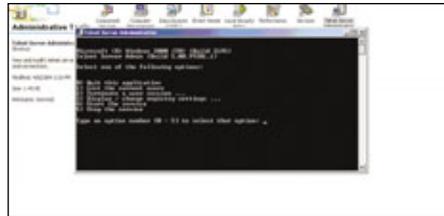
**Translation:** If the system is designed to do an automatic backup at shutdown or Startup, this error could occur. It indicates that the backup system detected an inconsistency in the tape and warns you against jumping to the end of the tape so you won't risk losing data. It's also possible that you're using a tape that the backup system does not support.

**Solution:** Check your backup tape and try a different tape. Also, to prevent errors in the future, replace the tape with a new one and avoid using that tape again.

**Error Message:** "The wrong version of the driver has been loaded."

**Translation:** A recently installed driver conflicts with the software that's been installed to support the driver.

**Solution:** Check the compatibility between the driver and the software and make sure they are meant to be installed together. If there still seems to be a problem, contact the manufacturer of the driver to get the appropriate driver and software combination.



If there's an error in the network connection, this Telnet screen will provide some options.

## Networking Errors

**Error Message:** "The binding handle is invalid."

**Translation:** The system can't use the information that's supplied by a distributed application, so it can't establish a client-server relationship that would allow for remote computing.

**Solution:** Usually, a distributed application is being supplied by a third-party source, such as a hosting provider. Contact the vendor of the application to fix the problem.

**Error Message:** "You are not logged onto the Windows 2000 workstation as a member of the user group that has the right to view the workstation's Virtual Memory settings."

**Translation:** If your workplace logs employees into user groups automatically upon Startup, this error is an indication that there's a problem with user access. To use the workstation, you have to be an administrator or a user who's been granted permission to read the settings that have been put in place by the company.

**Solution:** If administrator access is granted, then log on with that permission and try again. If you're a user, ask your administrator for the necessary permissions and log on again once they're granted.

**Error Message:** "The workstation driver is not installed."

**Translation:** Windows 2000 isn't installed properly, or installed, or there's a problem with the configuration file.

**Solution:** Install or reinstall the operating system. If the message still appears, check to ensure that installation settings are accurate. To do this, go to the free tool download section of Microsoft's Web site at [www.microsoft.com/windows2000/techinfo/reskit/tools/default.asp](http://www.microsoft.com/windows2000/techinfo/reskit/tools/default.asp) and download the Installation Monitor. There are more than 300 other free tools available for other troubleshooting tasks.

**Error Message:** "A network resource shortage occurred."

**Translation:** The network hardware couldn't access the resources it needed. This may have occurred because too many sessions are operating or the server is out of memory. If several users are attempting to access the same information from the server at the same time, the amount of network resources allocated to access may have run out.

**Solution:** Try to connect later or ascertain how many users are on the server and how long they plan on using the network resources. Talk to your administrator about expanding network resources if this is a common problem.

**Error Message:** "Drive not responding."

**Translation:** While enumerating the contents of the disk drive, Backup noticed a device error and issued this message to show that the drive is no longer responding because of that error.

**Solution:** If the drive is a remote disk drive, check that the drive is available and then try restarting. If the drive still doesn't respond, use the Add/Remove Hardware option to remove the hardware and reinstall it.

**Error Message:** "The Workstation service is in an inconsistent state. Restart the computer before restarting the Workstation service."

**Translation:** The Windows Workstation service is prone to a vulnerability that may let a remote attacker gain unauthorized access to a vulnerable host. Because of this, there have

## Most Hilarious Error Message

**Error Message:** "The environment is incorrect."

**Translation:** The system schedules a series of tasks that it has to do regularly. These Scheduled Tasks have their own error handling facility that's used for errors that are generated while a job is scheduled, an existing job is active, or an existing job has its properties modified. If errors occur within the job, the job closes normally and an error message about the environment is received.

**Solution:** Find the location of the error by selecting Start, Programs, Accessories, System Tools, and then Scheduled Tasks. Click the Advanced/View Log. The resulting code will display with this message: "The task completed with an exit code of XX." The message is inadvertently hilarious, if taken out of context and viewed in a "Greenpeace is right" kind of way. Similarly, any error message that reads, "Argument is invalid" never fails to bring an ironic smile. □

been patches released to repair the vulnerability, and occasionally they may show up as inconsistent with the system on Startup.

**Solution:** Restart the computer.

**Error Message:** “The computer name already exists on the network.”

**Translation:** Each workstation has an individual name for effective network management and security. If two workstations have been given the same name, the network will not let both operate.

**Solution:** The duplication must be eliminated. Take both workstations off the network, rename one of them, and restart.

**Error Message:** “Network logons are paused.”

**Translation:** The administrator has suspended access to the network by disabling logons.

**Solution:** Speak to your network administrator if a notice about logons hasn't been issued, or if a time frame for the pause hasn't been announced. If you have administrator access, continue the Netlogon service by typing NET CONTINUE NETLOGON.

**Error Message:** “Active connections still exist.”

**Translation:** When shutting down the computer, the system identifies connections that should be closed and issues this alert if it finds any. Another possibility is that you tried to delete a network connection that still has an active process or is being utilized.

**Solution:** For security reasons, log out of the connections that are open. In the future, be sure the processes running on a server are completed before you break the connection to that server and that processes on all remote servers are completed before you log off and shut down.

**Error Message:** “Invalid address was specified for adapter name. This interface cannot be initialized.”

**Translation:** This error is part of a TCP/IP system and involves bindings. In Windows 2000, binding is the process of associating a protocol driver with the network adapter it will work with, and then establishing a communication channel between the two. If part of that communication is hindered, then this error may occur. It might also appear if the Registry is corrupted.

**Solution:** Remove the TCP/IP and then reinstall it using the Network option in

### Most Unusual Error Message

**Error Message:** “Invalid RDP Data can Cause Terminal Service Failure.”

**Translation:** The RDP (Remote Data Protocol) that's used to communicate with other computers had a security vulnerability in which a particular series of data packets weren't being handled correctly. If a malicious user were to send these particular packets to an affected server, the server would fail. The message is considered unusual since it should have been fixed by a security patch.

**Solution:** This is a security vulnerability that can easily be fixed by downloading the appropriate security patch from Microsoft's site. The problem is discussed in Microsoft's Security Bulletin MS01-052. □

Control Panel. If this doesn't correct the problem, reinstall the Registry from the Emergency Repair Disk that was created when Windows 2000 was originally installed.

### Security Errors

**Error Message:** “Certificate Services configuration information is corrupted.”

**Translation:** Certificate Services allows for certificates to be issued to devices such as cable modems so security features can be put in place. If there's an error in the configuration information, Windows 2000 will consider it to be corrupted and won't issue the certificate.

**Solution:** Several certificate bugs were fixed in the Windows 2000 Service Pack 4, including this type of error. Visit the Microsoft site for Windows 2000 ([www.microsoft.com/windows2000/default.asp](http://www.microsoft.com/windows2000/default.asp)) and download the appropriate service pack.

**Error Message:** “The Issuing Certificate could not be found. The Certificate Services may need to be reinstalled.”

**Translation:** Unlike the error about information being corrupted, in this case the system can't find the information it needs to issue a certificate.

**Solution:** Reinstall the Certificate Services and restart. If the error message still appears, download the Windows Service Pack 4.

**Error Message:** “A disk I/O failure occurred.”

**Translation:** A software error occurred while Windows 2000 tried to access the security database file.

**Solution:** Use a backup copy of the security database from a server and try again. If the error persists, it's possible that your hard drive could have hardware problems.

**Error Message:** “The security database is corrupted.”

**Translation:** The security information for the computer or the connection to the network is damaged or can't be accessed.

**Solution:** The security information should be on a backup done by the individual or the company. Restore the security database from the backup.

### Configuration Errors

**Error Message:** “A problem exists with the system configuration.”

**Translation:** The system hasn't been configured properly. There's also a chance that there are interoperability problems with devices and systems, or that system settings were changed so a configuration error results. This is a general message that doesn't point to a specific problem. Rather, it could be a host of problems resulting from poor installation or hardware and software conflicts.

**Solution:** Check your system configuration settings to make sure they're correct. If they are, it's probably best to reinstall the system.

**Error Message:** “An internal consistency error has occurred.”

**Translation:** Usually, this refers to a problem with software. Windows 2000 detects a problem with settings or configurations of a specific application.

**Solution:** Determine which software is the culprit and reinstall that application.

**Error Message:** “The configuration file or the command line has an ambiguous option.”

**Translation:** The configuration file is a system file you can change to customize the way

your system behaves. Such files are sometimes referred to as customization files. With these files, commands can be entered to change the way a system operates. In the case of this error, a command option that was supposed to determine the system's next step at Startup or shutdown was determined to be too vague for the system to follow.

**Solution:** Make sure the configuration options are correct. If you've indicated a command that's specific to Startup or shutdown, examine the command to make sure it's written properly or that it doesn't conflict with other commands.

**Error Message:** "The configuration file or the command line has a duplicate parameter."

**Translation:** The command that was issued conflicts with another command that's too similar or includes duplicated instructions.

**Solution:** Check your commands for duplications or repeated phrases and remove them.

**Error Message:** "The workstation is not configured properly."

**Translation:** The individual computer that is starting up is having a conflict with the server, network, or system. Usually, this is a result of nonsystem configurations, so a reinstallation of Windows 2000 is probably not necessary.

**Solution:** Look at the workstation configuration, including how it's connected to the network, what resources it shares, what devices it's using, and how the operating system is accessed. If an error message still occurs after rebooting, watch for the point at which the error message comes up, since that could indicate the difficulty depending on the point in the Startup when the error occurs.

**Error Message:** "Unable to obtain configuration information for graphics card."

**Translation:** Upon Startup, the system is searching for information on the graphics card, but the configuration setup data is missing or incorrect.

**Solution:** Check the configuration information provided by the graphics card manufacturer and double-check the settings. If the configuration information is correct, contact the manufacturer.

**Error Message:** "The time range specified ends before it starts."

**Translation:** Your system has several areas where a time range problem could occur. With

this message, a time range difficulty is usually present in a command line that may be directing a computer to shut down at a specific time or access a network during specified hours.

**Solution:** Retype the command with a valid time range. You can use either the 12-hour or 24-hour time format, as long as it's consistent across the system. If you use the 12-hour format, don't forget to specify a.m. or p.m. for each variable in the time range.

**Error Message:** "Memory Allocation Failed."

appropriate space assigned to it, or the space can be set aside for another purpose, such as storing data and instructions for parallel processing. This error on Startup means that a recent repartitioning of the drive has caused the disk space to be allocated incorrectly. This is usually a Windows 2000 Server error.

**Solution:** Reduce the number of partitions on the disk. This will also speed processing and prevent similar errors in the future.

**Error Message:** "The user disk quota information is unusable."

## Most Terrifying Error Message

**Error Message:** "An operations error occurred."

**Translation:** This is an example of a Stop message. Windows 2000 generates Stop messages when it detects an error from which it can't recover. They're used to identify and debug hardware and software problems that occur while loading or running the operating system. When a critical part of the operating system fails, Microsoft notes that it's preferable to generate an obvious error message, such as this one, rather than to fail in an invisible manner and possibly corrupt data. A Stop error consists of a blue screen (sometimes called the Blue Screen of Death, or BSOD), the message, a text translation, the addresses of the violating call, and the drivers loaded at the time of the error. The Stop message provides information to help locate and identify problem areas by indicating where the error occurred at both the address and driver levels.

**Solution:** Perhaps one of the most dreaded of all messages, a Stop error will take time to troubleshoot. Problems can be resolved through general procedures such as verifying instructions, reinstalling key components of the system, and verifying file dates. Also helpful are diagnostic tools such as Winmsd, Network Monitor, and Network General Sniffer. Also obtainable through Microsoft is the Windows 2000 Resource Kit CD, which includes detailed information about the system and can isolate and resolve many issues. □

**Translation:** Memory that was supposed to be directed to a specific application during Startup or shutdown wasn't delivered due to an internal conflict or interoperability problem.

**Solution:** First, determine your memory settings and make sure there's enough available memory for allocation. If there is, examine the target of the memory allocation to see if there's a conflict with existing memory usage.

**Error Message:** "Maximum number of partitions exceeded."

**Translation:** Partitions divide disk space into areas that can be assigned and managed independently. Each application can have

**Translation:** Disk quotas let you allocate a specific amount of disk space to a user or application to ensure that a user or application doesn't take more disk space than needed. This lets you control how much of a file system's resources can be accessed.

**Solution:** Since someone with administrative access must configure disk quotas, ask your network administrator to update the information in a way that can be recognized by the system. If you're the administrator, check the information for the user or application disk quota to make sure it's correct. 

by Elizabeth Millard

# Windows 2000 Hardware Errors

## Learn What's Behind Those Cryptic Messages



Some of the hardware-related error messages that Windows 2000 sends out almost drown you in explanations; others make you want to scratch your head and say, “Huh?” (And some error messages do both.)

Win2000 is considered one of the more stable operating systems Microsoft has released, but that’s of little consolation when a wayward error message pops up on your screen. To help you learn to speak the same language as your OS, we’ve compiled a list of some of the more common hardware-related errors you may encounter as you work with Win2000.

### STOP Errors

**Error Message:** “STOP: 0x000000B8 (0x00000000,0x00000000,0x00000000,0x00000000) ATTEMPTED\_SWITCH\_FROM\_DPC address 0xf729a248 in XX.”

**Translation:** When you access an Iomega Zip drive that’s connected to your computer’s parallel port, you may see this STOP error message (an unexpected system error that Windows is unable to recover from; also known as a fatal system error). Two of the files

the Zip drive uses, Ppa.sys and Ppa3.sys (represented by XX in the error message), have problems that sometimes interfere with other Win2000 processes.

**Solution:** The Win2000 SP4 (Service Pack 4) corrects this problem. You can download SP4 via the Windows Update service or directly from [www.microsoft.com/windows2000/downloads/servicepacks/sp4/default.asp](http://www.microsoft.com/windows2000/downloads/servicepacks/sp4/default.asp).

**Error Message:** “STOP: 0x0000000A” or “IRQL\_NOT\_LESS\_OR\_EQUAL.”

**Translation:** This usually means that a hardware device in your computer has failed. The most common culprit is a faulty memory module on the motherboard, but it can also be the CPU, motherboard, or drive controllers. If the message occurs during or after installing new hardware, one or more device drivers (small programs that let Windows communicate with a computer’s hardware) may be using an improper memory address.

**Solution:** If the problem is hardware failure, remove all unnecessary hardware devices from your computer and try restarting your computer with a single memory module, disk controller, and video card. If the computer

boots successfully, install additional hardware, one device at a time, rebooting after each installation. Continue this process until you determine which hardware device is defective.

If the problem is a new hardware installation, remove the hardware and its device driver. Contact the manufacturer to ensure that the device is compatible with Win2000. Update the driver, if necessary.

**Error Message:** “STOP: 0x00000077 (0xParameter1, 0xParameter2, 0xParameter3, 0xParameter4) KERNEL\_STACK\_INPAGE\_ERROR.”

**Translation:** This series of errors indicates a problem with accessing the page file (the file the processor uses to temporarily store data when actual RAM is unavailable) on your hard drive. Four parameters display in the error message, which we’ve labeled 0xParameter1, 0xParameter2, 0xParameter3, and 0xParameter4. If 0xParameter1 and 0xParameter3 are not zero (that is, not 0x00000000), then 0xParameter2 contains the I/O (input/output) status code (information about an operation that is transferring information from [input] or to [output] a device that’s external to the computer’s main processor), which describes what happened.

Possible values for 0xParameter2:

- 0xC000009A—STATUS\_INSUFFICIENT\_RESOURCES. There isn’t enough physical memory to load the paging file or there isn’t enough free space on the hard drive to store the paging file.
- 0xC000009C—STATUS\_DEVICE\_DATA\_ERROR. There are bad blocks on your hard drive.
- 0xC000009D—STATUS\_DEVICE\_NOT\_CONNECTED. The drive controller cannot access the hard drive, possibly due to a faulty cable or connector.
- 0xC000016A—STATUS\_DISK\_OPERATION\_FAILED. There are bad blocks on your hard drive.
- 0xC0000185—STATUS\_IO\_DEVICE\_ERROR. Improper termination or a defective cable on a SCSI (Small Computer System Interface)-based device.

**Solution:** Use the corresponding method to resolve the error.

- 0xC000009A: Add memory or remove unnecessary files to create more hard drive space.
- 0xC000009C or 0xC000016A: Use a hard drive utility to perform a surface scan of the drive and map out the bad blocks. Consider replacing the drive.

- 0xC000009D or 0xC0000185: Check the cabling between the hard drive and the drive controller for breaks and tears. Make sure that cables are properly seated and any SCSI devices are properly terminated.

**Error Message:** “STOP: 0x00000023 (0xParameter1, 0xParameter2, 0xParameter3, 0xParameter4) FAT\_FILE\_SYSTEM.”

**Translation:** This error occurs when you are using the FAT file system (the method an OS uses to keep track of files) and have a physical problem with a hard drive, or an IRP (Interrupt Request Packet, a method of sending data or commands between devices and the Windows Plug-and-Play manager) didn't complete successfully or is corrupted.

0xParameter1 contains the source file number (the first four hexadecimal characters after 0x) and the source line number (the last four hexadecimal characters) where the STOP error occurred.

**Solution:** Disable all backup utilities, virus scanners, firewall software, and any other software that runs automatically at startup. Verify the file system's integrity by running the CHKDSK utility and repairing any errors it reports. To do this, click Start and Run, type **chkdsk** in the Open field, and click OK. Contact the manufacturer to ensure that you have the latest drivers for your hard drive(s) and any removable media drives, including tape backup and optical drives.

If you are unable to boot your computer to run CHKDSK, try using the Recovery Console to run the CHKDSK routine. To do this, you will need to boot from a Win2000 setup CD or startup floppy diskettes. If you don't have these handy, you can make a set by booting from any Windows startup diskette that includes support for CD-ROM drives, such as Windows 95/98/Me.

After you successfully boot with CD-ROM support, insert the Win2000 CD. Navigate to the SUPPORT\Bootdisk\ directory on the CD-ROM drive and then run the Make-boot.exe or Makebt32.exe program to create the setup diskettes.

Boot from the setup diskettes. When the Welcome To Setup dialog box displays, press F10 to start the Recovery Console. When the Recovery Console prompt displays, you can try to repair the corrupted NTFS drive or partition by typing the command **chkdsk X: /p** where X is the drive letter (for example, C). When the command finishes, remove the

diskette, type **exit**, press RETURN, and restart your computer.

If you still can't boot your computer, you may need to delete and re-create the corrupted partition. Unfortunately, you will lose all data on the partition.

**Error Message:** “STOP: 0x00000024 (0xParameter1, 0xParameter2, 0xParameter3, 0xParameter4) NTFS\_FILE\_SYSTEM.”

**Translation:** There's a problem with the Ntfs.sys file, the driver that enables your computer to read and write data to a hard drive that uses the NTFS file system. The problem can be a corruption in the file, a damaged hard drive disk, or damaged SCSI or IDE (Integrated Drive Electronics) controllers (any device that controls data transfer between a device and a computer).

0xParameter1 contains the source file number (the first four hexadecimal characters after 0x) and the source line number (the last four hexadecimal characters) where the STOP error actually occurred.

**Solution:** Use the Event Viewer to check for error messages from SCSI or FASTFAT (the driver that Win2000 uses to access FAT file systems) in the system log. To launch the Event Viewer, click Start, Settings, and Control Panel; double-click Administrative Tools; and double-click Event Viewer. Check for error messages from Autochk in the application log. Error messages may tell you whether a device or a device driver is causing the STOP error.

Disable virus scanning, backup, disk defragmenting, and other programs that actively monitor the file system. If you have a hardware diagnostic program, it may be able to determine which device is causing the problem.

Run the CHKDSK utility with the /r switch to detect and correct file system damage, if any. To do this, click Start and Run, type **chkdsk /r** in the Open field, and click OK. If you are unable to boot your computer to run CHKDSK, try using the Recovery Console to run the CHKDSK routine. To do this, you will need to boot from Win2000 startup diskettes.

Before booting from the startup diskettes, you must modify the Txtsetup.sif file, located on the first setup diskette to disable the Ntfs.sys file from loading at boot time. Insert the first setup diskette into a working computer and then use Notepad to open the Txtsetup.sif file. Scroll through the file until you find the section labeled [FileSystems.Load]. Locate the line that begins with **ntfs = ntfs.sys**. Put a semicolon at the front of this line and save your changes. The new line should read, “;ntfs = ntfs.sys.”

Boot from the setup diskettes. When the Welcome To Setup dialog box displays, press F10 to start the Recovery Console. When the Recovery Console prompt displays, you can try to repair the corrupted NTFS drive or partition. To attempt this, type **chkdsk X: /p** where X is the drive letter (for example, C).

When the CHKDSK utility finishes, remove the diskette, type **exit**, press RETURN, and restart your computer. If you still can't boot your computer, you may need to delete and recreate the corrupted partition.

**Error Message:** “STOP: 0x0000002E (0xParameter1, 0xParameter2, 0xParameter3, 0xParameter4) DATA\_BUS\_ERROR.”

**Translation:** A parity error has been detected. This generally indicates a RAM failure in system memory, the L2 RAM cache, or Video RAM. It can also indicate a virus in the MBR

## Most Common Error Message

**Error Message:** “The device cannot start. (Code 10) Try updating the device drivers for this device.”

**Translation:** This error message can occur when you're using the Device Manager to check the status of specific hardware devices. The cause is usually either an older driver that isn't compatible with Windows 2000 or a corrupted driver. In many cases, you'll see this error when you reinstall hardware or reinstall Windows to fix an unrelated problem. Most of us are a bit unreliable about updating hardware drivers. We conscientiously update them once and then forget about them when we need to reinstall Windows or a piece of hardware.

**Solution:** Before you reinstall Windows, a hardware device, or its drivers, check with the manufacturer to ensure that you're using the most current drivers.

(Master Boot Record, a small program, usually located at the beginning of a hard drive, that launches whenever the computer first boots) or a device driver attempting to access memory in a memory range that doesn't exist.

The four parameters provide the following information:

- *0xParameter1*: This parameter contains the virtual address that was in use when the fault occurred. This information can help experienced programmers locate a problem within a software program.
- *0xParameter2*: This parameter contains the physical memory address that was in use when the fault occurred. This information may point to a specific memory chip that is defective.
- *0xParameter3*: This parameter contains the value of the Processor Status Register, which tracks CPU activity. The data represents the value that was present at the time of the fault. Programmers and hardware developers can use this information to determine the events the processor was involved in when the fault occurred.
- *0xParameter4*: This parameter contains the value of the faulting instruction register. This information may contain the instructions that the processor executed when the fault occurred.

**Solution:** If the error occurred after you installed RAM, there may be a problem with the installation. Make sure that the RAM is seated correctly in its connector and that the contacts are clean. If the problem persists, verify that the RAM is the correct type for this installation and is correctly rated for speed, voltage, and other parameters required by your specific computer. If everything is correct, contact the manufacturer of your computer's motherboard for BIOS (Basic Input/Output System, a small program that contains all the code necessary to access the basic hardware on the motherboard) updates, if any.

If there are no new components to explain the error, the problem may be a failed RAM module, a virus in the MBR, or a failing hard drive.

If your computer manufacturer provided a hardware test utility, use it to diagnose which RAM module is bad. If you don't have a

diagnostic application, remove all but one RAM module and reboot your computer. If you don't get an error message, add one RAM module back at a time and reboot your computer until the problem returns. Replace the defective module.

Run a current virus scanner that can check and repair the Master Boot Block (the first location on a hard drive; usually contains the MBR) on your hard drive.

Although rare, it's possible for a failing hard drive to generate this error message. Use the CHKDSK utility to validate your drive. If your drive was formatted using NTFS, use CHKDSK with the /f (error-fixing) and /r (information recovery) switches. To do this, click Start and Run; type `chkdsk /f /r` in the Open field and click OK.

If none of these steps resolves the problem, consider taking your computer to a competent diagnostic testing facility. The problem may be a motherboard failure.

**Error Message:** "STOP: 0x0000007B: (0xF741B84C, 0x00000034, 0x00000000, 0x00000000) INACCESSIBLE\_BOOT\_DEVICE."

**Translation:** You may see this error message if you move a hard drive that contains a Win2000 OS to a different computer or if you install a new motherboard or hard drive controller. The Registry (a database that Windows uses to store configuration information) stored on the hard drive you're booting from doesn't have the correct entries for the new motherboard or hard drive controller. The Registry contains the PnP (Plug-n-Play) IDs that identify the hard drive controller. Win2000 uses the PnP ID to load the correct driver for the mass storage device. In this case, the device driver that Win2000 is loading from the Registry doesn't work with the new motherboard or your PC's hard drive controller.

**Solution:** If you see this error message after installing a new hard drive controller, your current Win2000 installation doesn't have the necessary drivers or the proper Registry entries. You can solve the problem by reconfiguring your computer with the old hard drive controller and attaching the hard drive that contains

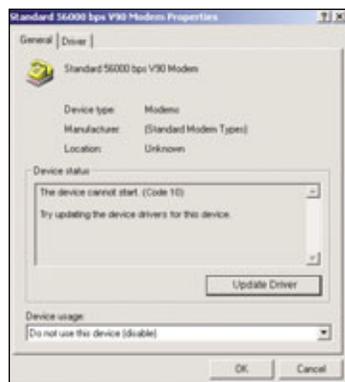
the operating system back to the original controller. Confirm that you can boot successfully and then install the new hard drive controller, leaving the old controller in place and the hard drive connected to the old controller. Boot your computer. Win2000 will recognize that a new controller has been added, install the necessary drivers, and make the necessary entries in the Registry. After you successfully install the new controller, shut down your computer, remove the old controller, attach the hard drive to the new controller, and reboot your computer.

If you see this error message after moving your hard drive to another computer, or after installing a new motherboard, you can repair the Windows installation. Boot from the Win2000 setup diskettes or the Win2000 CD. At the Welcome to Setup screen, press ENTER. Press F8 to accept the license agreement. Select your current Win2000 installation (it may already be selected) and press R. Follow the on-screen instructions to complete the repair process.

**Error Message:** "STOP: 0x0000007F (0xParameter1, 0xParameter2, 0xParameter3, 0xParameter4) UNEXPECTED\_KERNEL\_MODE\_TRAP."

**Translation:** This error can indicate hardware or software problems, but the most likely cause is hardware. The actual failure is listed in *0xParameter1*; the other parameters have no meaning. *0xParameter1* contains the actual trap values, which you can look up in X86 processor (any processor that's compatible with the Intel X86 architecture) manuals. The most common failures are:

- 0x00000000: Divide By Zero Error. The system made an attempt to divide a number by zero. Poorly written software or corrupted data in memory can cause this problem.
- 0x00000004: Overflow. An overflow condition occurs when the result of an operation, such as addition or multiplication, is beyond the range of the processor register that holds the result.
- 0x00000005: Bounds Check Fault. This indicates that a chunk of data stored in memory exceeds its expected size. Poorly written software or faulty memory can cause this problem.
- 0x00000006: Invalid Opcode (a program instruction that memory loads as needed). In this case the processor received an instruction it couldn't interpret. Failed memory that's corrupting data before it's sent to the processor is the usual culprit.



**If you see this error message, one of your device drivers is either corrupted or incompatible with Windows 2000.**

## Most Hilarious Error Message

**Error Message:** Your computer begins to play “Fur Elise” or “It’s a Small World.”

**Translation:** This audible, rather than visual, error message occurs when the CPU fan inside your computer stops working. We can only wonder if the Windows 2000 developers had just returned from an overly long vacation at Disney World.

**Solution:** As funny as it may seem to have your PC suddenly start serenading you, don’t take this light-hearted sound lightly. A malfunctioning CPU fan can quickly allow your CPU to overheat and fail. Shut down your computer immediately and check the motherboard and CPU fan. □

- 0x00000008: Double Fault. A double fault usually results from a memory page fault. Here the processor attempted to access an unavailable memory page. The double fault occurs because the invalid access result usually generates an interrupt request with invalid data.

All of these errors can be caused by faulty hardware, usually RAM that has failed. Other probable causes include overclocking the processor, faulty hardware devices, or badly written software.

**Solution:** If you’re trying to overclock (manipulate hardware and/or software settings to eke out extra speed) your computer, this error message is telling you that the speed you’re attempting isn’t viable. Lower your overclock settings or consider returning to the default values for your processor.

Use a diagnostic utility to check for RAM failure. Replace affected RAM modules if indicated.

Remove any unnecessary controller cards, such as sound cards, game controllers, and USB (Universal Serial Bus) or FireWire add-ons and see if the problem recurs. If it doesn’t, add one controller back at a time, reboot, and check again. Continue this process until you find the defective controller card. You can replace the controller card or do without it if you don’t need it.

If you’ve recently installed new software, uninstall it and reboot your computer. If the problem still occurs, contact the software manufacturer for updates.

## Modem Errors

**Error Message:** “Error 692: Hardware failure in port or attached device.”

**Translation:** Windows was unable to access or detect the modem. If it’s an external modem, it may be turned off, or the modem

cable may be disconnected. For internal and external modems, the modem may not be recognized as compatible with Win2000 or the handshaking option (a method of exchanging information that ensures each side has sent or received valid data) may be set incorrectly.

**Solution:** If you have an external modem, be sure the power is on and the cable is firmly attached. Reset the modem, if needed.

For internal and external modems, check the Windows Hardware Compatibility List at [www.microsoft.com/whdc/hcl/search.msp](http://www.microsoft.com/whdc/hcl/search.msp). Contact the modem manufacturer for the latest drivers.

**Error Message:** “Error 633. The modem is already in use or not configured for dialing out.”

**Translation:** Win2000 couldn’t open a connection to your modem. This message usually occurs when an external modem is turned off or wasn’t connected to your computer when you booted.

**Solution:** The easiest solution is to turn the modem on and/or reconnect it to your computer and then reboot.

If for some reason you can’t reboot your computer, but you still need to access the modem, reconnect the modem and make sure it’s turned on. Click Start, Settings, and Control Panel. Double-click the System icon. Select the Hardware tab and then click Device Manager. In the list of devices, right-click Modems and select Scan For Hardware Changes. A dialog box will open, indicating that the scanning is in progress. When the scan is complete, the dialog box will go away, and the hardware list will be updated with any changes. The modem should now be available for use.

**Error Message:** “Modem is busy or not responding.”

**Translation:** Windows is unable to connect to the modem because it’s already in use by another application. This generally occurs when a background process uses the modem to retrieve information while you are connected to, or trying to connect to, a network using your modem. This error can also occur if you’re trying to use two different network services that both require a modem.

**Solution:** Exit from the application that’s currently using the modem and retry the connection with the second application. If the error persists, try resetting the modem (external modem) or rebooting your computer (internal modem).

## Printer Errors

**Error Message:** “Could not connect to the printer: The system cannot find the file specified.” or “*Servername\sharename* is an invalid port name.” or “Test Page failed to print. Would you like to view the printer troubleshooter for assistance? The filename, directory name, or volume label syntax is incorrect.” or “Test page failed to print. Would you like to view the printer troubleshooter for assistance? Unable to create a job.” or “Could not start a print job.”

**Translation:** These erroneous error messages crop up when you try to print to a password-protected Win2000 printer share (a printer configuration that provides printing access to users on a network).

**Solution:** You can prevent these error messages by doing one or more of the following.

Log on to the PC with an account that has the correct permissions. Remove the password protection from the Windows printer share. Double-click the My Network Places icon on your Desktop and then double-click the computer hosting the shared printer. A window should open, showing shared resources on the selected computer, including the problem printer.

Click Start, Accessories, and Command Prompt. In the Command Prompt window, type **net use lptX \\servername\printername password**, where X is the next available LPT1 (line printer terminal) port for your computer, *servername* is the name for the computer hosting the printer, *printername* is the shared printer’s name, and *password* is the password you use to access the shared printer. Press ENTER.

Click Start, Settings, and Printers. Double-click the Add Printer icon. When the Add Printer Wizard launches, click Next. Select Local Printer and click Next. In the list of available ports, select

the LPT port you specified in the Net Use command above. Click Next. Follow the Add Printer Wizard's prompts to complete the installation. The next time you print, select the printer you created with the Add Printer Wizard.

**Error Message:** "There was an error found when printing the document XX to LPT1. Do you want to retry or cancel the job?"

**Translation:** By itself, this error message (in which XX represents the name of the file you're trying to print) may not indicate a hardware problem. If it occurs frequently, the parallel port your printer connects to may be set to a nonactive state, either by your motherboard's BIOS or by Win2000.

Click Start, Settings, and Control Panel. Double-click the System icon. Select the Hardware tab and then click Device Manager. Expand the Ports (COM & LPT) entry by clicking the plus sign (+). Double-click the LPT port your printer connects to. Click the General tab and check the Device Status area. If the status is "Code 29: Firmware not correctly installed," then the LPT port is disabled.

**Solution:** Restart your computer and then enter the BIOS setup page (usually by pressing DELETE when your computer starts to boot). There are many different BIOSes, so consult your computer or motherboard manual to find out how to access your particular BIOS. What you need to do is locate the configuration information for the parallel port, which may be under an Advanced, I/O

Configuration, or Communication section of the BIOS Setup program. Locate the LPT port and change the setting from Automatic, OS Controlled, or Disabled to Enabled or ECP+EPP (contact your BIOS manufacturer for detailed information about setting the parallel port parameters). The important point is that the port should not be disabled or set to Automatic or OS Controlled.

**Error Message:** "A port with that name already exists. Choose another port name."

**Translation:** This message appears when you use the Add Printer Wizard after failing to install a printer, usually because you canceled the installation because of missing information.

When you cancel the Add Printer Wizard, it doesn't perform a cleanup to remove anything it has already configured, so it has probably already assigned a printer to the port you're now trying to use.

**Solution:** Remove the port the Add Printer Wizard created. Click Start, Settings, and Printers. From the File menu, select Server Properties and then click the Ports tab. Highlight the port you're trying to use, click Delete Port, and click OK.

### Drive Errors

**Error Message:** "Not ready reading drive X."

**Translation:** There's a problem reading a drive (X above), usually removable media.

**Solution:** Make sure the drive has media in it. Remove the media, reinsert it, and try accessing the drive again. If the problem recurs, check the media to be sure it isn't damaged, blank, or in the wrong drive, such as an optical drive. If the problem persists, check the media in another computer. If it works, try cleaning the drive with a cleaner designed for that type of drive.

**Error Message:** "Serious Disk Error Writing Drive X."

**Translation:** The X represents a drive that has a serious problem. In many cases, you can recover the drive using Windows' error-checking utility or a third-party hard drive utility. In some cases, you may need to replace the drive.

**Solution:** Before using a disk utility, try to back up the drive or copy any important files to removable media such as diskettes or CD-Rs. You may not be able to complete the backup or copy all of your files, but it's always worth a shot.

Double-click the My Computer icon on your Desktop. Right-click the drive named in the error message, select Properties, click the Tools tab, and click Check Now. In the Check Disk options dialog box, put a check mark next to Automatically Fix File System Errors and click Start. If the drive you're trying to repair is the boot volume, you'll see the following message: "The disk check could not be performed because exclusive access to the drive could not be obtained. Do you want to schedule this disk check to occur the next time you restart the computer?" Click Yes and restart your computer.

If these steps succeed at repairing the drive, perform a full backup of the drive and plan to replace it soon. In the meantime, back up your files on a regular basis. If you were unable to repair the drive, you will need to replace it.

**Error Message:** "Non-System disk or disk error. Replace and press any key when ready."

**Translation:** During the boot process, Windows scans the floppy drive to see if a diskette is present. If there's a diskette in the drive, Windows reads it to determine whether it contains a bootable system. If it does, the boot process continues, using the data on the diskette. If the diskette is blank or doesn't contain a bootable system, you'll see the error message above.

**Solution:** If you intended to boot from a boot diskette, make sure you chose the correct diskette. Then reinsert it and press any key. If you didn't intend to boot from a diskette,

### Most Confusing Error Message

**Error Message:** "Error performing Inpage Operation."

**Translation:** This error message appears to be telling you that there's a problem with Windows 2000's memory paging system. It could easily convince you to check system RAM or the hard drive where the Virtual Memory page is stored.

In reality, this error message is most likely to occur when you're trying to copy a file from a bad diskette to your hard drive or to another diskette. When you copy small files (less than 256KB), Windows uses a different copying process, one that maps the file into Virtual Memory space. Windows then reads the data from Virtual Memory space, instead of from the slower floppy drive.

If a problem occurs during the file copy, you'll usually see the error message above, which will lead you astray instead of identifying the correct source of the error (the floppy drive or the media).

**Solution:** Inspect the diskette for damage. Reinsert it and try again. If that doesn't help, a third-party drive utility may be able to recover the file.

remove it. Then press any key to continue the boot process.

## Device Manager Errors

**Error Message:** “This device is not configured correctly (Code 1). To update the drivers for this device, click Update Driver. If that doesn’t work, see your hardware documentation for more information.”

**Translation:** Although this error message is pretty explicit, it’s helpful to know what’s behind it. Win2000 contains a ConfigFlags (data that reflects a device’s current status) value for every device in the Windows Registry. In this case, the device has been enumerated (detected), but the Device Manager wasn’t able to find an associated INF file, which is necessary to finish configuring the device. Therefore, the ConfigFlags value for this device was never set. This happens when you install a new piece of hardware but, when prompted for a device driver, fail to install the correct driver.

**Solution:** Click the Update Driver button. If the Update Driver button isn’t on the General tab, click the Driver tab and then click Update Driver. You’ll need the driver software to complete the installation. Check with the manufacturer to be sure you have the latest drivers.

**Error Message:** “The driver for this device might be corrupt, or your system may be running low on memory or other resources. (Code 3).”

**Translation:** In most cases, this message appears because a damaged device driver is being loaded into the computer’s memory. It’s unlikely that the cause really is low memory. To check, press CTRL-ALT-DEL and then click Task Manager. Click the Performance tab where you can verify whether your computer is low on available memory.

**Solution:** Replace the bad driver. Contact the manufacturer and, if a more current driver is available, follow the manufacturer’s instructions for installation. If no new driver is available or if the driver didn’t come with instructions, click the Update Driver button, which should be just below the error message. If there’s no button, select the Driver tab. Then click Update Driver and follow the on-screen instructions.

After you install the new driver, reboot your computer. Check the Device Manager to ensure that the error message is no longer present. Then use the Task Manager to check memory usage. If you’re still using a large amount of system memory, consider adding more RAM.

## Most Unusual Error Message

**Error Message:** “Coprocesor not available fault.”

**Translation:** This message was fairly common years ago, when motherboards had separate processors and math coprocessors. Today, a single CPU contains all of the elements necessary to perform both functions.

**Solution:** If your computer isn’t a vintage machine, check the motherboard and CPU. If you do have an older computer, this is its not-so-subtle way of telling you that it’s time to consider an upgrade. □

**Error Message:** “Windows cannot identify all the resources this device uses. (Code 16) To specify additional resources for this device, click the Resources tab and fill in the missing settings. Check your hardware documentation to find out what settings to use.”

**Translation:** This usually indicates a corrupted or incompatible driver or a hardware failure. Windows was unable to retrieve the resource setting information from the hardware device’s configuration memory, and the driver didn’t provide the necessary information.

**Solution:** According to the error message, you should manually configure the resource settings, but this usually isn’t an acceptable option because it can interfere with other PnP hardware devices. Contact the manufacturer for the latest Win2000-compatible drivers. Use the Update Driver button under the Driver tab to launch the Update Driver Wizard and follow the on-screen instructions.

Restart your computer and then use the Device Manager to check the status of the suspect device. If the problem still exists, contact the manufacturer for any special instructions for uninstalling older drivers or installing new drivers. If there are no special instructions, the hardware device may be damaged and may need to be repaired or replaced.

## Miscellaneous Errors

**Error Message:** “General Protection Fault in module XX.”

**Translation:** General protection faults occur when an application or DLL (dynamic-link library, a small file containing functions that can be used by multiple applications), represented by the XX above, attempts to write or read memory assigned to another application.

This is almost always a software-related problem, usually caused by compatibility issues

between two or more applications, but it can also be caused by a memory error, either in system RAM or the graphics card’s video RAM.

**Solution:** Use a memory testing utility to verify that RAM isn’t the problem. Contact your video card manufacturer for a utility to test the video card. These utilities can usually also test video RAM.

**Error Message:** “While setting up DVD-video playback, it was found that XX Video cannot be shown on the computer monitor because of one of the following reasons: Low video memory. Please try using lower display resolution and/or colors. The display adapter is incompatible with the DVD decoder. Please try to obtain a display driver update.”

**Translation:** The video card doesn’t have enough memory or the DVD playback software isn’t compatible with the video card.

**Solution:** Contact the manufacturer of your DVD decoder software for an update that works with Win2000 and your video card. Follow the manufacturer’s instructions to update the software.

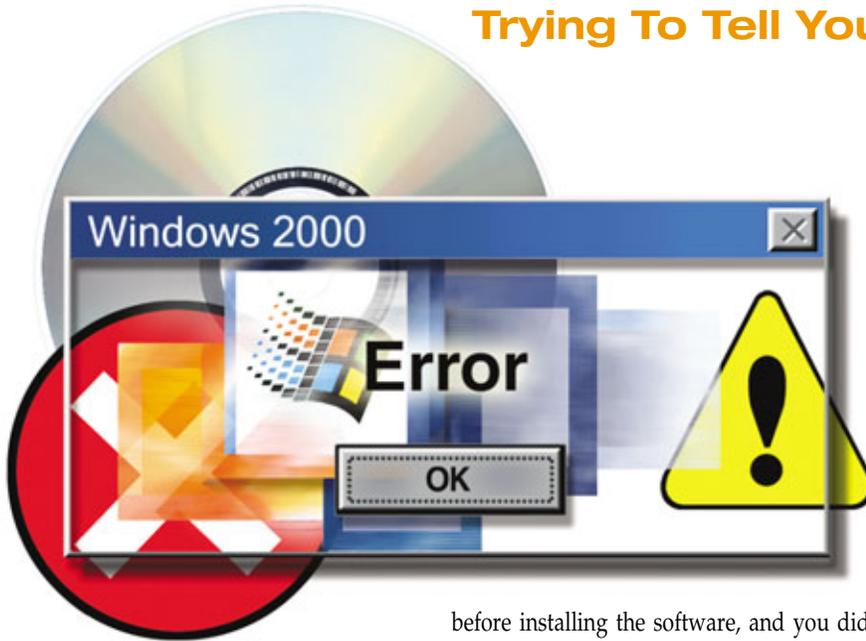
If your video card doesn’t have enough video RAM or performance, you can alleviate the problem by reducing your display resolution. Right-click your Desktop and select Properties from the pop-up menu. Click the Settings tab. Drag the Screen Area slider to the left to reduce screen resolution. A good starting point is 800 x 600, although you can try various screen sizes. Click OK and try the DVD player again. Repeat until the error message disappears and playback quality is acceptable.

If you plan to watch a lot of DVDs on your computer, consider upgrading your video card for better performance. 

by Tom Nelson and Mary O’Connor

# Windows 2000 Software Errors

## How To Figure Out What Your OS Is Trying To Tell You



**W**indows 2000 is an improvement over earlier versions of the Windows OS, but one area that still hasn't received the attention it deserves is error reporting. Windows error messages are often cryptic at best and sometimes stingy about providing information that can actually help you diagnose a problem.

We've gathered a list of some of the more common software error messages and deciphered their meaning for you. The next time you run into a General Protection Fault, you won't have to close your eyes, reboot, and hope for the best. Instead, you'll not only understand what happened, you'll know what you can do to help reduce the chances of a recurrence.

### STOP Errors

**Error Message:** "STOP: 0x0000000A" or "IRQL\_NOT\_LESS\_OR\_EQUAL."

**Translation:** This usually means a hardware device in your computer has failed, but it can also occur after you install new software. In the latter case, no unusual problems existed

before installing the software, and you didn't actually add new hardware.

**Solution:** Uninstall the new software. If you are unable to restart your computer successfully, turn off the power, wait a few seconds, turn on the PC, and press F8 as your system starts to boot. This will bring up the Win2000 Advanced Menu Options. Use the arrow keys to select Last Known Good Configuration. Follow the on-screen instructions to complete the startup process.

Contact the software developer to find out if a newer version of the software is available and if there are any known issues between the software and any hardware installed on your computer. If there's a compatibility problem between your hardware and the software, contact the hardware manufacturer about possible updates.

**Error Message:** "STOP: "0x00000050" (0xParameter1, 0xParameter2, 0xParameter3, 0xParameter4) PAGE\_FAULT\_IN\_NONPAGED\_AREA."

**Translation:** The requested data wasn't found in memory. Possible causes are hardware (faulty RAM), buggy system services, or antivirus software.

The four parameters displayed in the error message, which we've labeled *0xParameter1*, *0xParameter2*, *0xParameter3*, *0xParameter4*, contain the following information:

*0xParameter1*: The virtual memory address that the application tried unsuccessfully to access. When an application needs to store data in, or retrieve data from, memory, and its request includes the location where the data can be found or will be stored.

*0xParameter2*: The type of memory access the application was going to perform, either Write (if *0xParameter2* = 0x00000001), in which case, the application was going to store new information in the memory location listed in *0xParameter1*, or Read (if *0xParameter2* = 0x00000000), in which case the application was going to retrieve data stored in the memory location listed in *0xParameter1*.

*0xParameter3*: If the data is all zeros (that is, 0x00000000), this parameter has no meaning. If the data is anything but all zeros, this parameter represents the memory address that contains the instruction, executed by the computer's processor, which caused the error.

*0xParameter4*: Every STOP error message displays four parameters, but not all parameters are always relevant. This parameter is not used for this error message and contains no usable information.

**Solution:** This problem often occurs when you install new system services, including any software that runs as a service under Win2000. If this error message appears shortly after you install a new service, disable the service, and contact the developer for updates.

If the error occurs at system startup, and prevents you from disabling the service, reboot your computer and press F8 as your system starts to boot. From Win2000 Advanced Menu Options, select Last Known Good Configuration and follow the on-screen instructions.

If you recently installed or updated an antivirus program, disable the program and contact the developer for updates or assistance.

**Error Message:** "STOP: 0xC000021A (0xParameter1, 0xParameter2, 0xParameter3, 0xParameter4) STATUS\_SYSTEM\_PROCESS\_TERMINATED."

**Translation:** A user mode process, such as Winlogon (which manages how users log on and off) or CSRSS (Client/Server Runtime Server Subsystem, which manages background Windows processes and graphics), has been

fatally compromised. Because security can no longer be assumed, the OS switches to kernel mode (a basic operating mode that doesn't involve user settings and applications), which generates this error.

Win2000 requires Winlogon and CSRSS to be available at all times. The failure of either leads to a STOP error. This is one of the few failures in user space that can bring down Windows entirely.

*Parameter1* contains a status code specific to the software driver. Contact the developer if you need to decipher the status code.

The most common causes of this error message are third-party applications, system service and device drivers, and mismatched system files.

**Solution:** Installing Win2000 Service Pack 4 can solve this problem. Refer to the "How To Install A Service Pack" sidebar for details.



**A hot fix is available from Microsoft for BAD\_POOL\_CALLER printing errors, which result from documents with bad or corrupt embedded fonts. The fix may require you to pay a support fee.**

If the error message occurs after installing or updating an application, uninstall the application and contact the developer. If the error occurs at system startup, and prevents you from disabling the service, reboot your computer and press F8 as your computer starts to boot. From Win2000 Advanced Menu Options, select the Last Known Good Configuration option, and follow the on-screen instructions.

If you haven't recently installed new software, the problem may be corrupt or mismatched system files. If you can boot the computer, click Start and select Run. In the Run dialog box, type `SFC /scannow` and click OK to run the System File Checker, which should correct any mismatched system files.

**Error Message:** "STOP: 0xC0000221 STATUS\_IMAGE\_CHECKSUM\_MISMATCH\_PATH\XX" or "STOP: C0000221 unknown hard error PATH\XX."

**Translation:** This error message can appear in multiple ways, including as a BSOD (Blue Screen of Death; a blue screen that appears when Windows encounters a serious problem and crashes) or a simple dialog box. Its appearance depends on how much of the OS was loaded before the error was encountered.

The *PATH* in the error message indicates the path to the file or files involved in the error, and *XX* represents the file name.

No matter what form this message takes, it relates to a corrupted file that couldn't be loaded following the integrity check that Windows performs at startup.

**Solution:** Replace the file (which is most often a Windows system file) with a fresh copy. Start your computer in Safe Mode by pressing the F8 key repeatedly while the PC boots or restarts and then selecting the Safe Mode option. Use the System File Checker utility to correct the problem by clicking Start and Run, typing `sfc /scannow` in the Open field, and clicking OK.

When the System File Checker is finished, try rebooting. If you still encounter the error, or you couldn't boot into Safe Mode, you will need to repair or reinstall Win2000.

To repair Win2000 insert your Win2000 CD and reboot. When the option appears to boot from the CD, press any key. At the Welcome To Setup screen, press R to start the repair process. At the

Repair Options screen, press R to select the emergency repair process and follow the on-screen instructions.

If the problem persists, you may need to reinstall Win2000.

## Printing Errors

**Error Message:** "BAD\_POOL\_CALLER Stop 0xC2."

**Translation:** You're trying to print or use Windows Explorer to open a document that contains a bad or corrupted font.

**Solution:** Microsoft determined that this is a problem with Win2000 Professional, Win2000 Server, and Win2000 Advanced Server. A hot fix is available by contacting Microsoft Help And Support via phone (visit the Help And Support site at [www.support.microsoft.com](http://www.support.microsoft.com) to obtain an appropriate phone number). However, keep in mind that Microsoft recommends installing the fix only if

you're experiencing a problem and that you will be charged a fee for calling the Microsoft support number unless the support staff determines that the update will resolve your problem.

**Error Message:** "Win32k!EXFOR-MOBJ::vGetCoefficient+0xb."

**Translation:** You're printing to a print server that's using Win2000 and a Microsoft-supplied default printer driver, and the page you're trying to print contains white text.

**Solution:** Use the manufacturer's printer driver, if one is available. Win2000 SP4 includes a fix for this issue; refer to the "How To Install A Service Pack" sidebar for more information.

**Error Message:** "The separator page does not exist."

**Translation:** You may see this error message when you try to insert a separator page between printed documents using the Advanced tab of the printer's Properties dialog box. If the printer can't locate the separator page file, or if the file's attributes aren't set correctly, the error can occur.

**Solution:** Separator pages are installed as part of a Win2000 installation and/or with printer drivers. These pages usually end with a .SEP file extension. Make sure you're selecting the correct separator page for your printer type.

Separator pages must have the correct file attributes, or they won't load when called for. Valid separator file attributes are Read-Only, Archive, and Normal. Different OSes may interpret file attributes differently. In Win2000 Professional, a separator page with no file attributes is considered normal. In Win2000 Server, a separator page with no file attributes returns an error.

Most Windows installations and third-party manufacturers set separator page file attributes to Archive, which allows them to run with both Win2000 Professional and Win2000 Server. If you use the backup program included with Win2000, it clears the Archive file attribute after performing an incremental backup.

The latest Win2000 Service Pack includes a fix for this issue.

**Error Message:** "Unable to create or open the file XX."

**Translation:** The print spooler (program that manages print jobs) can't access a file. In most cases you're either running low on free hard drive space or don't have the proper permissions to print the file.

**Solution:** Empty the Recycle Bin. Then use the Disk Cleanup utility to remove temporary files. To do this, click Start, Programs, Accessories, System Tools, and Disk Cleanup. Select the drive you want to clean up, click OK, and follow the on-screen instructions.

The print spooler must open the file and store it temporarily in a spooling directory. If you're in a network environment, contact your system administrator to be sure you have write permission for the directory. If you're using a stand-alone computer, access rights aren't likely to be a problem, but you can confirm this by clicking Start, Settings, and selecting Printers. Right-click the icon for the printer and select Properties from the pop-up menu. Click the Security tab and check to be sure you have permission to use the printer and manage documents.

**Error Message:** "An application error has occurred and an application error log is being generated. SPOOLSV.EXE Exception: access violation (0xc0000005), Address Parameter1."

**Translation:** The Windows Print Spooler (the service for which Spoolsv.exe is the executable file) can cause this error if there are too many .SPL (spool) files and/or .TMP (temp) files in the spooler directory. *Parameter1* is a memory address where the violation occurred.

**Solution:** Remove the .SPL, .TMP, and any .SHD files currently in the print spooler directory. The default spooler directory is C:\WINNT\SYSTEM32\SPOOL\PRINTERS. After you remove the files, restart the print spooler. Any jobs in the spool directory will be lost.

If you're unable to delete the files, turn the print spooler off. To do this, click Start, Settings, and Printers. Right-click the appropriate printer and select Properties. Select the Advanced tab and disable print spooling.

### File System Errors

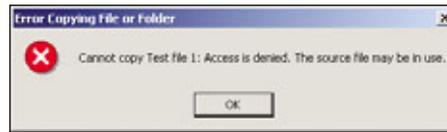
**Error Message:** "Could not load or run XX specified in the Registry. Make sure the file exists on your computer, or remove the reference to it in the Registry."

**Translation:** When an application launches, Windows checks the Registry for any files, preferences, or other information the application needs. If a file is specified in a Registry entry for the application, and that file is not at the path specified, the error message above will appear.

**Solution:** This problem may occur because the file (represented by XX above) was moved

or deleted. In most cases you can correct the problem by uninstalling the application that caused the error and then reinstalling it. This process should also reinstall the missing file.

**Error Message:** "The file XX that shortcut YY refers to cannot be found" or "The item XX that this shortcut refers to



**If you don't have sufficient write privileges, you'll see this error when you try to replace a file. To get around this problem, rename the new file.**

**has been changed or moved, so this shortcut will no longer work properly."**

**Translation:** You're using a shortcut (represented by YY) to access a file (represented by XX) that has been moved, renamed, or deleted.

**Solution:** Right-click the shortcut and select Properties. Select the Shortcut tab and click Find Target to search for the file.

For the second error message, Windows automatically attempts to find the target and display the same options that display when you manually select Find Target. If Windows finds the file, click Fix It to correct the shortcut.

Otherwise, delete the shortcut or cancel the Find Target function.

If the Find Target function can't find the file, you can delete the shortcut, manually locate the file, and recreate the shortcut.

**Error Message:** "XX This file exists with Read-Only attributes. Please use a different file name" or "Access to PATH\XX was denied."

**Translation:** Both error messages refer to a file (represented by XX) set as Read-Only, thereby preventing you from overwriting or changing it. The first error message may occur when you copy or move a file and the second when you try to save a read-only file from within an application.

**Solution:** Copy or save the file with a different name to avoid having to change the file's permissions or find a system administrator to fix them for you.

If you believe the file should not be set to Read-Only, contact your system administrator.

**Error Message:** "Cannot copy XX: Access is denied. The source file may be in use."

**Translation:** You're trying to replace an existing file (represented by XX) without sufficient write privileges. It might not actually be the case that the file is in use.

**Solution:** Rename the new file, so you won't be overwriting an existing file.

### Most Common Error Message

**Error Message:** "General Protection Fault in module XX."

**Translation:** General Protection Faults occur when an associated DLL (dynamic-link library) file (represented by XX) attempts to access protected memory space assigned to another application, DLL file, or other system component.

**Solution:** If XX is an application, be sure you're using the latest version of the software. Visit the software manufacturer's Web site and update the application if possible.

If XX is a system or DLL file, tracking down the cause of the problem is more difficult. If it's a DLL file, click Start, Search, and For Files Or Folders to search for it. When you find it, check to be sure that the DLL file you're using (usually the one located at C:\WINNT\SYSTEM32) is the latest version compared to any other copies that may exist on your computer (you can find this information by right-clicking the file, selecting Properties, and selecting the Version tab). If it's older than another version on your computer, chances are an application you recently installed overwrote a newer version of the DLL file with an older version included with the application installer. Replace the DLL file with the newest version. Also, be sure your copy of Win2000 is up-to-date. □

If you believe you should have write permissions for the file, contact your system administrator.

**Error Message:** “XX This file is already in use. Select a new name or close the file in use by another application.”

**Translation:** You’re attempting to save or open a file (represented by XX) that is already in use by another application. Usually this happens when you’re working on a file and switch to another application to work on the same file without closing it in the original application.

**Solution:** Switch to the other application and close the document or the application. Be careful when closing a file if edits have been made in two different applications. The last application to perform a save usually overwrites any changes made earlier in another application.

**Error Message:** “Maximum number of files already open. Close a file or application to open this file.”

**Translation:** You have exceeded the maximum number of files that the system permits you to use at one time.

**Solution:** Close one or more files. Open file limits can be imposed by an application or by your computer’s file system. If you work on a server, or are connected to one, the open file limits may be a policy decision on the server. If you’re using a Win2000 server, you can ask the administrator to check the MaxOpens entry in the server’s configuration file.

**Error Message:** “XX The above file name is invalid.”

**Translation:** The name (represented by XX) you’re trying to use when creating a file or directory doesn’t meet the criteria for a valid file name. (The full file name may not display in the error message. It may be truncated or missing characters.) File or directory names in Win2000 may contain upper or lower case characters, except for the following reserved characters: ? “ / \ \ , . \* | : .

**Solution:** Change the file name to include only valid characters.

## DLL Errors

**Error Message:** “The dynamic-link library WININET.DLL could not be found in the specific path.”

**Translation:** Windows applications use the Wininet.dll file (a DLL [dynamic-link library] file stores instructions common to multiple programs) to communicate with your Web browser. Wininet.dll is normally located in the WINNT\SYSTEM32 directory but appears to be missing.

**Solution:** Verify that Wininet.dll is in the C:\WINNT\SYSTEM32 directory. If the file is missing, click Start, Search, and For Files Or Folders to try to locate it. If you find more than one copy of the file, check the version information for each file (you can find this information by right-clicking the file, selecting Properties, and selecting the Version tab). Copy the most recent version to the C:\WINNT\SYSTEM32 directory.

If Wininet.dll is already in the C:\WINNT\SYSTEM32 directory, it may be an older version associated with a third-party

application, thereby causing compatibility problems. Search for a more recent version of the file to use as a replacement.

If you don’t find Wininet.dll, visit Microsoft’s Internet Explorer home page ([www.microsoft.com/windows/ie](http://www.microsoft.com/windows/ie)) to download the latest version of IE, which includes the Wininet.dll file.

**Error Message:** “Cannot overwrite XX: The specified file is being used.”

**Translation:** Windows will not allow you to overwrite a DLL file (represented by XX) that is currently in use.

**Solution:** Copy the replacement DLL file to the Temporary directory, usually located at C:\WINNT\TEMP. Rename the DLL file in the C:\WINNT\SYSTEM32 directory by adding the word “old” to the file name (for example, Wininetold.dll). Click Start, Programs, Accessories, and Command Prompt. In the Command Prompt window, type the following after the command prompt, one line at a time, replacing *DLLFILE* with the name of the DLL file you copied to the temp directory. Press ENTER after each line.

```
cd %SystemRoot%\temp
copy DLLFILE %SystemRoot%\System32\
exit
```

Restart your computer to apply the changes.

**Error Message:** “This program has performed an illegal operation and will be shut down. If the problem persists, contact the program vendor. XX caused an Invalid Page Fault in Module YY.”

**Translation:** The application you’re using (represented by XX) tried to access protected memory space used by another application, system file, or DLL file.

**Solution:** This error message is common, and almost always indicates a poorly written application or DLL file. The affected module (represented by YY) is often a common DLL file used by many applications or the OS. This makes it difficult to determine which applications are actually interfering with each other. The best solution is to use the Task Manager (press CTRL-ALT-DELETE, click Task Manager, and select the Applications tab) to note which programs were running when the error occurred. Use this information as a reference if the error occurs again.

Save data in any open applications and reboot your computer. If you need to use the application that caused the problem, limit the

## Most Confusing Error Message

**Error Message:** “You cannot drag an item into a button on the Taskbar. However if you do this without releasing the mouse button, the window will open and you can the drag the item into the window.”

**Translation:** This message appears to first tell you that you can’t do something, and then tell you that you can. Taskbar buttons, which represent currently open windows and applications, do not support the drag-and-drop capabilities of the Desktop.

**Solution:** Use the Taskbar button to open the window the button represents and then drag the item into that window. As noted in the error message, you can accomplish this in a single step by dragging the item to the Taskbar button, without releasing the mouse button. In a few seconds, the window the Taskbar button represents will open. Still holding down the mouse button, drag the item into the newly-opened window. Release the mouse button to copy or move the item. □

### Most Hilarious Error Message

**Error Message:** "Unknown error."

**Translation:** Windows doesn't know what happened and hasn't a clue what to do about it.

**Solution:** Your guess is as good as ours. You can exit and relaunch the application you were using, or even reboot your computer, if it makes you feel better, but neither of these actions will necessarily solve the problem, whatever it was. This error doesn't usually repeat itself twice in a row, so regardless of what you were doing, give it another shot.

number of other open applications. Visit the software manufacturer's Web site and check for program updates that might solve the problem. Also use the Windows Update program (click Start and Windows Update) to ensure you have the latest Win2000 updates.

### Miscellaneous Errors

**Error Message:** "There was an internal error and one of the windows you were using has been closed. It is recommended that you save your work and close all programs, and then restart your computer."

**Translation:** This type of error is primarily the result of application problems, incompatibility between applications, or background processes, such as those associated with antivirus programs. A window was closed to release system resources that may have become corrupt or are no longer available.

**Solution:** Save your work. For future reference, take note of the applications that were open when the error occurred.

Although this step may be difficult to perform if your computer is unstable because of this error, press CTRL-ALT-DELETE to launch the

Task Manager. Select the Performance tab and check memory and CPU usage. If memory or processor usage is very high, change to the Processes tab, and find the processes with the highest CPU and/or memory usage. Write down this information and restart your computer.

The next time this error message occurs, make a note of the same information and compare it with the previous information. The purpose of this exercise is to try to narrow down the applications or processes that are causing problems. You can then contact the software manufacturer(s) about available updates. Also use the Windows Update program (click Start and Windows Update) to be sure you have the latest Win2000 updates.

**Error Message:** "An error occurred sending the command to the application."

**Translation:** This error can occur when you use the Task Manager to end a task.

**Solution:** Because you're using the Task Manager to try to close an application, there's a possibility that the application, or other components of the OS, may be in an unknown state and unable to respond to the Task Manager's command to stop the program from running.

### Most Unusual Error Message

**Error Message:** "Due to an unexpected error the system cannot be restarted."

**Translation:** Windows system drivers were unable to force a restart. This can happen when you try to restart your computer when Windows Media Player or related applications are open.

**Solution:** Microsoft suggests shutting down or restarting, although if you could restart, you wouldn't see this error message. We suggest closing any open applications, or using the Task Manager (press CTRL-ALT-DELETE, click Task Manager) to end a task that has stopped responding to your OS, and then shutting down or restarting.

Try selecting the appropriate program and clicking End Task again. If the problem persists, try closing other applications or processes. If the application still fails to respond to the End Task command, restart your computer. Refer to the application's manual for information about recovering lost data when the application fails in this manner.

**Error Message:** "XX An error has occurred in your program. To keep working anyway, click Ignore and save your work to a new file. To quit this program, click Close. You will lose information you entered since the last save."

**Translation:** A program has encountered a problem it can't fix by itself. The error message appears to indicate that the problem is with the program (represented by XX), but the actual root of the problem may be incompatibility with another application or with device drivers the application uses.

**Solution:** You can click the Ignore button, but more than likely the application will crash before you can save your work. If possible use the Save As option to save your work under a different name. This will cause minimal corruption to the currently open data file. Clicking Close will stop the program in a fairly clean manner, with less chance of corruption, but you will lose any work you've done since your last save.

Finding the cause of this problem is difficult. One approach is to ensure that the application, your OS, and any device drivers the application uses are up-to-date. Be sure to check video, multimedia, audio, CD, and DVD drivers because one or more of these drivers are likely to have been in use at the time of the error.

**Error Message:** "Your system is running low on Virtual Memory, please close some applications" or "Your system is low on Virtual Memory. To ensure that Windows runs properly, increase the size of your Virtual Memory paging file. For more information see Help" or "Your system is low on Virtual Memory. Windows is increasing the size of your Virtual Memory paging file. During this process, memory requests from some application may be denied. For more information see Help."

**Translation:** Win2000's virtual memory (hard drive space reserved to act as if it were RAM when necessary) settings are preventing applications from functioning properly. You are most likely to see one of these error

messages when you launch an application or when you attempt to work with large files from within an application.

**Solution:** Increasing the virtual memory paging file (the file on the hard drive reserved for use as virtual memory) size may alleviate the problems with specific applications, but it's not necessarily the best option. Adding physical RAM is usually a better choice, especially when application performance is an issue. In the interim, you can adjust virtual memory settings to allow your applications to run.

Right-click the My Computer icon on your Desktop and select Properties. In the System Properties window, select the Advanced tab. Click Performance Options. In the Virtual Memory area of the dialog box, click Change. The value in the Initial Size (MB) field should be at least one and one-half times your physical memory size. This is the default value that Win2000 uses when you first configure it. If you have lowered the value, or added RAM since installing Win2000, you may need to increase this value.

For example, if you have 256MB RAM installed, the Initial Size (MB) field should read 384. The value in the Maximum Size (MB) field should be twice the initial size, or in this case, 768.

If the values are correct, and you still see the error message, try using this formula: Initial size = physical RAM x 2. Maximum size = Initial size x 2.

**Error Message:** "An error occurred while saving changes. Some changes will not be remembered."

**Translation:** This error relates to Win2000 control panels. Most of the changes you can make within the control panels are written to the Registry (a database Windows uses to store configuration information). This error message indicates that the changes could not be written successfully to the Registry, so they will no longer be saved in memory when you restart your computer.

**Solution:** A failure writing to the Registry can occur if you are running very low on available memory. Low memory problems can be momentary, a direct result of the number and types of applications you are using or have recently used. Rebooting should clear the low memory error and allow you to use the Control Panel to reconfigure your settings.

If a low memory error still occurs, make sure your RAM is properly installed, have a technician check the RAM's integrity, and/or add more RAM.

## How To Install A Service Pack

To resolve some of the error messages in this article you need to install the latest service pack for Windows 2000, Win2000 Service Pack 4. You can obtain SP4 using the Windows Update utility. As long as you have an active Internet connection, click Start and Windows Update to launch the utility, and then follow the on-screen prompts to download and install Win2000 SP4.

Alternately, you can visit Microsoft's Windows 2000 Service Pack 4 Web page at [www.microsoft.com/windows2000/downloads/servicepacks/sp4/default.asp](http://www.microsoft.com/windows2000/downloads/servicepacks/sp4/default.asp) and follow the instructions for downloading and installing Win2000 SP4. □



Unusually long Registry keys or values can also cause a failure writing to the Registry. The latest Win2000 Service Pack includes a fix for this issue. Refer to the "How To Install A Service Pack" sidebar for details.

**Error Message:** "Windows could not start because the following file is missing or corrupt: \WINNT\SYSTEM32\CONFIG\SYSTEMcd."

**Translation:** This message, which is sometimes also followed by the error message, "System hive error," indicates that Windows was unable to load the System hive (Windows Registry file) at boot time because the System hive is too big, badly fragmented (scattered across multiple locations on a hard drive), or missing.

This problem occurs during an early phase of the boot process, during which available memory is limited. The Registry must share this limited memory with other boot processes, including loading the kernel (core portion of an operating system), boot drivers, and other components. If the System hive is too large to fit into the available memory, or is so fragmented that it prevents complete loading, you'll see this error message.

**Solution:** Use the Recovery Console to try to create a nonfragmented (or at least, less fragmented) version of the System hive. Insert your Win2000 installation CD and reboot your computer. At the beginning of the boot process, when you see the option to Press Any Key to boot from CD, press any key. When the Welcome To Setup screen appears, press R to repair Win2000. On the next screen, press C to start the Recovery Console. Select the installation you want to repair. Enter your administrator password at the prompt. The Recovery Console will display a command prompt. Type

the following, one line at a time, and press ENTER after each line.

```
cd System32\config
ren system system.old
ren system.alt systemalt.old
copy system.old system
copy systemalt.old system.alt
exit
reboot
```

If you still see the error message, you will need to restore a copy of the System hive. Follow the above instructions to boot into the Recovery Console. If you have never created a Registry backup, you will need to restore the default System hive. If you have backed up the Registry, you should restore the System hive from the backup.

If you have never backed up the Registry, type the following at the command prompt, one line at a time, and press ENTER after each line.

```
copy c:\winnt\repair\system c:\winnt
\system32\config\
y
exit
```

If you have backed up the Registry, type the following at the command prompt, one line at a time, and press ENTER after each line.

```
copy c:\winnt\repair\regbackup\system
c:\winnt\system32\config\
y
exit
```

You may need to reinstall any hardware or software you installed after you last backed up the Registry.

If you still cannot boot into Win2000, consider reinstalling Win2000 or editing the Registry to reduce its size. **RS**

by Tom Nelson and Mary O'Connor

# End Connection Headaches

## Windows 2000 Networking & Online-Related Errors



**W**ithout a network to browse or share these days, computers seem, well, boring. A networking problem can shut down useful work in no time flat. Below, we'll parse some of the most common network-related error messages Windows 2000 can throw at you, along with the solutions you should try first.

### First Things First

**Error Message:** "The system could not log you on. Make sure your Username and domain are correct, then type your password again. Letters in passwords must be typed using the correct case. Make sure that Caps Lock is not accidentally on."

**Translation:** Windows is having trouble authenticating you either on your local computer or network domain controller (computer running Win2000 Server that manages network access). Larger networks usually have a

domain controller computer somewhere where network administrators keep track of everyone's logon information. If you don't have a domain controller on your network, it might be your own computer that is rejecting you. Ouch!

**Solution:** This one is pretty self-explanatory. In most cases, you're simply typing either the username or the password incorrectly. Because Win2000 logons are case-sensitive, the CAPS LOCK key suggestion offered in the message is a good one. Make sure you're spelling everything right and that you didn't change the password the other day and forget about it. If you know an administrator user ID and password, log on as an administrator and open the Computer Management console in Administrative Tools. There you can check the list of all users and make sure the user name you're having trouble with is, in fact, listed. If the

user ID does not exist on this computer, you can create it by selecting Action and then New User.

**Error Message:** "Unable to log you on because your account has been locked out, please contact your administrator."

**Translation:** The most likely scenario leading up to this error is that you failed too many attempts to log in properly. Anyone who has had to log in every morning has done it, usually the day after changing to a new password. To protect the network from brute-force password hacking, Win2000 automatically cuts off your user ID for a specified amount of time.

**Solution:** You can wait it out, but that might entail sitting around for quite a while if the timeout period (time it takes until the system allows you to attempt to log in again) is very long. If you're connected to a Windows domain, contact the network administrator and ask if she'll help you out of this jam. If you aren't connected to a domain, you can log on to your own machine as an administrator and let yourself back in. Click Start, Settings, and Control Panel. Double-click the Administrative Tools icon and then double-click Computer Management. In the left pane, click the plus sign (+) to open Local Users And Groups and then Users. Double-click the account you need to unlock and remove the check next to Account Locked Out.

**Error Message:** "Your password will expire in XX days. Do you want to change it now?" or "Your password has expired and must be changed."

**Translation:** This message speaks for itself (XX, of course, represents the number of days you have left until your password expires). Sure, it's a pain, but it's basic network security. You should change your password periodically to minimize the possibility that some unauthorized person will learn the password and compromise the system. If your network administrator has set a time limit on your password, Win2000 will start nagging you a few days before the password expires to come up with something new.



**Each computer on the network must have a unique name. Change your machine's network name from the Network Identification tab in the System Properties dialog box.**

**Solution:** Click Yes and the Change Password screen appears. Type a new password and then type it again to verify. Click OK to save the new password. Your network administrator might also have set up certain criteria by which to judge your password to make sure it isn't too simple (and, therefore, easy to crack). You probably won't be able to use the same password as last time, and you might have to include at least one number and one capital letter.

**Error Message:** "Your account has been disabled. Please see your system administrator."

**Translation:** Win2000 recognizes your user ID and password, but the account has been shut down. Either someone has changed the settings on your computer or your network administrator changed settings on the domain controller machine.

**Solution:** If you're connected to a network and you log in to a domain, the network administrator is going to have to solve this issue. If you aren't part of a domain, try logging on to the machine with an administrator account to enable your account. Click Start, Settings, and Control Panel. Double-click Administrative Tools and Computer Management. In the left pane, expand Local Users And Groups and then Users. Double-click the appropriate user name to see its properties. Remove the check mark by Account Disabled and click OK. The user ID should work as before.

## Learning to Share

**Error Message:** "\\computer\resource is not accessible. Access Denied."

**Translation:** This is a frustrating error that can crop up when you attempt to connect to a shared resource on a network, represented above as *computer\resource*.

The resource might even show up as normal in the Network Neighborhood, but nonetheless, those two rudest of words—access denied—assault your screen.

Often this error means that NTFS (Windows NT/2000/XP's organizational system for storing files on hard drives) partition permissions have not been properly assigned or that share permissions are not correctly set.

**Solution:** Check to make sure that both the share permissions and the

## Most Confusing Error Message

**Error Message:** "A duplicate name exists on the network."

**Translation:** If you're trying to connect a new computer to the network and some other computer on the same network already has the selected name, Windows returns this error. Network administrators sometimes run into this kind of error when they're transferring settings from one computer to another, and the network name tags along with everything else. This error can also occur when two users with the same first or last name both try to give their machines an easy-to-remember moniker. Any kid named Tyler is going to have some problems with this in a few years.

**Solution:** The network will become a confusing place if two workstations have the same name, so Windows is not going to let it happen. You will need to change the name of your computer (or get the other person to change the name of their computer). Right-click the My Computer icon on your Desktop and select Properties. In the System Properties window, click the Network Identification tab and then the Properties button. In the Identification Changes dialog box, type a new name in the Computer Name field and click OK. You may need to restart your computer before the change takes effect. □

NTFS partition permissions are configured for individual user or group access.

**Error Message:** "An error occurred while reconnecting XX: to \\computer\resource. This connection has not been restored."

**Translation:** When you see an error like this, it means that Win2000 is unable to find on the network the specific computer or resource you told it to find. Usually this error pops up when you are attempting to map a local drive letter (such as that represented by XX above) to a resource (a printer, for instance) on another computer through the network (represented by *computer\resource*). If the resource used to be accessible, it can be frustrating to find it absent without leave.

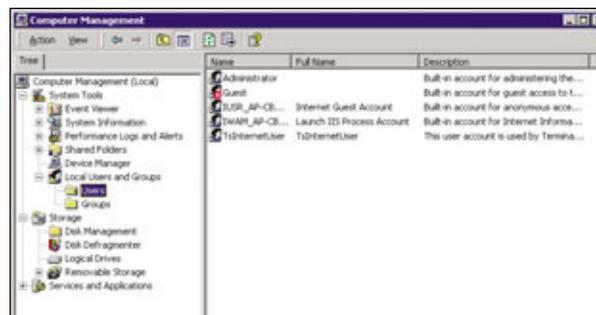
**Solution:** First, make sure your connection to the network, and especially the

computer in question, is working. Try accessing a resource on a different computer than the one that's proving difficult. If that doesn't work, the problem is likely with your own computer. Make sure you have a connection to the network hub—you should see a green light on your network adapter and the hub itself.

If you were able to access a different resource, the target computer might be the one with the problem. It could simply be shut off, or it could have an actual network problem. Look for the link lights on that computer as you did with your own. Assuming the shared computer is properly connected to the network, see if the resource it is hosting is set up to be shared. On the remote computer, double-click My Computer and navigate to the resource you want to access through the network. Right-click that resource and select Sharing. See that the Share This Folder or Shared As option is selected and the right share name is displayed in the Share Name drop-down list.

**Error Message:** "My Network Places: \\computer\resource is not accessible. The network path was not found."

**Translation:** As with the last error, this means that the OS is not able to locate the particular resource you want. Along with mapping a drive, Win2000 lets you set up a network



The Users section of the Computer Management console is where the administrator of a system controls access on a per-user basis.

path in My Network Places as a way to conveniently connect to resources you frequently use. Either way, various problems can make the network resource unavailable.

**Solution:** Troubleshooting a My Network Places error will be much like troubleshooting a mapped drive letter error. Follow the instructions provided for solving the previous error message.

**Error Message:** “No more connections can be made at this remote computer at this time because there are already as many connections as the computer can accept.”

**Translation:** As the error says, too many people are trying to use this resource at the same time. How many is too many? Network administrators can configure resources to allow only a certain number of connections; that number can vary depending on the configuration. If the remote computer you’re trying to access is running Win2000 or WinXP, you may also run up against a built-in 10-user connection limit. There might be a software license limit for elements of your networking software.

**Solution:** Get ahold of the office intercom and tell everyone else to stop using that network resource, or else. OK, we admit that’s probably not a good solution. An alternative option is to simply wait and try to connect again later. Or, ask the network administrator to look into the matter and determine whether the share can be configured to accept additional connections.

**Error Message:** “Error 234: Additional data is available.”

**Translation:** You might see this message when you’re browsing folders on a WinNT or Win2000 machine from a Windows 95 workstation. It sounds a bit cryptic—what is this “additional data” anyway? Why not just spit out an explanation that makes more sense? As it turns out, the older OS has trouble reading share names with more than 12 characters or with spaces. If someone gave such a name to a resource on the WinNT/2000 machine, you could get slapped with this Error 234.

**Solution:** Just make sure that the WinNT/2000 computer you want to access over the network has a share name that doesn’t contain

### Most Unusual Error Message

**Error Message:** “Check networking protocol connections . . . TCP/IP CP reported error 733: Your computer and the remote computer could not agree on PPP control protocols.”

**Translation:** You might see this error when you try to connect to an ISP with dial-up networking using PPP (Point-to-Point Protocol). The most common cause is that a setting called “Negotiate multi-link for single link connections” is enabled when it shouldn’t be.

**Solution:** Click Start, point to Settings, and then click Network And Dial-up Connections. Right-click the connection you’re trying to use and click Properties. Click the Networking tab and the Settings button. Clear the check mark from Negotiate Multi-Link For Single Link Connections. Click through the OKs to save your changes. □

any spaces and is less than 12 characters long. If you don’t have control over that resource, you might need the network administrator to make the change.

### Scary Errors

**Error Message:** “STOP: 0x000000C2 (0x00000007, 0x00000fd3, 0x88289700, 0x00000000)”

**Translation:** Yikes!

This kind of error message, displayed on a BSOD (Blue Screen of Death, the common term for the blue screen that appears when your computer experiences a serious crash), really doesn’t offer any clues on its own. It can appear ominously when you try to close a file on a network shared resource.

**Solution:** This error relates to a known bug in

Win2000 that has been repaired in Service Pack 4, a bundle of patches Microsoft put together to address various errors. To download the most recent Service Pack, head to [www.support.microsoft.com](http://www.support.microsoft.com), click the Knowledge Base Article ID Number Search link, and look for Article 260910. There you’ll find information about all Win2000 patches and packs.

**Error Message:** “STOP: 0x000000D1 (0xFF8BA000, 0x00000002, 0x00000001, 0xF3AAA40E) DRIVER\_IRQL\_NOT\_LESS\_OR\_EQUAL”

**Translation:** This is another error that results from a known Win2000 flaw. It can appear when someone removes a TCP/IP (Transmission Control Protocol/Internet Protocol) network connection in a certain way and may cause the computer to hang.

**Solution:** Follow the directions for solving the previous error message to download the latest Win2000 Service Pack. This error was fixed back in Service Pack 1, but the most recent Service Pack will include the patch, as well.

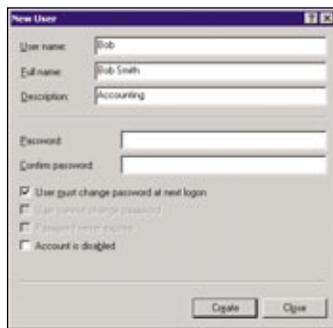
**Error Message:** “STOP: 0x000000D1 (68b6a590 00000002 00000000 bfa3841)”

**Translation:** As with the last few error messages listed above, this one results from a Windows flaw that can crop up in the middle of a network data stream. It appears while the system hangs.

**Solution:** There’s not much you can do to solve this in the short term other than restart the machine. When you regain control, head to the Microsoft site and download the latest Win2000 Service Pack to banish this bug according to the instructions for solving the previous two error messages.

**Error Message:** “Query result parsing failure.”

**Translation:** Just as you might find it difficult to understand Win2000 error messages, sometimes Win2000 finds it difficult to understand the language of the network. When you see this error, it means that the OS is having trouble interpreting the network protocol bindings that tell your computer how to talk over the network. Basically, bindings are how Windows knows what protocols to use with specific network adapters such as your LAN



When you create a new user ID on the system, it must be different from existing user names.

(local-area network) card. You might see this error message after you've installed a new network adapter or software that affects your network adapter, such as a device driver (software that lets the OS communicate with your computer's hardware).

**Solution:** Begin by resetting the network protocol bindings for your network adapter or all of your adapters if you have more than one. Double-click the My Computer icon on the Desktop and double-click Network And Dial-up Connections. Right-click your network adapter icon and select Properties. A new window appears with information about the current protocols, services, and network clients. Reset the binding information by removing the check next to each listed protocol. When finished, click OK to go back to the Network And Dial-up Connections window.

Right-click the network adapter icon again and select Properties. Click the empty checkboxes next to the protocols that your computer needs for its network and click OK. If you aren't sure which protocols to check, consult your system administrator.

Reboot the machine and you should be able to access the network as normal. If you still have problems, check the adapter card manufacturer's Web site for the latest device

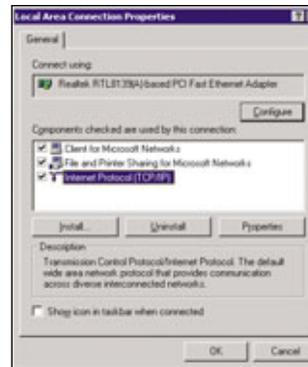
driver updates and troubleshooting information.

## Seeing Double

**Error Message:** "The system has detected an IP address conflict with another system on the network. The local interface has been disabled. More details are available in the system event log. Consult your network administrator to resolve the conflict."

**Translation:** Like computer names, computer IP addresses (the numerical names assigned to each device on the network) must be unique for the network to function properly.

**Solution:** No IP address can be used twice simultaneously, so you will need to change the address of your computer or the device that it's conflicting with it. Because you're right in front of your computer, it's probably easiest to change that unless the switch would cause other problems with the network scheme.



**If you need to pick out a new IP address, head to the TCP/IP (Transmission Control Protocol/Internet Protocol) configuration section of the appropriate network connection properties settings dialog box.**

Right-click the My Network Places icon on the Desktop and select Properties. In the Network And Dial-up Connections window, double-click the icon for the affected network connection and select Properties. Double-click the Internet Protocol (TCP/IP) icon to make changes to your IP configuration.

You'll recognize the IP address because it is always in the form of four numbers separated by periods. For example, the IP address 192.168.1.1 is similar to an address you might see. If you don't know what other

IP addresses might be available, try increasing the last number in the existing address by one. For instance, in our example you would try 192.168.1.2. Then click OK and restart the machine for the change to take effect.

If you get the same error again, try the next IP address up. If you have a large network, this method is probably going to take too much time to be useful. Try calling the network administrator.

## Most Common Error Message

**Error Message:** "Local Area Connection - Network cable unplugged."

**Translation:** With Windows 2000, Microsoft attempted to incorporate some new network troubleshooting tools to help you solve annoying problems a bit faster. Of course, one of the most common issues, whether we like to admit it or not, is the simple unplugged cord. Win2000 can sense when a network cable appears to have suddenly become disengaged and alert you with the above error and also a red "X" in the Windows Taskbar.

**Solution:** The "Network cable unplugged" message is not always exactly correct, but it does let you know that something is amiss. Start your problem-solving routine by making sure that your network cable is, in fact, plugged into your computer and into the wall socket. You might want to try unplugging the cable at both ends and then reattaching it to make sure that the connection is sound. Your network adapter card probably has a tiny, green LED (light-emitting diode) next to the connector that lights up when you have a good connection to your network hub. If this link light doesn't turn on, there's something wrong with the cable, the network hub, or your network adapter. If no one else connected to your hub is having the same problem, your cable and adapter might not be working correctly. Try a different cable to rule that out. Also, check to make sure that the network adapter is inserted correctly into its motherboard slot or PC Card slot. Sometimes they can become loose as people connect and reconnect cables. □

**Error Message:** "The device XX: is already connected to \\server\resource. Do you wish to replace the current connection with \\server2\resource?"

**Translation:** Win2000 likes to keep track of stuff, and in this case it's noticed that you appear to be trying to map a drive letter (represented by XX) to a shared network resource (identified above as server\resource) that's already mapped to another resource (server2\resource2).

**Solution:** How you decide to solve this error is really up to you. If you want to remap the drive letter to a different resource, you can. Click Yes in the error message dialog box, and Win2000 will automatically make the switch.

If you want to choose a different drive letter, click No and pick another drive from the drop-down menu. This might be the best choice if your network administrator is trying to keep a standardized system of drives mapped to particular resources. [RS]

by Alan Phelps

# Microsoft Office System 2003

## Installation & Startup Errors

**T**raditionally, a Microsoft Office installation is something like the fabled girl with the curl in the middle of her forehead: When it works, it works very, very well, and when it doesn't work, it's horrid. Here are a few of the grizzliest error messages you might encounter when installing or upgrading Office System 2003 and the steps you can take to make those messages go away.

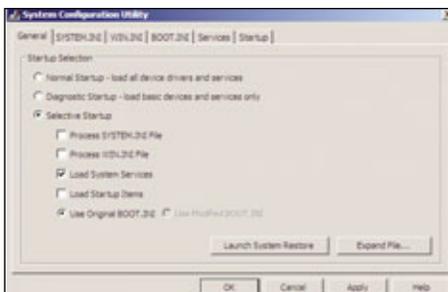
### Installation Errors

**Error Message:** "Error 1305: Setup Cannot read XX. Check your network connection or, if you are installing from CD-ROM, be sure that the YY CD-ROM is in the drive. Click Retry to continue or Cancel to stop the installation."

**Translation:** Your Office 2003 CD-ROM is damaged, a program installed on your computer is conflicting with the Office 2003 setup, or there is some sort of trouble with your CD-ROM (or DVD-ROM) drive. (In this message, XX refers to a file that Setup can't read from the Office CD.)

**Solution(s):** If you're installing from a CD-ROM, attempt the following fixes in the order listed below.

**Try a clean boot before installation.** A clean boot is a Windows startup that loads only the most basic programs—and that most likely does not load any software that might be conflicting with your Office 2003 installation. To set up a clean boot, click Start and Run; type `msconfig` and press ENTER. In the System Configuration Utility's General tab, click Selective Start-up,



**When Setup has trouble reading files from your Office CD, try a clean reboot and then reattempt the Office installation.**

and uncheck Process SYSTEM.INI, Process WIN.INI, and Load Startup Items. Click the Services tab; check the Hide All Microsoft Services option and then click Disable All. Click OK and Restart. Try again to install Office 2003. If it works, run `msconfig` again; in the General tab, select Normal Startup so your computer will resume starting normally.

**Make sure your CD-ROM or DVD-ROM drive is working correctly.** Click Start, right-click My Computer, and choose Properties. In the System Properties dialog, select the Hardware tab and click the Device Manager button. In the list of devices, click the plus sign (+) next to DVD/CD-ROM drives, right-click your drive, and choose Properties. If the device is working properly, close out of everything you opened. If it isn't, you can try troubleshooting the drive by clicking the Troubleshoot button, but you'll probably do better to contact the drive or computer manufacturer's Web site or technical support line.

**Clean your Office 2003 CD-ROM.** Wipe the unlabeled side of your Office 2003 CD with a clean, soft cloth. (NOTE: Don't use paper, or even a soft paper towel can scratch a CD.) Next, wash and dry the CD using warm water or a CD cleaning kit—again, no paper.

Try to install Office one more time. If you still get the error message, it's probably time to call Microsoft technical support for help. (In most cases, installation support will be free and unlimited until you successfully install Office.)

**Error Message:** "Error 1307 There is not enough disk space to install this file. Free some disk space and then click 'Retry', or click 'Cancel' to exit." or "The highlighted volumes do not have enough disk space available for the currently selected features." or "Automatic



**Recovery protects your computer if setup fails.** There is not enough disk space on the drive highlighted below to store the Automatic Recovery data. This data is temporary and will be deleted when setup completes."

**Translation:** You don't have enough space on your hard drive to install Microsoft Office 2003.

**Solution:** Free some space. Because programs usually take up much more space than document or data files, often the fastest way to reclaim hard drive space is to uninstall any programs you use infrequently or not at all. First, click Start, then Programs (or All Programs), and select the program folder for any program you'd like to delete; if the folder includes an Uninstall application, use it to uninstall the program (a program's own uninstall option often does the most thorough job of removing the program). Repeat this for as many programs as you don't need. Next, click Start and choose Control Panel. Double-click Add/Remove Programs. Find a program you don't need or can tolerate removing; select it, click Remove or Change/Remove, and follow the instructions to remove the program. Repeat this for every program you can afford to remove and then try again to install Office 2003.

Note that once you install Office, you may be able to reinstall some of the programs you deleted since few of them will require the amount of free hard drive space that an Office installation requires. However, even if you manage to clear

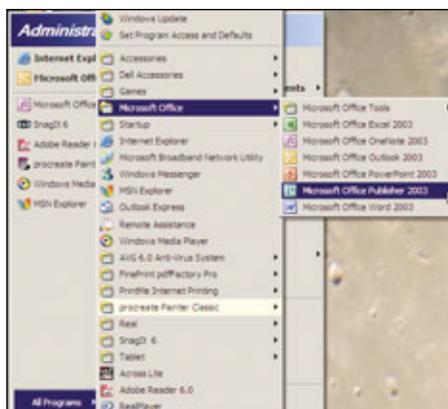
enough drive space to install Office, consider this error message a warning sign. Office and your other applications aren't going to run their best on a crowded hard drive; what's more, you may be only a few giant PowerPoint presentations away from a totally stuffed drive.

**Error Message:** "Error 1608. Setup could not locate a version of Microsoft Office 97, 2000 or XP on the selected drive. Click OK to stop the installation. If you have a version of Microsoft Office on CD-ROM, run setup again. For more information, see XX under 'Locating a previous version of Office.' "

**Translation:** While trying to upgrade to Office 2003 from an earlier version of Office, setup has prompted you for a CD-ROM containing your previous version of Office—but after you provided it, you were rewarded with this error message. After clicking OK, you were rewarded with another error message, "Installation ended prematurely because of an error."

**Solution:** Restart the Office 2003 setup. When the User Information box appears, enter your Product Key in the five boxes provided, and click OK; in the Product Compliance Check CD Key dialog box, click OK, too. You'll move to the Product Compliance Check dialog box; in the Drive list, click the CD-ROM or DVD-ROM drive containing your Office 2003 CD. Remove the Office 2003 CD from this drive and insert:

- Office XP CD1, if you're upgrading from Office XP;
- Office 97 Small Business Edition CD1, if you're upgrading from Office 97 Small Business Edition; or



**When you upgrade from an earlier version of Office to Office 2003, run applications from the All Programs menu the first time, so that Windows XP can add the appropriate icons to your Most Recently Used programs menu.**

## Most Annoying (And Seemingly Irrelevant) Error Message

**Error Message:** "A Runtime Error has occurred. Do you wish to debug?  
Line: XX. Error: YY."

**Translation:** After installing Microsoft Office System 2003, your Office applications work fine—but every time you use Internet Explorer to visit a Web site you see a message like the one above, prompting you to debug a runtime error. (The error occurs in a script contained in the Web page you're viewing; XX is the line number of the script where the error occurs, and YY is a description of the error, for example, "null" is null or not an object.)

**Solution:** You're having this problem because the Microsoft Office 2003 installation sometimes enables Internet Explorer's script debugging and then forgets to disable it. Unless you enjoy these messages, you don't really need Script Debugging, so turn it off yourself. In the Internet Explorer menu choose Tools and Internet Options and click the Advanced tab. In the Settings list, under Browsing, check Disable Script Debugging and uncheck Display A Notification About Every Script Error. Then click OK. The messages should disappear. □

- Office 2000 Small Business Edition CD2, if you're upgrading from Office 2000 Small Business Edition

Wait about 30 seconds for the computer to recognize the changed CD and then click OK. When the End-User License Agreement appears, remove the CD for the previous version of Office and re-insert the Office 2003 CD. Select I Accept The Terms Of The License Agreement (EULA) and then click Next. You should be able to follow the instructions to complete the installation.

**Error Message:** "The MSIEXEC file is linked to missing export MSI.DLL:222."

**Translation:** Your Microsoft Windows installer files, which you need in order to install Office 2003 on Windows 2000, have been corrupted or damaged.

**Solution:** Update the installer files for Win2000. Surf to [www.microsoft.com/downloads/release.asp?releaseid=32832&NewList=1](http://www.microsoft.com/downloads/release.asp?releaseid=32832&NewList=1), which contains links to the appropriate files and instructions for downloading and installing them. When you finish, try again to install Office 2003.

## Setup Modification Errors

**Error Message:** "Office Source Engine error: Error 25090. Office Setup encountered a problem with the Office Source Engine, system error: -2147024703."

**Translation:** The Office Source engine (Ose.exe), which gets copied to your hard drive during Office installation, and which copies additional Office 2003 installation files from the CD to your computer when you modify your setup, has somehow become damaged or corrupted. Without a properly functioning Office Source Engine, you can't change anything about your Office setup.

**Solution:** If you're lucky, you'll be able to solve the problem by recopying Ose.exe from your Office CD. Insert the CD into your CD/DVD-ROM drive and use My Computer to navigate to the Files\Setup folder on the CD. Right-click Ose.exe and click Copy. Next, navigate to the PROGRAM FILES\COMMON FILES\MICROSOFT SHARED\Source Engine folder, click Paste, and then Yes to replace the existing file. Cross your fingers and re-attempt your setup. If recopying the Ose.exe doesn't work, you'll have to uninstall Office, through the Windows Control Panel, and then reinstall it. (If you upgraded, you'll need to have handy the CDs from your previous version.)

## Startup Errors

**Error Message:** "The application failed to initialize properly (0xc0150002). Click on OK to terminate the application."

**Translation:** There are two possibilities here, both of them a bit convoluted. In the first scenario, sometime after installing Office 2003

and Windows XP SP1a (Service Pack 1a ) on your computer, you either upgraded WinXP Home to WinXP Professional, reinstalled WinXP, or repaired WinXP. After doing this you can't start an Office 2003 application without getting this error message. The second possibility is that, sometime after installing Office 2003, you installed WinXP SP1 (Service Pack 1) and did not restart the computer as prompted at the end of the SP1 installation process. (This is a common oversight. The Restart Your Computer request is often buried under other windows and dialog boxes displayed during the SP1 installation, and many people miss it.)

**Solutions:** In the first case, reinstall WinXP SP1a. The easiest way to do this is to visit the official Windows XP Service Pack 1a Web page at [www.microsoft.com/windowsxp/pro/downloads/servicepacks/sp1/default.asp](http://www.microsoft.com/windowsxp/pro/downloads/servicepacks/sp1/default.asp) and follow the instructions there. For the second scenario, restart your computer. You should be able to restart your Office 2003 applications without incident.

**Error Message:** "Your installation cannot be activated because you have activated up to the limit for your Product Key. For details about the maximum allowed number of product activations, close this wizard and review the End User License Agreement, available through the Help menu of this application. If you believe that you are getting this message in error, click Back and choose the telephone option. The telephone activation system will provide you the opportunity to speak with a support representative about all activation issues."

**Translation:** This happens after you install and activate Office 2003 on one computer, and then install Office 2003 from the same CD(s) on a second computer—even if you uninstall Office 2003 from the first computer before installing it on the second computer. Uninstalling does not deactivate the original activation.

**Solution:** Call Microsoft's activation department at the number displayed on-screen. When you reach the automated phone menu, press zero (0) and you'll be directed to a person who can help you. You'll need to attempt a restart of an Office 2003 application so that your Activation Wizard is on-screen when you call.

**Error Message:** "You have not entered a valid product key. Please check the number located on the sticker on the back of the CD case or on your Certificate of Authenticity."

## OneNote Weighs In

**O**neNote is Microsoft's note-taking and note management program. As a new (and fairly straightforward) application, OneNote error messages are fairly uncommon. Still, you might run into one or two, such as the one noted below.

**Error Message:** "While verifying the integrity of your section files, OneNote detected a problem with the following file: XX.one."

**Translation:** You tried to open, optimize, find, or back up a OneNote file (where XX.one is the name of that file), but OneNote has determined that the file has been damaged or corrupted.

**Solution:** For starters, click OK. OneNote's automatic file repair feature restarts OneNote, attempts to repair the file, and presents you with a new message: "OneNote has repaired the following file: XX.one." However, even though the file has been repaired, you may have lost data. Open the file and check it. If any data or content is missing, choose Help, Open Backup; in the File list, double-click the most recent backup, and then double-click the section that's missing data. OneNote opens this section in a new tab. Check the tab; if it contains the content you're missing, copy and paste it into the appropriate section of your OneNote file. When you're finished, right-click the Backup tab, and choose Close to close the backup. If the backup doesn't contain your missing information, it's lost for good (unless you can recreate it from memory or printouts). □

**Translation:** You purchased a computer with Office 2003 preinstalled. Before running any of the preinstalled Office applications, you installed Office 2003 Professional. You then started an Office application and received the error message, essentially because your system can't decide which Office edition the application belongs to.

**Solution:** You need to remove the Office edition you don't want—probably the pre-installed Office edition—and then reinstall Office 2003 Professional. Click Start, choose Control Panel, and double-click Add Or Remove Programs. Select your preinstalled Office edition, click Remove, and follow the instructions to remove this edition of Office. Next, still in the Add Or Remove Programs dialog box, click Add New Programs. Click CD or Floppy; when the Install Program from Floppy Disk Or CD-ROM dialog box appears, put your Office Professional CD in your drive and click Next. Follow the instructions to install Office Professional, making sure to enter the product key from the back of your Office Professional CD-ROM case when prompted. You shouldn't see the error message again.

(NOTE: Even if you decide you'd prefer Office Standard or Basic, install Office Professional and use the Custom install to specify only those Office applications you want.)

**Error Message:** "Please wait while Windows configures Office XP Pro..." or "This action is only valid for products that are currently installed."

**Translation:** You installed Microsoft Office XP and then moved the Office XP shortcuts to a Start menu folder other than the All Programs folder, where the Office XP installation puts them by default. Then you upgraded from Office XP to Office 2003 and tried to start one of your new Office 2003 applications by clicking what seemed to be the appropriate shortcuts on your Most Recently Used Programs menu (the left section of the Start menu). This occurs because the shortcuts in your Most Recently Used Programs menu point to your Start menu folder, while Office 2003 installed your new Office apps in your All Programs folder.

**Solution:** Start your Office 2003 programs from the All Programs menu. As soon as you use them, WinXP will replace the old shortcuts on your Most Recently Used Programs menu with shortcuts that point to your new Office 2003 applications, and you shouldn't have the problem again. 

by Mark Scapicchio

# Immaculate Reception

The 802.11g USB 2.0 adapter with twist-and-shout flexibility!



180°

GWU513

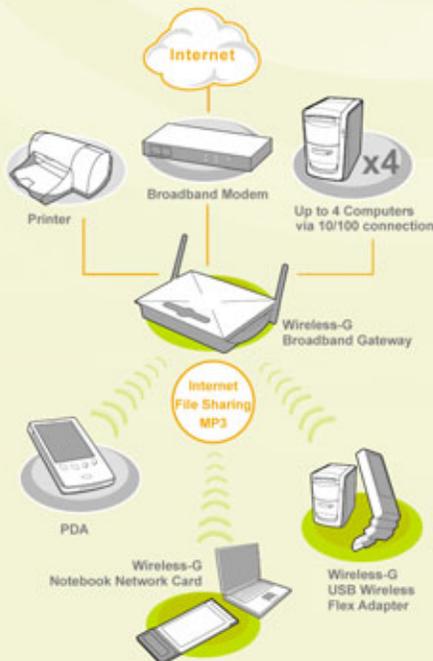
## Wireless-G to USB 2.0 Flex Adapter

- Uses USB port, not cardbus or PCI slot
- No configuration hassles
- Flexes and pivots for optimal reception

IOGEAR's ultra fast Wireless-G 802.11g USB 2.0 adapter can help you connect to a wireless network with "higher power." It bends and twists to ensure optimal reception so you can work at up to 54Mbps at home or anywhere a hotspot is available.

Installation takes just moments. All IOGEAR Wireless-G products offer the latest security and are backward compatible with 802.11b.

So "retire the wire" without sacrificing Internet speeds - pick up IOGEAR's line of Wireless-G products today!



GWA501

## Wireless-G Broadband Gateway/Print Server

- Fast setup in just a few simple steps
- Includes everything for effortless installation
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- Built-in print server shares your printer with all connected computers



GWP511

## Wireless-G Notebook Network Card

- Low-profile high-gain antenna achieves favorable sleek design
- Included Software Access Point allows you to turn your notebook into a wireless Access Point



Retire the Wire.

# Word 2003

## Diagnose & Correct Microsoft Word Error Messages



Generally, there are three types of errors that you may encounter when using Word 2003:

- Fatal exception errors
- Nonfatal errors caused by internal conflicts
- Runtime errors

All of these error types are caused either by problems in the application itself, by conflicts between the application and the operating system, or by a problem within the document that you are working on at the time that the error occurs.

The solutions will vary, depending on the cause. Your application may have been installed incorrectly, or it may have been damaged due to an unexpected shutdown or a virus infection. The solution in either case may be to reinstall the application. You may have another application running that has a conflict with Word 2003, and therefore you might have to reinstall or upgrade that application to get it to “play nice” with Word. Sometimes part of a

document gets damaged and you may need to start the document over (although there are also techniques that let you reuse most of the work you have already done).

The way to troubleshoot any error is fairly uniform. Record the error by writing down the error message and its details and follow the instructions included as part of the error message (if you can) to try to correct the problem. Try to remember what you were doing when the error occurred. If you didn’t capture the error message, try to re-create the error so that you can generate the same error message. Finally, search the Microsoft Knowledge Base at [www.microsoft.com](http://www.microsoft.com) to see if the error has been reported and if there is a standard solution. New errors get reported continually to Microsoft, and the solutions are often available on the Microsoft Web site. If you don’t see the answer here, you can go to Microsoft’s Support site ([support.microsoft.com](http://support.microsoft.com)) and enter the information from the error message to get the latest information.

Methods for correcting an error can range from the simple, such as restarting your computer, to the more complex, such as reinstalling your application software. You may also need to install an upgraded version of some other application software to make it compatible with Word 2003.

### Fatal Error Messages

When Microsoft Word 2003 encounters a fatal error, it will display a message similar to the following:

“Microsoft Word 2003 has encountered a problem and needs to close. We are sorry for the inconvenience. Please tell Microsoft about this problem.”

We have created an error report that you can send to help us improve Microsoft Word 2003. We will treat this report as confidential and anonymous. To see what this error report contains, click here.”

Note that this type of error dialog box includes a link that allows you to view the details of the error. This list of details is called the error signature, and it is where the message usually looks the most incomprehensible. In spite of that, this is where the experienced user or a technician will be able to start diagnosing the problem. The details will look something like this:

This signature says that the Windows Word executable file (Winword.exe) had a problem executing a module of the code called Mso.dll.

AppName	AppVer	ModName	ModVer	Offset
Winword.exe	11.0.5207.4	Mso.dll	11.0.5207.5	00842bfc

The offset further identifies the location of the error within the code. For most mortals, this appears no more helpful than the error message itself. However, you can use this information to search Microsoft’s database of reported errors to find out the next steps to take to correct the problem, and a support tech can use the information to help pin down the problem.

Let’s take a look at some common fatal errors and their suggested solutions below. Note that in all of these cases, you will have already seen the fatal error message (similar to that listed above) and then clicked the To See

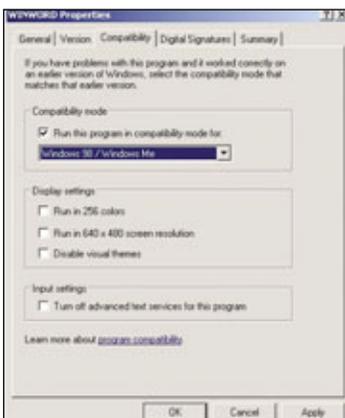
What This Error Report Contains, Click Here link to view the detailed signature.

**Error Message: (Signature):** "Application Name: Winword.exe. Application Version: 11.0.5604.0. Module Name: Mso.dll. Module Version: 11.0.5606.0. Offset: 00059890."

**Translation:** This error normally occurs when Word 2003 is running in Windows 98/Me Compatibility Mode. Windows XP's Windows Compatibility Mode feature allows you run applications created for earlier versions of Windows on WinXP. However, Word 2003 does not work in Windows Compatibility Mode for Win98/Me. If you have enabled this feature and you're working with a document created in an earlier version of Word, you may see this error signature after receiving the initial fatal error message.

**Solution:** The good news is that Word 2003 will work just fine with documents created in earlier versions of Word; there's no need to invoke Windows' Compatibility Mode feature. Turn off the feature by taking the following steps: Click Start, Search, and then select Files Or Folders. When the search dialog box opens, enter **winword.exe** in the Search For... field and start the search. Once the search is complete, you should see an icon and file listing for the Winword application. Right-click the Winword icon and select Properties. Select the Compatibility tab at the top of the Properties dialog box. Click to clear the check mark in the Run This Program In Compatibility Mode For box and then click OK. Word 2003 should now work with documents created in earlier versions of the program.

**Error Message: (Signature):** "Application Name: Winword.exe. Application Version:



**Adjust Word's properties if you're having problems with the Compatibility Mode feature.**

**11.0.5604.0. Module Name: Gdiplus.dll. Module Version: 6.0.3260.0. Offset: 00082f1d."**

**Translation:** You may see this signature if Microsoft Word 2003 quits unexpectedly when you're using another graphics-heavy application at the same time as you're running Word. Especially when you use applications with heavy reliance on graphics enhancement routines such as DirectX and the DCI (Display Control Interface), you can get resource conflicts that result in this fatal error. The more graphics-intensive programs that you use at the same time, the more likely you will end up with a resource conflict that will cause this failure. Games are usually the most obvious cause, but other programs, including Microsoft NetMeeting, can also trigger this error.

**Solution:** When a graphics-based error occurs, you can correct the problem by not running the graphics-intensive programs at the same time that you are using Word 2003. Another alternative is to turn off the graphics hardware acceleration on your machine. This will slow down your computer's response to DirectX and other graphics commands, but it will reduce the likelihood of a further fatal crash. To do so, click Start and select Control Panel. At the Control Panel, select Appearance And Themes; then click Display and choose the Settings tab. Click Advanced and select Troubleshoot. There is a sliding adjustment for Hardware Acceleration. Move the slider to the third position from the left, and you will see this message:

"Disable all DirectDraw and Direct 3D accelerations, as well as all cursor and advanced drawing accelerations. Use this set-



**If you have a problem with graphics-intensive programs conflicting with Word, you may need to correct the Graphics Display settings.**

ting to correct severe problems with DirectX accelerated applications."

Click OK to complete the adjustment and then click OK again on the Display Properties dialog box to close it.

**Error Message: (Signature):** "Application Name: Winword.exe. Application Version: 11.0.55207.4. Module Name: Mso.dll. Module Version: 11.0.5207.5. Offset: 00842bfc." When you close the error signature, you may receive this error additional message: "The exception Illegal Instruction. An attempt was made to execute an illegal instruction. (0xc00001d) occurred in the application at location 0x31482bfc."

**Translation:** This fatal error message may occur if you are using Adobe Acrobat in conjunction with Word 2003 to create documents or presentations. An incompatibility with a file in Adobe Acrobat 5.0.5 is normally what causes the problem.

**Solution:** You have two options: You can buy the upgrade to Adobe Acrobat 6.0.1 or else rename the Pdfmaker.dot file to prevent access to the file by Word 2003. To rename the file, click Start and Search and select Files Or Folders. When the search box opens, enter **pdfmaker.dot** in the search field. Once the search is complete, you'll see all instances of the file. Right-click each instance of the file and click Rename. You can just rename the extension from .DOT to .OLD and press ENTER.

**Error Message: (Signature):** "Application Name: Winword.exe. Application Version: 11.0.5604.0. Module Name: Winword.exe. Module Version: 11.0.5604.0. Offset: 003606fc."

**Translation:** This error is caused by using OLE (object linking and embedding) to place objects (images, charts, spreadsheets, etc.) in a Word 2003 document. OLE is the process of creating an object in one application and embedding it in another. It is different from merely cutting and pasting because the embedded object invokes the original program from within the host program. The specific problem may occur if you background save a Word document containing an OLE object. Background saving is the process that allows you to keep working on a document while it is being saved to your hard drive. You may see this fatal error message when saving or printing a document or when trying to exit Word 2003 if you have OLE objects embedded in your Word document.

**Solution:** Microsoft has issued an update to Word 2003 that's available at the Word 2003 Support Center ([support.microsoft.com/default.aspx?pr=off2003](http://support.microsoft.com/default.aspx?pr=off2003)). Installing that update is the best solution to this problem. However, if you just want a temporary fix for the problem, you can disable the Background Save feature in Word 2003 and continue to save Word documents with OLE objects embedded in them. To turn off this feature temporarily, open Word 2003 and select the Tools menu. Click Options and select the Save tab. Click to remove the check mark from the Allow Background Saves box. Click OK to close the dialog box and you'll be able to save OLE objects in your Word 2003 document. However, keep in mind that until you install the Word update, your computer will not be able to perform other tasks while you are saving documents.

**Error Message: (Signature):** "Application Name: Winword.exe. Application Version: 10.0.4009.0. Module Name: winword.exe. Module Version: 10.0.4009.0. Offset: 00144ad3. Word has detected a problem with the existing normal.dot. Would you like to create a new normal.dot?"

**Translation:** Normal.dot is the global template that stores the majority of your format settings and application-wide macros for Word 2003. Template files use a file format that is different from a regular document file's format. If the Normal.dot template gets stored as a Word document (that is, as a DOC file), you will get a fatal error with this error signature and the usual prompt to report the error to Microsoft.

**Solution:** After you choose Send Error Report or Don't Send from the error message, you'll see the additional message. Select Yes to delete the incorrect Normal.dot file and replace it with a new one having the standard format defaults. If you have created a specialized default template file for your documents, you will lose all of your customized settings and will need to re-create them.

### Nonfatal Errors Caused By Internal Conflicts

**Error Message:** "The document caused a serious error the last time it was opened. Would you like to continue opening it?"

**Translation:** After the second time you try to open a document that causes Word 2003 to crash for any reason, Word 2003 will

mark the file as a problem and place the file on a list of disabled files. Further attempts to open the problem file will result in this message every time you try to open it until you correct the problem.

**Solution:** If Word 2003 opens properly and your other documents do not experience these errors, you may have a corrupted paragraph marker in your document. Documents in Word 2003 store their paragraph formatting in the paragraph marker at the end of each paragraph and the formatting for the whole document in the final paragraph marker in the document. You can see the paragraph markers by clicking the paragraph icon (¶) on your toolbar. Look for a paragraph that has strange formatting or fonts, remove the marker from the end of that paragraph, and save the file. If one paragraph does not stand out, try removing the final paragraph marker from the document. Once you think you have resolved the original problem, you can remove the document from the disabled files list and try restarting. Find your disabled files by clicking Help and then About Microsoft Office Word. Click the Disabled Items box and you will see a list of those items. To remove a file from the list, select the item with your cursor and click Enable. If you have previously solved the root problem, you will be able to open the file.

**Error Message:** "Microsoft Word cannot install the necessary files due to Windows Installer Error 1605."

**Translation:** If you have a problem with the Word Startup folder, Word may fail to open when you try to start it and you will see this error message. The Startup folder is the location where the Word 2003 application stores templates containing add-ins and macros that you create. These templates start automatically when you start Word.

**Solution:** To resolve the problem, you need to find out which template is the source of the problem and delete it from your Word 2003 Startup folder.

The Startup folder is a hidden folder, so first you need to make it visible by opening Windows Explorer, clicking the Tools menu, and selecting Folder Options. Click the View tab; from the list that appears, select Show Hidden Files And Folders. Click OK and you will return to the main Windows Explorer page. On the left-side pane, click My Computer and then select the drive where

Word is installed (usually drive C:). Click Documents And Settings, Owner (or the name of the person to whom the software is registered), Application Data, and Word. Under Word, you will see a folder marked Startup. (NOTE: It's possible that your Word folder may be located elsewhere, depending on where you installed the application.) Click to open it and you'll see a list of all templates in the folder. Make a new folder by clicking File, New, and Folder. Name the folder Temp Startup.

Select the first template listed in the Startup folder and either drag and drop it into the Temp Startup folder or highlight the item with your mouse and select the Edit menu and the Move To Folder option. Once the file is out of the Startup folder, try to start Word 2003. If it starts, you have removed the culprit. If Word doesn't start, repeat the process until you find the offending template file. Once you have located the problem file, move all the other files back to Startup and delete the Temp Startup folder.

**Error Message:** "The command cannot be performed because a dialog box is open. Click OK and then close any open dialog boxes to continue."

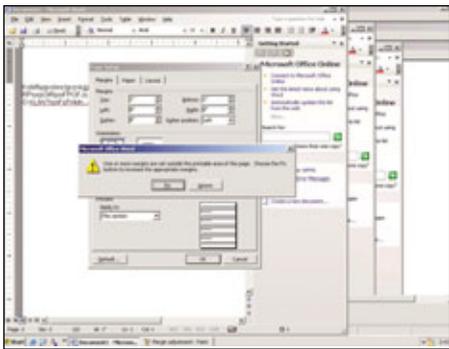
**Translation:** When you are in Windows Explorer and you double-click a Word 2003 document to open it, you may receive this error message if your Word Startup folder has a template containing an autoexec macro that opens a dialog box.

**Solution:** To resolve this error, you can start the document directly from Word, which will avoid any conflict among the dialog box, Windows Explorer, and Word. You can also follow the procedure for the previous solution to locate and delete the template that causes the problem.

**Error Message:** "The margins of section <n> are set outside the printable area of the page. Do you want to continue?"

**Translation:** If part of your document has wider than normal margins, you may get this error message when you try to print your document. Choosing Yes will cause your document to print, although some parts of the document may not appear on the page. If you click No, the document will not be printed. This error occurs because printers are unable to print all the way to the edge of a page, and you have your margins set beyond the printer's range.

**Solution:** You can reset the margins by making a note of the section indicated in the error message and then selecting the Edit menu and clicking Go To. When you see the Go To What box, click Section. Enter the section number in the Section Number field and click Go To and then Close. Now select File and Page Setup. Click the Margins tab and then OK. You'll see a dialog box with this message: "One or more margins are set outside the printable area of the page. Choose the Fix button to have Word set the page margins within the appropriate range." Select the Fix button to increase the margin in the unprintable area to the minimum setting for the selection.



**Word will attempt to adjust your document's margins if you have them set beyond what your printer can handle.**

You can also just choose to print the document as is, but you'll probably find that parts of the document will be cut off.

## Runtime Errors

**Error Message:** "There is not enough memory or disk space to complete the operation." Or "There is insufficient memory or disk space. Close extra windows and save your work." Or "Word cannot complete the save due to a file permission error." Or "This program has performed an illegal operation and will be shut down. If this problem persists, contact the program vendor."

**Translation:** This error will occur when you are trying to save a Word 2003 file and the application stops responding if the page file (the section of hard drive that Windows uses as virtual memory) has gotten too large.

In extreme cases the page file can fill up most of the available space on your hard drive. This can also occur if you are running certain antivirus software versions or if you

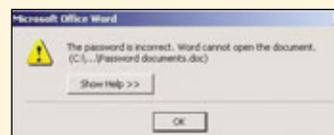
## Most Frustrating Error Message

**A**lmost by definition, all error messages are frustrating. This one's especially irritating, though, because you obviously knew (and may even have written down) the password at one point but have now forgotten (or lost) it.

**Error Message:** "The Password Is Incorrect. Word Cannot Open the Document."

**Translation:** If you have chosen to place password protection on your Word 2003 documents, you will receive one of these error messages if you enter an incorrect password when you try to open the document. You can protect your Word 2003 document with a password by selecting Options from the Tools menu. Select the Security tab, and you can require a password to open the document or to change the document. The password can be any combination of letters, numbers, punctuation marks, or spaces up to 15 characters. Passwords are case sensitive, so make sure your CAPS LOCK key has not been activated.

**Solution:** If you receive this error, retry the password, making sure you have repeated the correct sequence of characters. Remember to enter the password using the same uppercase and lowercase characters you used originally. Unfortunately, if you do not supply the correct password, you cannot reopen the document unless you wish to resort to a third-party password-cracking utility.



**If you used password protection on your document, be sure that you remember the password or you won't be able to access your document.**

are trying to save your document to a floppy diskette or CD that is already full.

**Solution:** Depending on the cause, you can take several approaches to solving this problem. You can add more hard drive space by replacing your drive with a larger one or you can add an additional (internal or external) drive. But try the simple solution first: Close any open files or programs that you don't need and restart your computer to release the page file. If you are running antivirus software, try disabling the program temporarily. If that solves the problem, you should contact the antivirus software's publisher to see if there is an update or a workaround.

You should also consider deleting files or programs that you don't need by running Disk Cleanup. To do so, click Start and select Programs, Accessories, System Tools, and Disk Cleanup. You'll see a dialog box labeled

Select Drive that lets you select the drive you want to clean up (usually C:). Select the drive and click OK. When you see the next Disk Cleanup tab, click to select the files that you want to remove and click OK. This will remove the files from your drive and free up space for your other files.

Finally, another option is to run a file compression utility to free up some space on your hard drive.

Note that, in the case of the "file permission" error cited above, your problem may in fact be that you're attempting to write to a file without permission to do so. This can occur, for example, in a network situation when you have permission to open and look at a file but not to delete it or change its contents. In a case like that, you'll need to contact the network administrator. **RS**

by Bert Nixon

# Excel 2003

## Diagnose & Correct Excel Errors



Application Name	Application Version	Module Name	Module Version	Offset
Excel.exe	11.0.5612.0	Mso.dll	11.0.5606.0	00059890

This signature says that Excel.exe, the Excel executable file, had a problem executing a module of the code called Mso.dll. The Offset further identifies the location of the error within the code. Although this sort of message doesn't make much sense to most of us, you can use this information to search Microsoft's database of reported errors to find out the next steps to take to correct the problem, and a support technician can use it to help pin down the problem.

Here are some fatal errors common to Excel. (Some of these errors may also be common to other applications in the Microsoft Office suite.) (NOTE: In the examples below, the assumption is that you've already seen the initial message and have clicked the Details link to view the detailed error signature.)

**Error Message (Signature):** "AppName: WinExcel.exe. AppVer: 11.0.5207.4. ModName: Mso.dll. ModVer: 11.0.5207.5. Offset: 00842bfc." After closing the error signature, you will see this additional error message: "The exception Illegal Instruction. An attempt was made to execute an illegal instruction. (0xc000001d) occurred in the application at location 0x31482bfc."

**Translation:** You may encounter this message if you're using Adobe Acrobat in conjunction with Excel 2003 to create documents and presentations. It's caused by an incompatibility with a file in Adobe Acrobat 5.0.5 called Pdfmaker.dot. When Excel attempts to access the file, it can't process the instructions correctly, which causes the fatal error.

**Solution:** There are two ways to correct this problem: Either buy and install the upgrade to Adobe Acrobat 6.0 or rename the Pdfmaker.dot file to prevent access to the file by Excel 2003. If you don't want to buy the Adobe upgrade, you can prevent Excel from accessing the incompatible file by renaming it. To rename the file, click Start,

### Fatal Error Messages

When Microsoft Excel 2003 encounters a fatal error, it will display an error message similar to the following: "Microsoft Excel 2003 has encountered a problem and needs to close. We are sorry for the inconvenience. Please tell Microsoft about this problem. We have created an error report that you can send to help us improve Microsoft Excel 2003. We will treat this report as confidential and anonymous. To see what this error report contains, click here."

Any time you see this error-reporting dialog box, you have encountered a fatal error. You may choose to report the error or not; regardless of whether you report it, you can usually get more detail on the error by clicking the Details link. Doing so will display the error signature, a listing of specific details about the error. Although it looks cryptic to most of us, the error signature contains more detailed information about the error, and an experienced user or technician can use this to start diagnosing the problem. The details of the signature will look something like this:

Excel 2003, like all Microsoft Office applications, has its fair share of cryptic error messages. Understanding how the messages are designed and what they mean can help you recover from a problem and get back to using your computer the way you want to.

There are three basic categories of errors in Excel:

- Fatal errors that cause your computer to stop working and require you to restart your system to begin correcting the problem. Usually you'll lose any unsaved data that you were working on when a fatal error strikes. Fatal errors in Excel 2003 are most often caused by an incompatibility with an application external to Excel.
- Nonfatal errors that are caused by interactions with other applications.
- Nonfatal errors that are the result of an internal setting within Excel 2003. The user has the greatest amount of control over preventing these errors and correcting them easily and quickly.

Search, and select Files Or Folders. When the search dialog opens, enter **pdfmaker.dot** in the Search For Files Or Folders Named field and begin the search. Once the search is completed, you will see all instances of the file. Right-click each instance of the file and click Rename. You can just rename the extension from .dot to .old (or another name of your choosing) and press ENTER.

**Error Message (Signature):** "AppName: excel.exe. AppVer: 11.0.5612.0. ModName: gdiplus.dll. ModVer: 6.0.3260.0. Offset: 00082f15."

**Translation:** You may see this error signature if Microsoft Excel 2003 quits unexpectedly when you're using another graphics-intensive application at the same time. If Excel is running graphics routines that compete with other programs for access to the computer's display buffer (the portion of memory that controls the flow of graphics and video images across your computer screen), your application may stop working properly. Especially when using applications with heavy reliance on graphics enhancement routines such as DirectX and DCI (Display Control Interface), your programs may experience resource conflicts that create this fatal error. The more graphics-intensive programs that you use at the same time, the higher the probability that you will cause a resource conflict that will result in this failure. Games are usually the most obvious cause of this problem, but other programs, including Microsoft NetMeeting, can also trigger it.

**Solution:** When a graphics-based error occurs, you can usually correct the problem by not running another graphics-intensive program at the same time that you are using Excel 2003. Another alternative is to turn off the graphics hardware acceleration on your machine. This action will slow down your computer's response to DirectX and other graphics commands, but it will also reduce the likelihood of a fatal crash. To turn the graphics hardware acceleration off in Windows XP, click Start and select Control Panel. From within the Control Panel, select Appearance And Themes, then click Display, and choose the Settings tab. Click Advanced and then select Troubleshoot. Move the Hardware Acceleration slider to the third position from the left, and you will see this message: "Disable all DirectDraw and Direct 3D accelerations, as well as all cursor and

advanced drawing accelerations. Use this setting to correct severe problems with DirectX accelerated applications." Click OK to complete the adjustment and then click OK again on the Display Properties dialog box to close it. This should eliminate the conflict that causes this error.

### Nonfatal Errors Caused By Interactions With Other Applications

These errors are often caused by an incompatibility between Excel 2003 and an earlier version of the application or by incompatibility with another application running at the same time as Excel.

**Error Message:** "Errors were detected in file *name.xls*, but Microsoft Excel was able to open the file by making the repairs listed below. Save the file to make these repairs permanent." This error message may be followed by another error message after you attempt to save the file: "Damage to the file was so extensive that repairs were not possible. Excel attempted to recover your formulas and values, but some data may have been lost or corrupted."

**Translation:** This error sometimes occurs when you try to open a file in Excel 2003 that has been previously saved in an earlier version of Excel. The workbook may be damaged or corrupted, and you will experience this error even though the Excel file opens without any problem in your earlier version of Excel.

**Solution:** If you have the earlier version of Excel available, install it on the computer where you have Excel 2003 installed. Open the original file, copy the file, and paste it into an open Excel 2003 workbook. You should now be able to save the file in Excel 2003.

**Error Message:** "Unable to read file."

**Translation:** This is an error that often occurs when you try to open an Excel 2003 file that contains links to other Excel spreadsheets that have been generated by exporting a Microsoft Access report to Excel 2003.

**Solution:** You can usually get your files to open properly if you first open the subsidiary linked Excel workbooks *before* you open the workbook that contains the links from the Access files.

**Error Messages:** "This workbook contains one or more Microsoft Excel 4.0 macros. These macros may contain viruses or other harmful

code. These macros will be disabled." Or, "This workbook contains one or more Microsoft Excel 4.0 macros. These macros may contain viruses or other harmful code. Open this workbook only if you trust the source. Do you want to enable these macros?"

**Translation:** This error occurs when your workbook contains macros assigned to Microsoft Excel 4.0. Macros are predefined commands that cause a series of specific steps to be executed automatically within a program such as Excel 2003 when a workbook is opened. Because these commands sometimes contain malicious code when you receive them from outside sources, Excel 2003 has several macro-related security settings designed to detect macros in new workbooks and to alert the user to their presence. This gives you the opportunity to decide if you want to trust the macro and proceed, verify the source of the file, or delete the macro before opening the workbook. If your Macro Security Level is set to High, you will see the first error message. If your setting is Medium, you will see the second message. If your security level is set to Low (not recommended), you will not see the message. View your macro security levels by opening the Tools menu at the top of the worksheet and then selecting Macro and Security. You have the option of modifying your settings at this point.

**Solution:** When you get this message and you believe you want to open the workbook, you may choose to remove the macro from the workbook. Remove the macro or macros by selecting the Insert menu, selecting Name, and clicking Define. You should see names associated with the macros. Select the name and click Delete. Repeat these steps for each name in the workbook. When you're finished deleting the macros, click OK, select the File menu and Save As, and save the file under a different name.

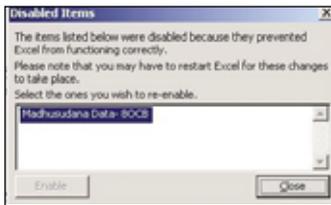
### Nonfatal Errors Resulting From An Internal Setting Within Excel 2003

By far, these are the most common types of errors you will encounter in Excel 2003. Luckily, they're also usually the simplest errors to correct, once you understand the cause of the problem.

**Error Message:** "The document caused a serious error the last time it was opened. Would you like to continue opening it?"

**Translation:** After the second time you try to open a document that causes Excel 2003 to crash for any reason, Excel 2003 will mark the file as a problem and place the file on a list of disabled files. Further attempts to open the file will result in this message.

**Solution:** You need to remove the file from the Disabled Files list, but not until you've found and corrected the cause of the problem. Find your disabled files by clicking Help and then About Microsoft Office Excel. Click the Disabled Items box, and you'll see a list. To



**Locate your disabled files in Excel 2003 by selecting Help and then clicking About Microsoft Office Excel 2003. The Disabled Files tab lets you see and enable disabled files once you have corrected any errors.**

remove a file from the list, select the item and click Enable. If you have previously solved the problem, you should now be able to open the file normally.

**Error Message:** "Microsoft Excel cannot find the data you're searching for. Check your search options, location, and formatting."

**Translation:** If you are using the Data Filter command in Microsoft Excel 2003, you may receive this error message when you use the Find utility to locate text, values, or other data in your filtered list. If your data filtering parameters exclude the data or text that you are looking for so that it is not displayed, the Search utility will not be able to find the data.

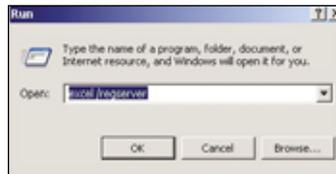
**Solution:** You can solve this problem by setting the filter criteria to Show All on each worksheet in your workbook before you perform the search. You set the filter in the Excel worksheet by clicking Data on the menu bar at the top of the screen and then selecting Filter and Show All. Do this for each worksheet that you want to search.

**Error Message:** "Cannot delete file name. This file is in use by the following program: Microsoft Excel. You must close the file before proceeding."

**Translation:** There are several locations within Windows from which you can delete a file. Among these are the dialog boxes for the Open and Save As functions in Excel 2003, as well as in Windows Explorer. When you try to delete an Excel 2003 file from any of these locations, you will see this error if the file you are trying to delete is already open elsewhere on your computer. When Excel opens a file, the file cannot be deleted and can be opened again only as a read-only file. If you are working in a networked environment where multiple people might have access to files, someone else may have the file open and locked.

**Solution:** Because you can't delete an open, locked file, you need to locate the open version of the file and close it. In a networked environment, it is also common for the network administrator to restrict the right to delete a file. If that is the case, you should contact your network administrator to give you the appropriate level of permission to delete the file.

**Error Message:** "Cannot find the file file name.xls (or one of its components). Make sure the path and file name are correct and that all required libraries are available."



**Reassociate Excel 2003 files, if necessary, by forcing the program to rewrite its Registry keys.**

**Translation:** When you attempt to open Microsoft Excel files from an object embedded in an application other than Excel 2003, you may receive this error message if Excel is not properly configured in the Registry.

**Solution:** You will need to "register" your copy of Excel by forcing it to rewrite its Registry keys. This will also cause Excel to reassociate all of its files and workbooks.

(NOTE: This procedure is not the same thing as registering the application software with the manufacturer.) To register Excel, first quit Excel and any other programs that you are running. Click Start and select

Run. In the Run field, enter `excel /unregserver` and click OK. Repeat the Start and Run steps, but this time type `excel /regserver` and click OK. Start Excel; after it runs, quit the program and restart your computer. (Note the space after "excel" and before the slash.)

**Error Message:** "This operation is attempting to change a filtered range on your worksheet and cannot be completed. To complete this operation, the AutoFilter feature in the worksheet needs to be modified."

**Translation:** You will receive this error message when you try to create a list from a filtered range of cells in Excel 2003 if the last row of your selected range of cells does not appear in the filtered range. For instance, let's say you're working with a spreadsheet range that includes rows 1 through 31 on your spreadsheet, but your currently active filtering includes the data only through row 28. AutoFilter will prevent you from seeing the data in the last three rows of the range, and you will get the error.

**Solution:** You can work around this problem by including the first blank row under the filtered range when you specify the range for your list. This way you'll be sure that all the data is considered in the list.

**Error Message:** "Some of the cells you are trying to change are password protected, but no one password will allow access to all of the cells. Click OK, and then try editing one cell at a time."

**Translation:** If you have password protection on a range of cells in your Excel 2003 worksheet, you'll receive this message if you try to edit more than one protected cell at the same time, for instance, by trying to copy the contents of a range of cells into a protected range of cells.

**Solution:** As long as you have the correct passwords, you can solve this problem by double-clicking any single cell in the range you want to edit. Excel will prompt you for the password. Enter the password and click OK. This will remove the range protection for all the cells in your target



**Opening password-protected cells in an Excel 2003 worksheet may require some extra steps.**

range that are protected by that password. Note that the error message is not really accurate. It implies that you'll need multiple passwords to unlock all of the cells. In fact, one password actually *will* allow access to all the cells in the range if you enter it that one time.

**Error Message:** "Microsoft Excel cannot find a match."

**Translation:** When you are trying to use the Replace functions in Excel 2003, you may see this error message even though the text you are trying to replace *does* exist in the worksheet. The problem may occur when the active cell in your worksheet doesn't have the match and you have also not followed the correct (if somewhat confusing) sequence of steps before you select Replace in the Find And Replace dialog box.

**Solution:** There are three different ways to make this function work properly. First, you can use the Replace All command by choosing the Edit menu and clicking Replace. A dialog box with the Find What field will display on your screen. Type the text you want to replace in the Find What field (for example, **thier**) and the substitution text (for example, **their**) in the Replace With field. Click Replace All, and all instances of the original text will be replaced in your worksheet. You can automatically find all instances of your text and replace them selectively by following the same steps as above except that you'll need to click Find Next after you have landed on an instance of the text that you don't want to change. Clicking Find Next will take you to the next instance, and you can continue through the worksheet until you have seen (and chosen whether to correct) every instance. Click Replace when you want to change the text, and Excel will make your changes and automatically take you to the next instance.

**Error Message:** "Cannot find the file *path* (or one of its components). Make sure the path and filename are correct and that all required libraries are available." Generally this message appears when Excel opens without displaying a workbook.

**Translation:** This problem can be caused when the Ignore Other Applications setting is active in Excel 2003. You may see this error message when you double-click an Excel 2003 workbook to open it from Windows Explorer. Excel may actually open, but the selected file

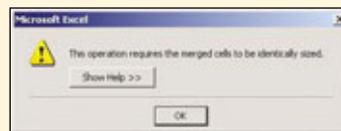
## Most Frustrating Excel Error Message

**A**lthough it may not be obvious, there are times when one cannot merge cells unless the cells are of the same size. At first glance, it may not be apparent why the cells' size should matter, but there are cases when it does, especially when attempting to sort the cells.

**Error Message:** "This operation requires the merged cells to be identically sized."

**Translation:** This error can occur for a number of reasons. Excel users often merge cells when one piece of information pertains to several subheadings, such as in a daily schedule. Excel 2003 requires all the cells in a range to be the same size, and it won't execute a Sort command if the cells are different sizes. If you try to sort a range of cells in an Excel 2003 spreadsheet and some of the cells in the range are merged cells and some aren't or if all of the cells are merged but are of different sizes, you will see this error. The error can also occur when you try to use the Paste Special command in Excel 2003 if you are copying merged cells and pasting them as Values Only within the same worksheet.

**Solution:** If you encounter this error, you need to make sure that each cell in the range you are working with has the same number of rows and columns as the other cells in the range. Either merge the cells that are not merged or split all the cells into their original sizes by first highlighting the range of cells you want to change and then selecting the Format menu at the top of the worksheet. Select Cells and click the Alignment tab. Under the heading Text Control in the dialog box, there is an option to Merge Cells. Click to place a check mark in this box to merge the cells or remove the check mark to split the cells that you have highlighted. As long as the cells are now equally sized, you'll be able to complete the operations on the range you have selected.



**Cells must be the same size in Excel 2003 in order to sort properly.**

does not. If you already have Excel 2003 open, another instance of the program may start up. This occurs because Windows Explorer opens documents in all applications using DDE (dynamic data exchange) messages to send instructions to the source application (Excel, in this case), telling the program to open and then open the file that you selected. If the setting for Ignore Other Applications is active in any of your workbooks, Excel 2003 will ignore the DDE messages from Windows Explorer, and none of your workbooks will open when you attempt to invoke them by double-clicking the file icons. (Note that this does not affect opening files from within Excel itself. Having the Ignore Other Applications setting active does

not preclude opening worksheet files from within Excel.)

**Solution:** To verify that the Ignore Other Applications setting is the cause of the problem and to correct it, select the Tools menu at the top of your worksheet and click Options. Select the General tab on the dialog box that displays on your screen. Find the checkbox next to Ignore Other Applications and click to clear it. Click OK and close the dialog box. You should now be able to open your Excel workbooks by selecting and double-clicking them from within Windows Explorer. **RS**

by Bert Nixon

# PowerPoint 2003

## Work The Bugs Out Of Your Presentations

Office 2003 errors are bad in general, but PowerPoint 2003 errors are particularly painful. Because this is presentation software, errors often occur in front of an audience or while users are putting the finishing touches on that important slideshow that is due immediately. The good news is that many of the most common PowerPoint 2003 error messages are relatively simple to decipher, if not to fix.

Office 2003 only works on Windows 2000 and Windows XP, so all of the instructions provided in this article apply only to those operating systems.

### Opening & Playing Files

**Error Message:** "PowerPoint can't read XX.ppt."

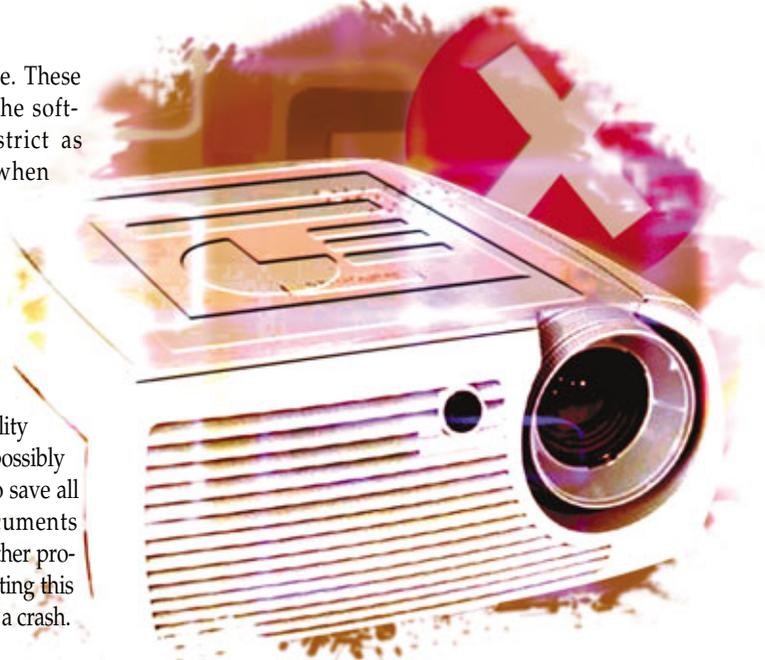
**Translation:** You've tried to open a .PPT file with the path and name listed in XX. The path is the list of folders that leads to the folder where the file is stored. For example, the path C:\POWERPOINT\BUSINESS means the file is stored in the Business folder, which is in the PowerPoint folder, which is on the C: drive. When this error message appears, it means PowerPoint found the listed file but can't open it for viewing or editing.

**Solution:** This error message is one of the worst you can encounter because it means your .PPT file is damaged. In most cases there is no way to open a damaged file, but Microsoft suggests trying to open the file in PowerPoint 2000

or earlier if possible. These older versions of the software are not as strict as PowerPoint 2003 when it comes to reading damaged files, so there's a slight change they will be able to open it. Unfortunately, opening a damaged file can cause instability in PowerPoint and possibly even in Windows, so save all open files and documents and shut down all other programs before attempting this trick and prepare for a crash.

**Error Messages:** "PowerPoint can't read XX." Or "PowerPoint can't open XX because part of file is missing." Or "PowerPoint can't open the type of file represented by XX."

**Translation:** Didn't we just cover this? Not entirely. The three error messages above sometimes appear when users open a PowerPoint file containing OfficeArt shapes created in previous



**Sometimes you have to reconfigure Windows to associate .PPT files with PowerPoint.**

### Most Common Error Message

**Error Message:** "Microsoft PowerPoint has encountered a problem and needs to close. We are sorry for the inconvenience."

**Translation:** PowerPoint 2003 is more stable than previous releases, but this error message indicates that a dreaded program crash has occurred. Hope you saved your work before it was triggered!

**Solution:** Usually there is nothing that you can do about this error message except to try not to reproduce it the next time PowerPoint is launched. If the error appears when you use Adobe Acrobat within PowerPoint, there is a more tangible solution. Reboot the computer if necessary and, in Windows 2000, click Start, expand Search, and click For Files And Folders. In Windows XP click Start, click Search, and click All Files And Folders. Type **pdfmaker.ppa** in the text field and click Search Now (Search in WinXP). If any hits appear in the right pane, right-click them, click Rename, and give them a different name, such as Pdfmaker.bad. Then visit the Adobe Reader download page at [www.adobe.com/products/acrobat/readstep2.html](http://www.adobe.com/products/acrobat/readstep2.html) and use the provided drop-down menus to download and install the latest version of the Adobe Reader software, which should fix this problem within PowerPoint and other Office applications. It's a 15.9MB download, so dial-up modem users should prepare for a relatively long download session.

versions of Microsoft Office. PowerPoint 2003 uses a more complicated version of OfficeArt and messes with the previously created shapes, possibly causing file corruption even though the original document was not corrupted.

**Solution:** Microsoft offers a downloadable Critical Update that fixes this problem. Install it and all other available patches by visiting the Office Update Web site at [office.microsoft.com/OfficeUpdate/default.aspx](http://office.microsoft.com/OfficeUpdate/default.aspx) and clicking Check For Updates. If a Security Warning box appears asking if you want to install and run Office Update Installation Engine click Yes, wait for the program to install, and make sure Office 2003 Critical Update is selected in the list that appears. Click Start Installation to apply the patch.



**Install the Office Update Installation Engine if prompted to keep PowerPoint as up-to-date as possible.**

**Error Message:** “The file you are attempting to play has an extension that does not match the file format. Playing the file may result in unexpected behavior.”

**Translation:** Extensions are the three-character (sometimes four-character) abbreviations appended to files so that Windows can differentiate among file types. They are always preceded by a period. For example, the extension .TXT means the associate file is a text document, and .PPT denotes a PowerPoint file. When this message appears, PowerPoint is saying that the extension for an embedded movie is invalid.

**Solution:** This error usually appears when a movie file with the extension .MOV, denoting an Apple QuickTime movie, is embedded in the PowerPoint 2003 presentation. The only way around this error is to convert the .MOV file to a video format that PowerPoint 2003 can handle, such as .AVI (Audio Video Interleave), .MPG (Moving Picture Experts Group), or .WMV (Windows Media Video). Windows doesn't come with tools to do this, but several third-party solutions are available. If you created the video yourself, see if your editing package has the capability to save the file in a compatible

## Most Confusing Error Message

**Error Message:** “There is insufficient memory. Save the document now.”

**Translation:** This message perplexes novices because it seems to contradict itself—if the computer is out of memory, how can you save the document? In reality this highlights the difference between the computer's physical RAM, which is used to run programs and store files that you open for editing, and the computer's storage devices (such as hard drives, where it permanently stores data that you save).

**Solution:** Do as the message says and save the open file immediately so it is stored on your computer's hard drive or another storage device. To continue working, try shutting down as many programs as possible that are running in the background, as they consume RAM that could be allocated to the file you are working on. If that is impossible, and the file you're editing is simply too large to fit within your computer's RAM, consider adding more memory by adding extra RAM chips or replacing existing modules with higher-capacity ones. Contact your PC's manufacturer or read the documentation that came with the system to determine what type of memory it requires, as numerous varieties are available. □

format. If the video was obtained elsewhere, consider purchasing Apple's QuickTime Pro (\$29.99; [www.apple.com/quicktime](http://www.apple.com/quicktime)), which is the software most commonly used to create .MOV files. Use the software to load the file, expand the File menu, click Export, and select the format you want to convert to using the pop-up window that appears. Be sure to read the documentation that comes with the software, as several advanced options are available during the conversion that impact video quality.

**Error Messages:** “The file XX is not available.” Or “The file XX is unavailable.” Or “User does not have access privileges.”

**Translation:** Sometimes these messages appear because files get moved, are damaged, or are inaccessible because system administrators have not given you the right to access them. If none of these possibilities apply to your situation and these error messages appear, there likely is a problem with the antivirus software installed on your computer.

**Solution:** Visit your antivirus software manufacturer's Web site to obtain the latest patches and virus definitions, or use any auto-updating features included in your antivirus software to do the same thing. These errors sometimes crop up if you install antivirus software from a CD-ROM after installing Office 2003; the antivirus software restricts access to certain files because it flags them as potential threats. Updating the software to the latest version should solve this problem.

**Error Message:** “Windows Media Player cannot find the specified file. Be sure the path is typed correctly. If it is, the file does not exist in the specified location, or the computer where the file is stored is offline.”

**Translation:** One of the multimedia files referenced but not embedded in the PowerPoint presentation cannot be found. For example, if the presentation contains a link to a file stored on another computer on a network, and that computer is turned off, PowerPoint can't access the file for playback.

**Solution:** Most multimedia problems are avoidable in the first place by embedding files in the presentation (placing copies of the source file directly in the presentation) instead of linking to files that are stored externally. Embedded multimedia files can dramatically increase the storage space a PowerPoint presentation requires because they are bundled as part of the presentation file, but this usually is an acceptable trade-off for the peace of mind of knowing that this error message won't appear during a presentation.

If embedding such files isn't a viable option, double-check to see if the file linked to the presentation is where you said it would be, because if it was moved after you saved the presentation the link will not update automatically to reflect the change in location. Also, if the multimedia file is stored on a computer located elsewhere on a network, check to see if the network connection is working properly and that the computer or file server where the file is stored is turned

on. At the very least, try to save all files associated with a presentation on the computer that will run the presentation so they can be accessed locally, and update references to those files within the presentation accordingly.

**Error Message:** “Cannot delete XX. This file is in use by the following program: YY. You must close the file before proceeding.”

**Translation:** File XX is open in program YY, so it is impossible to delete. This message can vary but always begins with “Cannot delete XX.”

**Solution:** If the file you want to delete is open in another program on your computer, switch to that program, close the file, and then delete the file. This error also appears if file sharing is in use and someone else on your network has the file open on his computer. Ask him to close the file and it becomes eligible for deletion.

Finally, this message also appears when users attempt to delete files stored on another computer on a network that they don't have permission to delete. Permissions are set by network administrators, and if you are not assigned delete privileges in the folder where the file in question is stored, you will not be able to get rid of it. Contact your network administrator or the person who uses the computer where the file is stored to see if they can delete the file or grant you delete privileges within that particular folder.

**Error Message:** “XX.ppt is currently in use. PowerPoint can't modify it at this time.”

**Translation:** Someone, somewhere (most likely you) has the file you want to edit open in another program or in another instance of PowerPoint.

**Solution:** Shut down all of your open programs to make sure none of them has the presentation opened and try shutting down and then restarting PowerPoint to see if the file loads properly and can be edited and saved. If this error message still appears, someone else on your network has the file open on their computer, so ask them to close it or expand the File menu, click Save As, save the presentation under a different name, and perform the edits and saves on the new copy.

**Error Message:** “Windows cannot open this file.”

**Translation:** Windows keeps a list of registered file types so it knows what program to use when a user tries to open a file with a particular extension. For example, when Word is installed, DOC files are registered to it so that when users open a file with the .DOC extension, Word automatically launches and displays the file. All PPT files should be registered to launch PowerPoint when opened, but sometimes other programs take the registration for themselves or the PPT registration is otherwise disassociated with PowerPoint. The end result is that Windows no longer knows

which program is associated with PPT files and lets the user know via an error message.

**Solution:** Microsoft provides three solutions for solving this problem. First, try to manually restore the association between PowerPoint and the .PPT extension by clicking Start, clicking My Computer, expanding the Tools menu, and clicking Folder Options. Select the File Types tab in the Folder Options dialog box, scroll down the Registered File Types list until you find PPT (Microsoft PowerPoint Presentation), click that entry, and click the Change button. When the Open With box appears, scroll through the Programs list until you see Microsoft Office PowerPoint, click that entry, and click OK. If the entry is not listed, click Browse, navigate to C:\PROGRAM FILES\MICROSOFTOFFICE\OFFICE 10, click Powerpnt.exe, and click Open. Click OK, click Close, and PPT files will once again fire up PowerPoint automatically when you open them.

If that doesn't work, try repairing your PowerPoint installation. Open PowerPoint, expand the Help menu, click Detect And Repair, and click Start. Follow the prompts to repair the installation, and keep your installation CD-ROM handy because Windows may ask for it. If this doesn't work you must open the file directly by launching PowerPoint, expanding the File menu, and clicking Open. Navigate to the troublesome file and click Open.

### Saving Files

**Error Message:** “XX is read-only. Do you want to save changes to a different file name?”

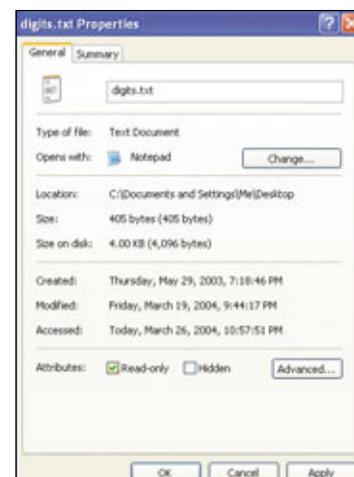
**Translation:** Remember putting tape over the holes in the top of your cassettes so nobody

## Most Hilarious Error Message

**Error Message:** “The source application is busy and can't respond immediately.”

**Translation:** What's next, “we'll get back to you within two business days”? This message sometimes appears when PowerPoint attempts to open an embedded object that is already open in another program, but that other program has generated a dialog box or error message box that must be closed. Adding insult to injury, clicking Cancel in the PowerPoint error message box just causes the same error to appear again and again because the software continually tries to open the inaccessible embedded object.

**Solution:** The open dialog box or error message in the other application must be closed before PowerPoint can open the embedded object. Click the program's entry on the Taskbar to bring it to the forefront, and click OK or Cancel to close the dialog box or error message associated with that program. If the Taskbar trick doesn't work, hold down the ALT key and tap the TAB key to cycle through open programs until you reach the one with the dialog box or error message, and proceed from there. Now, switch back to PowerPoint and it should have no trouble opening the embedded object. □



**You can't modify read-only documents unless you first revoke their read-only status via the Properties dialog box.**

could accidentally record over them? The XX read-only files referenced in this error message are locked down in the same way; you can open and view them, but you can't edit them, and neither can anyone else.

**Solution:** To see if a file is read-only, right-click its icon, click Properties, select the General tab, and look for a Read-Only checkbox in the Attributes section. Remove the check mark to make the file editable, or place a mark in the box to make the file read-only. If that doesn't work, save the file using a different name as the error message suggests, and work with the copy.

## Printing Files

**Error Message:** "Windows cannot print due to a problem with the current printer setup."

**Translation:** This error message appears along with a list of potential solutions that usually work, unless you are trying to print a very large (in terms of file size) PowerPoint file. When that is the case, there usually is nothing wrong with the printer, despite what the error message says.



**Compressing pictures is a great way to dramatically reduce the file size of a PowerPoint Presentation.**

**Solution:** Sometimes pictures and graphics embedded within a PowerPoint file are too large and must be reduced in size before the printer can handle the file. Microsoft recommends opening the file in PowerPoint 2003 and compressing pictures to reduce their file sizes. Find the Picture toolbar and click Compress Pictures. If the toolbar isn't visible, expand the View menu, expand Toolbars, and click the Picture entry.

When the Compress Pictures dialog box appears, make sure the All Pictures In Document radio button is selected, select the Print radio button in the Change Resolution section, and select the checkboxes next to Compress Pictures and Delete Cropped Areas Of Pictures. Click OK, click Apply, let the utility do its work, and try printing the file again.

## Most Unusual Error Message

**Error Message:** "Microsoft PowerPoint 'hlink.dll' can't be loaded." Or "Microsoft PowerPoint failed to load 'hlink.dll'."

**Translation:** What's a DLL, anyway? It's short for dynamic-link library, and PowerPoint relies on certain DLLs for proper operation, including Hlink.dll. This file is installed along with Internet Explorer and controls the way PowerPoint handles Internet hyperlinks.

**Solution:** The only way to solve this problem is to repair or reinstall IE. Close all open programs, click Start, expand Find, and click Files or Folders. In Windows XP click Start, click Search, and click All Files Or Folders. Type **hlink.dll** in the search box and click Search (Find Now in Windows 2000). Wait for the search to complete and if Hlink.dll appears, right-click it, click Rename, and change the name to something different, such as Hlink.bad.

Now comes the tricky part of reinstalling or repairing IE, which will add a fresh copy of Hlink.dll to your computer's hard drive. This process varies depending on the version of IE installed on your computer, so if you use any version between 4.0 and 5.5, visit [support.microsoft.com](http://support.microsoft.com) and search for Knowledge Base Article 258893, entitled "Information About How To Reinstall Internet Explorer." If you use IE6.x on any OS other than WinXP, visit the same site and look for Knowledge Base Article 293907, "How To Uninstall Internet Explorer 6." If you use IE6.x with WinXP, search for Knowledge Base Article 318378, "How To Reinstall Or Repair Internet Explorer And Outlook Express In Windows XP." The WinXP fix involves editing Windows' Registry, so pay close attention to the provided steps and back up all of your important files before proceeding.

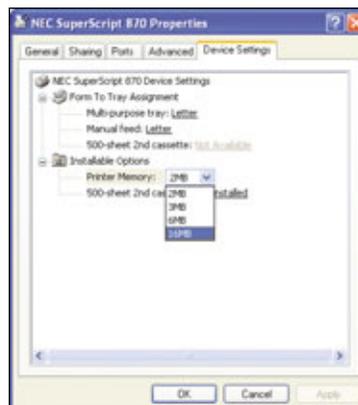
**Error Message:** "Not enough printer memory available to print page."

**Translation:** The size of the PowerPoint presentation you are trying to print has outstripped the memory capacity of the printer, stalling the print job indefinitely.

**Solution:** If the printer you're using doesn't have enough physical RAM to handle the print

job, the only way to solve this problem is to add to the printer's memory by adding more memory or replacing the existing chip(s) with larger ones. Look at the documentation that came with the printer or contact the manufacturer to see if this is possible and to find out how much it costs, as printer memory is generally more expensive than PC memory.

Sometimes this error occurs because of an improper printer memory setting within Windows, in which case it is easy to fix. In Win2000 click Start, expand Settings, and click Printers. In WinXP click Start, click Control Panel, click Switch To Classic View on the left if it isn't already selected, and click Printers And Faxes. Right-click the icon that corresponds to the printer generating the error message, click Properties, and select the Device Settings tab. Look in the Printer Memory section to see if the number corresponds to the amount of memory installed in the computer. If it doesn't match up, select the proper setting and click OK. **[RS]**



**It doesn't matter how much memory is installed in your printer if Windows isn't configured to properly recognize it.**

by Tracy Baker

# Outlook 2003

## Failure To Communicate? We Can Help

Email has become such a crucial communication tool that problems with email software can seriously affect your business and personal relationships. Outlook 2003 is far more stable than previous versions of the software, but it still has its share of problems. Oddly enough, some of these flaws are by-products of special features included with the software, but that's the nature of the beast in these security-minded days.

**Error Message:** "Outlook blocked access to the following potentially unsafe attachments: XX"

**Translation:** Attachments are files (pictures, songs, or text documents) appended to email messages. Any file has the potential to become an attachment, including viruses and other malicious files, and Outlook 2003 is designed to block access to files that have extensions commonly used by these unwanted programs and are considered Level 1 threats. File extensions that have Level 1 threat status include .ADE, .ADP, .APP, .ASX, .BAS, .BAT, .CHM, .CMD, .COM, .CPL, .CER, .CRT, .EXE, .FXP, .HLP, .HTA, .INF, .INS, .ISP, .JS, .JSE, .LNK, .MDA, .MDB, .MDE, .MDT, .MDW, .MDZ, .MSC, .MSI, .MSP, .MST, .OPS, .PCD, .PIF, .PRF, .PRG, .PST, .REG, .SCF, .SCR, .SCT, .SHB, .SHS, .URL, .VB, .VBE, .VBS, .WSC, .WSF, and .WSH. Files with these extensions have the capability to automatically execute scripts that issue a series of commands to a PC without any further input from its user.

**Solution:** Before doing anything else, sic your antivirus software on the blocked file to make sure it checks out. If that isn't possible and the attachment looks suspicious, email the person who sent the file to make sure they meant to send it. If they don't respond, assume

the worst and don't open the file, or run a search on the file name using Google ([www.google.com](http://www.google.com)). Viruses and other malicious programs generally are sent using the same file name or email subject line, and a Google search for those elements can let you know if they are associated with a virus or have affected other computers.

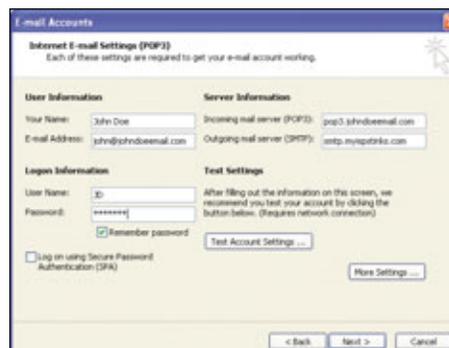
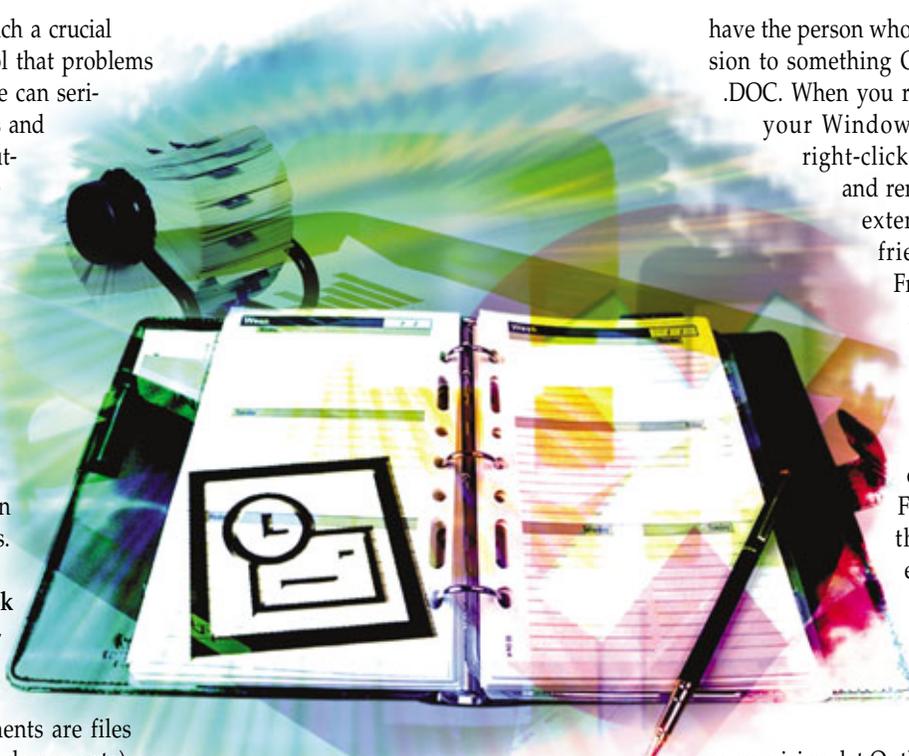
If you are certain the attachment is legitimate and Outlook still blocks access to it,

have the person who sent it change the extension to something Outlook accepts, such as .DOC. When you receive the file, save it to your Windows Desktop or a folder, right-click its icon, click Rename, and rename it using its original extension. For example, if a friend sends a file named Friend.exe that is blocked, have him change the file's name to Friend.doc and resend it. When the file shows up, use the Rename command to change its name back to Friend.exe and execute the file. We can't stress enough that you should only use such methods if you are absolutely certain the file is not a threat. If you have even a speck of doubt or suspicion, let Outlook do its job and forget about opening the file.

**Error Message:** "Microsoft Outlook has encountered a problem and needs to close. We are sorry for the inconvenience."

**Translation:** Something, somewhere, has caused Outlook 2003 to crash. Open email messages that you haven't saved or sent will be lost, but in the vast majority of cases your .PST file (the big database that stores all of your sent and received emails) remains intact.

**Solution:** Think about what led up to the crash and try to avoid doing the same thing when Outlook 2003 loads. Did you open a particular email file? Launch a different program? Access a particular menu setting? Work around the problem for a bit to see if the program remains stable, save any open work (including files that are open in other programs), and then try to reproduce the problem. If Outlook consistently crashes when you open another program but not at other times, it is likely that the other program is stealing system resources such as memory



**It is possible to use your ISP's outgoing email server and use an outgoing email address that has nothing to do with that server.**

## Most Common Error Message

**Error Message:** “ ‘Sending and Receiving’ reported error (0x8004210B): The operation timed out waiting for a response from the sending (SMTP) server. If you continue to receive this message, contact your server administrator or Internet service provider (ISP).”

**Translation:** The outgoing email server is experiencing problems, or Outlook 2003 is trying to contact the wrong server and is being blocked.

**Solution:** “Time out” errors usually are the fault of the email server, so there is nothing most users can do about it aside from calling their network administrator or ISP to make sure they are resolving the problem. Many times it is best to wait anywhere from several minutes to a few hours and try to send email again. Most email server problems are resolved quickly because they are usually software-related. Hardware-related problems that require hard drive swapping, cable replacement, or similar tasks take more time to resolve.

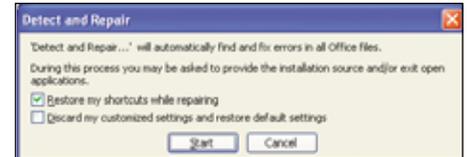
There is one other possibility regarding error messages related to sending email. If you have a hosted Web site or Web mail service and use its outgoing mail servers instead of the outgoing mail servers provided by your ISP, the ISP might purposely block the outgoing email. This has happened to us in the past, and the only way to resolve it was to configure Outlook 2003 to use our Web site’s server for incoming mail but route all outgoing mail through the ISP’s SMTP (Simple Mail Transfer Protocol) server. Fortunately there is a way to do this without having to change the From line in your email messages. Expand the Tools menu, click Options, select the Mail Setup tab, and click E-mail Accounts. Select the View Or Change Existing E-Mail Accounts button, click Next, click the name of the account that is generating the error message, and click Change. When the E-mail Accounts dialog box appears, leave the information in the Incoming Mail Server field intact, but change the information in the Outgoing Mail Server field to match your ISP’s SMTP server (look at its Web site or call technical support to find out exactly what to enter here). In the E-Mail Address field, type the name that you want to have appear in the From line of your messages, click Next, and click Finish. Now Outlook will send email from your ISP’s server, but they will appear to come from your Web site’s server because of the From line. Unfortunately, outgoing messages will be subject to the restrictions imposed by the ISP, which generally caps maximum outgoing email sizes at 2MB to 3MB. □

that are already allocated to Outlook, or is tying into Outlook somehow. Try reinstalling the application or updating it to its most recent version using a patch downloaded from the manufacturer’s Web site. If a particular message causes the crash, try forwarding the message to a Web email account and opening it there, or delete it entirely to see if the problem goes away.

In some cases, especially when accessing Outlook’s menus causes problems, there is a problem with Outlook itself and the program must be repaired or reinstalled. If you can get the software to load at all, make a backup

copy of your email folders by expanding the File menu, clicking Import And Export, clicking Export To A File, and clicking Next. Select Personal Folder File (.PST), click Next, and select the folders and subfolders you want to include in the backup set. To include them all, click Personal Folders, select the Include Subfolders checkbox, and click Next. Choose a name and location for the backup file, select the radio button that corresponds to the type of backup you’re creating (if an older copy already exists, you can save time by choosing Do Not Export Duplicate Items), and click Finish.

With the backup safely tucked away, it’s time to use Outlook 2003’s built-in repair tools to try to fix the problem. Open the program, expand the Help Menu, click Detect And Repair, select whichever checkboxes you feel are appropriate (we recommend selecting the Restore My Shortcuts While Repairing checkbox but leaving the other checkbox unchecked), and click Start. Keep your installation CD close by, as Windows may ask for it during the repair operation.



**Detect And Repair can fix minor problems with Outlook, but it only works if you can get the program to load in the first place.**

**Error Message:** “The file XX.pst could not be found.”

**Translation:** Here, “XX.pst” refers to the database that holds all received and sent email messages. If Outlook can’t find the file, it can’t open the file, so your Inbox, Sent Items, and other folders will be empty.

**Solution:** This error message often occurs when the .PST file you use is stored elsewhere on the network and the machine where it resides is turned off or otherwise disconnected from the network. Contact your system administrator to see if they can remedy this problem or if it is possible to move the .PST file to your computer so you can access it locally.

If the .PST file is stored locally and this error message appears, the file likely is corrupted. This is a dire situation because all of



**If Outlook 2003 loses your user profile, use Windows to create a new one so you can send and receive email messages.**

your email messages, contacts, and other Outlook data is stored in this big .PST file, but Outlook 2003 comes with an Inbox Repair Tool that works fairly well in such situations. In Windows 2000 click Start, expand Search, and click For Files Or Folders. In Windows XP click Start, expand Search, and Click All Files Or Folders. Type **scanpst.exe** in the search box and click Search in Win2000 or Search Now in WinXP. Wait for the file to appear in the search results box and double-click its name to launch the program.

Now you must type the name of the .PST file that needs to be repaired, or click the Browse button to navigate to the file manually. Once it is selected, click Start and the repair tool will scour the file for errors—and with any luck will fix them, as well, so Outlook can access the cleaned up .PST file.

**Error Message:** “System resources are critically low. Close some windows.”

**Translation:** System resources, such as RAM and CPU clock cycles, that are needed to run programs are available in limited amounts, and once they are all used up error messages like this are likely to appear.

**Solution:** Do what the message says and close some open programs or windows. This message is likely to appear on computers that don't have a lot of RAM installed but where a user has several email messages open at the same time for viewing or editing. Try closing some to free up resources.

Microsoft also reports that this message sometimes appears when users configure Outlook with publicly accessible folders and then add groups of users to the permissions lists for those folders. To get around this problem, try adding the permissions individually. Launch Outlook 2003, right-click the folder where you added the group permissions, and click Properties. Select the Permissions tab in the resulting dialog box, click Add, click a user's name to select it, and click Add. Keep selecting users and clicking Add to add them to the permissions list and the error message should no longer appear.

**Error Message:** “Outlook failed to start correctly last time. Starting Outlook in safe mode will help you correct or isolate a start-up problem in order to successfully start the program. Some functionality may be disabled in this mode. Do you want to start Outlook in safe mode?”

### Most Hilarious Error Message

**Error Message:** “Some items could not be deleted. They were either moved or already deleted, or access was denied.”

**Translation:** This message isn't funny because of what it says; it's funny because of one of the conditions that trigger it—a user trying to delete 5,000 or more messages at the same time.

**Solution:** Sometimes this error message means exactly what it says, and users must get permission from a network administrator or manually locate moved files they want to delete. If it appears because you tried to delete an absurd number of email messages, delete them in smaller chunks, and try to keep your inbox tidier in the future to avoid such problems. □

### Most Cryptic Error Message

**Error Message:** “The operation failed. An object could not be found.”

**Translation:** What operation? What object? This message sometimes appears when you click the Send And Receive button, and it means Outlook 2003 can't find the profile associated with your email account. Profiles contain personalized settings and other configuration information.

**Solution:** The only way around this problem is to create a new profile. In Windows 2000 click Start, expand Settings, click Control Panel, and double-click Mail. In Windows XP click Start, click Control Panel, click Switch To Classic View if it isn't in that mode already, and double-click Mail. Click Show Profiles, click Add, give the profile a name (we recommend “Outlook”), and click OK. Click Add A New E-Mail Account, click Next, choose the type of email server your ISP, hosted site, or other email provider uses, and click Next. Fill in the blanks with the information supplied by your ISP or other email provider (don't forget to click More Settings to adjust those extra options), and click Finish. Start Outlook and it should load the new profile and run properly. □

**Translation:** This is a rare example of an error message that requires a yes or no answer. When Outlook 2003 crashes or fails to load, the program generates this error message when you restart it. Safe Mode is a special operating mode that disables several of Outlook's features but at least lets the program load so you can see existing emails and access other elements of the software. If this feature sounds familiar, it should; Outlook's Safe Mode is similar conceptually to Windows' own Safe Mode.

**Solution:** We see this error message often, and in the overwhelming majority of cases it is safe to answer “no” and load Outlook 2003 in its fully functional configuration. We've never lost email messages or other data by choosing

this option, but if you don't want to risk it, load into Safe Mode and troubleshoot from there.

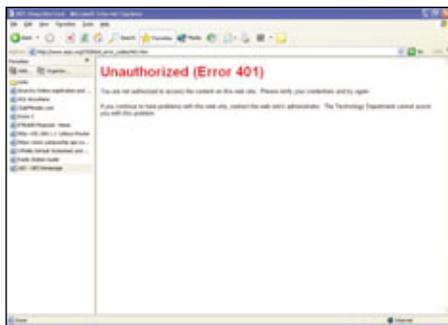
To see what features are disabled when Outlook runs in Safe Mode, expand the Help menu, click About Microsoft Office Outlook, and click the Disabled Items button. Now you can click individual items and click the Enable button to turn them on individually and see if they cause any problems. If they do, you may have to open the Help menu and click Detect And Repair to fix your copy of Outlook 2003. As stated in a previous tip, keep the Office installation CD nearby, as Windows sometimes needs it to perform the repairs. 

by Tracy Baker

# General Online Errors

## We Demystify The Internet's Cryptic Errors

**G**oing online is supposed to be an easy and trouble-free experience—just connect to an ISP and enjoy seamless Web surfing anywhere in the world. That's fine when everything works properly. Web sites can provide endless hours of interactive entertainment and education. Unfortunately, the Internet is a global hodgepodge of end users, Internet service providers, data carriers, and network servers. User errors, service interruptions, unreachable Web servers, and other foibles all contribute to occasional problems that prevent the smooth access that we've come to expect from the Internet.



**You likely need user ID and password credentials to access this Web site.**

Although an average Internet user can't prevent most problems, servers and Web browsers do report trouble through the use of error messages. The kicker is that most error messages are notoriously cryptic, using numbers and phrases that rarely explain the underlying trouble—and usually never outline corrective actions. But help is finally available. We've collected a bounty of common error messages and arranged them for you in numerical and alphabetical order. We'll translate what these errors mean and show you just what you can do about them.

### Troubleshooting By The Numbers

#### **Error Message: "401 – Unauthorized"**

**Translation:** Also termed "401 – Authorization Required" (but some Web sites may customize this message such as "Access

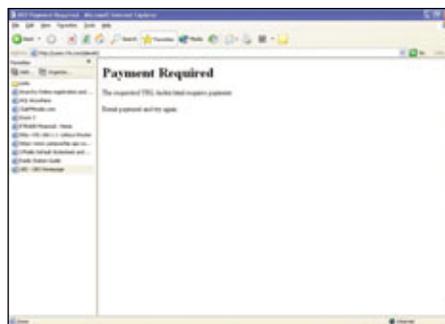
Denied" or "Unavailable"). Many Web sites restrict access using password protection. Chances are that you've attempted to view a restricted Web page (perhaps due to an incorrect URL), or the password that you used was wrong or typed incorrectly.

**Solution:** Recheck the URL and make sure that you're trying to reach the correct Web page (see the solution for the "Most Common Error Message" sidebar). If the URL is correct and you need a password to get in, recheck the password as you type it, and take note of upper and lowercase characters. For example, a password such as "LeMM^ng" can easily be typed as "lemming" if you forget to use the SHIFT key. If your password is correct, but you still cannot access the Web page, contact the site Webmaster to check the status of your account. The account may have been suspended or closed, or the password may have been reset. In either case, the Webmaster can help restore access.

#### **Error Message: "402 – Payment Required"**

**Translation:** The desired Web page is probably available, but authentication (usually in the form of a password and/or username) is needed to access the site. However, logon credentials may require payment to the site operator before access is set up for you. For example, many Web sites require a monthly subscription for access.

**Solution:** A valid subscription or access payment will typically correct this problem by establishing your account (often including a valid password and/or username). Afterwards, you should be able to access the desired site. If you have an existing account but you still

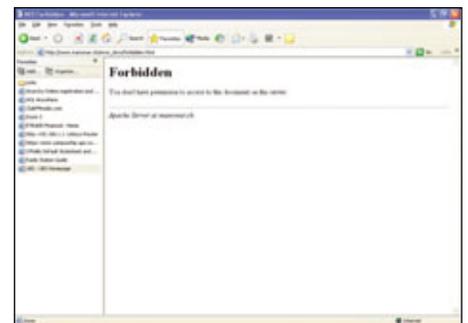


**It'll cost you to access this site, so be sure to contact the Web site operator.**

cannot access the site, contact the Webmaster to check the status of your account—the account may have been suspended or closed for issues such as nonpayment (a credit card number has been rejected). The Webmaster can usually update payment information and reestablish your access.

#### **Error Message: "403 – Forbidden"**

**Translation:** The Web server understands the URL but refuses to provide access. This is common when a Web page is intended for



**You simply don't have the authorization to view this Web page or media.**

personal or "in-house" use (and may be restricted with a password). In other cases, the Webmaster may have configured the desired page improperly. For example, the file may need to be assigned "read permission" for all users. Finally, the Web server may be congested or down for maintenance, prohibiting access to its contents.

**Solution:** Start with the basics and recheck the correct URL (see the solution for "The Most Common Error Message"). If the URL is correct and you need a password to get in, recheck the password as you type it, and take note of upper and lowercase characters. Because congestion can tie up a Web site, try reloading or refreshing the page with the browser's Refresh button (or try again later). If the problem persists, alert the Webmaster for assistance.

#### **Error Message: "404 – Not Found"**

**Translation:** Also termed "The Requested URL Was Not Found" or "File Not Found."

## Online Communications

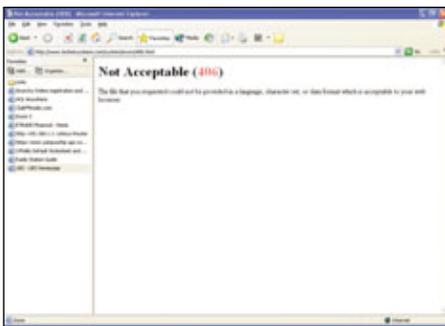
There is indeed a Web site located at that address, but the particular HTML page requested in the URL does not exist. The URL may have been entered improperly (a basic typo), or the page no longer exists.

**Solution:** Recheck the URL and make sure that you're trying to reach the correct Web page (see the solution for the "The Most Common Error Message"). In many cases, the page's content may still be available on the Web site, but the page itself may have been renamed, moved, or added to another page. Try poking around on the Web site to see if you can find the content on another page. For example, the home page may offer a link to a new or updated page that will help you.

### Error Message: "406 – Not Acceptable"

**Translation:** Web browsers can tell the Web server what kinds of data that the browser will accept. This error occurs because the requested Web page could not be returned in a language, character set, or data format that your Web browser can use.

**Solution:** Most current Web browsers accept a wide variety of data, so 406 errors are very rare today. However, they still occur, most often when trying to present a Web page with a foreign character set. For example, a U.S. client may see this error when attempting to visit a Web site that uses Chinese or Korean character sets. You may be able to update languages or character sets that will allow your



**Your browser cannot display the contents of a Web page, so try another language version of the site (if possible).**

browser to access the site properly. The easiest solution is simply to access a different language or version of the Web site that offers better compatibility with your browser. Check the home page or contact the Webmaster for links to alternate Web sites.

### Error Message: "408 – Request Timeout"

**Translation:** The Web server has dropped your connection. This occurs when there has been too much time between the creation of an IP (Internet Protocol) connection (a

### Error Message: "409 – Conflict"

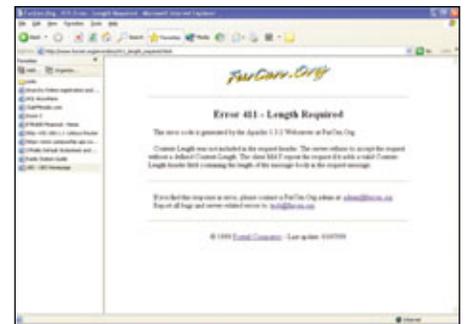
**Translation:** The request submitted by your browser cannot be completed because it conflicts with a rule established by the Web server. This is not really a security issue, but rather an application-specific conflict (such as when using Microsoft FrontPage). For example, if you attempt to upload a file to a Web server, but that file is older than the current file, the version conflict will likely cause a 409 error.

**Solution:** You normally don't see this error unless you're creating Web pages. If so, check the page versions that you're uploading against current versions. Also recheck the configuration of your Web server (or contact your Web hosting company for technical support). Otherwise, you should contact the Webmasters of offending sites to make them aware of the trouble.

### Error Message: "410 – Gone"

**Translation:** When a Web page moves, an older URL is often redirected to a new URL. A 410 error indicates that the desired URL is no longer available—this basically means the page has moved and there is no forwarding information. This is common for URLs that are intentionally time-limited or orphaned.

**Solution:** This error is similar to 404 – Not Found, but a 410 error suggests that the page may still exist in another location. However, the URL is effectively useless without forwarding information.



**The server is expecting a request with a specific length, so you may not be able to access this Web site.**

## Most Hilarious Error Message

**Error Message:** "No Response"

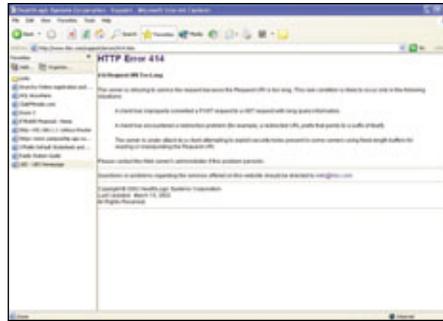
**Translation:** Also termed "No Response... Using A Previously Cached Copy" or "Site Unavailable." Here is one of the more amusing error messages—how can there be no response when you get a response telling you that there's been no response? In reality, this simply means that the desired Web server is not responding to your request, probably because it is congested with excessive traffic, or the server is not available due to failure or maintenance. If you've visited the Web site previously, a cached copy of the page may appear in your browser.

**Solution:** Recheck the URL and make sure that you're trying to reach the correct Web page (see the solution for "400 – Bad Request"). Try reloading or refreshing the page with the browser's Refresh button. The server itself may be partially offline for maintenance, in which case the best solution is to try the site again later. If the situation persists, notify the site's Webmaster about the problem. □

"socket" between the browser and Web server) and the receipt of data on that connection. The connection has been lost, and your browser must repeat the request.

**Solution:** Excess traffic loads on the client system or Web server may be timing out the connection and causing 408 errors. Try establishing a new connection by reloading or refreshing the page with the browser's Refresh button (or try again later). If the trouble occurs with only a certain Web site, the problem is likely at the Web-server end—there is little you can do except try again later. If the trouble occurs with any Web site, you may have problems with TCP/IP (Transmission Control Protocol/Internet Protocol) on your client system, or there are access problems with your local ISP.

Recheck the URL and make sure that you're trying to reach the correct Web page (see the solution for "The Most Common Error Message" sidebar). The page itself may have been renamed, moved, or added to another page. Go to the home page for that Web site and see if you can find the content on another page. For example, the home page may offer a link to a new or updated page that will help you.



**Error Message: "411 – Length Required"**

**Translation:** The Web server is looking for specific HTTP "content length" information in your browser's request. No specific length information was provided by the browser, so the Web server returned a 411 error.

**Solution:** Data length information may be needed when uploading data to the Web server but is generally never needed when retrieving information from a Web server. This error is typically due to configuration or programming errors on the Web server end. You

**There is a serious problem with the URL that you tried, so check the URL or contact the Webmaster.**

should contact the Webmasters of the offending sites to make them aware of the trouble.

**Error Message: "412 – Precondition Failed"**

**Translation:** The Web server is looking for a "precondition" specification in your browser's HTTP data. The Web server determined that the required precondition was not met and returned a 412 error.

**Solution:** This error is typically due to configuration or programming errors on the Web server end. You should contact Webmasters of the offending sites to make them aware of the trouble.

**Error Message: "413 – Request Entity Too Large"**

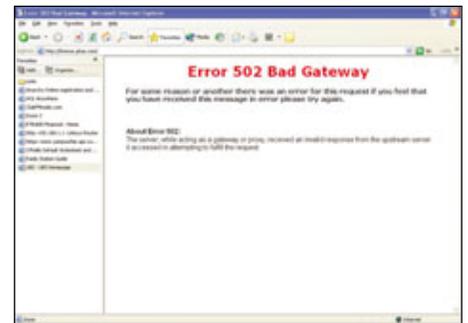
**Translation:** The Web server has determined that the data being sent by the browser is simply too large (that is, too many bytes). This occurs when file size limits are exceeded. For example, when uploading a very large file (using a technique such as HTTP PUT), a 413 error may be returned when the Web server sees that the file size is too large.

**Solution:** This error is typically due to configuration or programming errors on the Web server end. It may be possible to shrink the request entity

(such as uploading a smaller file). Otherwise, the Web server will need to be reconfigured to accommodate the larger entity. You should inform Webmasters of the offending sites about the trouble.

**Error Message: "414 – Request URI Too Long"**

**Translation:** A URI (Universal Resource Identifier) is a generic term for all types of names and addresses that identify Web objects. A URL is just one type of URI. This error occurs when the Web server determines that the URL is larger (that is, too many bytes) than the server can interpret. In some cases, this error may suggest that a server is



**A server has received an invalid response from an upstream server, so try your request again later.**

under attack by a client attempting to exploit security holes.

**Solution:** This error is rare because Web servers typically service ample length (2,048 or 4,096 characters). However, today's use of complex, dynamic Web content can result in very long URL strings. Recheck the URL and make sure that you're trying to reach the correct Web page (see the solution for "The Most Common Error Message"). You might also try a shortened variation of the URL to reach the Web site, then try browsing to the desired Web page from there. Finally, contact the Webmasters to make them aware of the trouble.

**Error Message: "415 – Unsupported Media Type"**

**Translation:** The Web server determines that the client (browser) is requesting a URL resource, but the actual media is not fully compatible with the request. This often occurs during a data transfer between the Web server and client. For example, if you're uploading a file to the Web server using a method that the Web server isn't prepared to accept, a 415 error is usually returned.

**Most Confusing Error Message**

**Error Message:** "407 – Proxy Authentication Required"

**Translation:** A proxy server is a server that sits between a Web browser and an actual Web server. The proxy server reads all requests to the actual server and attempts to service each request itself—if not, the request is forwarded to the actual server. Proxy servers improve performance by caching popular pages for certain groups of users and are often used to enhance the security of a Web site.

When you get a 407 error, the URL resource is available, but a connection requires the use of a proxy server that also needs authentication credentials. This error indicates that access has been denied because you have not logged onto the proxy server first or have logged on incorrectly.

**Solution:** You'll need to log into the appropriate proxy server first and provide the proper credentials (password and/or username) before you're able to proceed to the desired URL. This generally means you'll need a URL for the proxy server, along with authentication credentials. Once you're successfully logged onto the proxy server, you can usually navigate to the desired Web site successfully. If you have trouble obtaining proxy server information, contact the Webmaster for detailed user instructions. □

**Solution:** This error is typically due to configuration or programming errors on the Web server end. The Web server will need to be reconfigured to accommodate the media request or method. You should contact the Webmasters of offending sites to make them aware of the trouble.

### Error Message: “500 – Server Error”

**Translation:** Also termed “500 – Internal Error.” This is a general-purpose error produced by a Web server when a problem has occurred that the server cannot identify further. Some fault has prevented the server from fulfilling your request.

**Solution:** Recheck the URL and make sure that you’re trying to reach the correct Web page (see the solution for “The Most Common Error Message”). Excessive traffic (such as a congested server) can also cause server errors, so try reloading or refreshing the page with the browser’s Refresh button (or try again later). If the problem persists, contact the site’s Webmaster.

### Error Message: “501 – Not Implemented”

**Translation:** The Web server does not understand or support the HTTP method used by the client. This is almost always the result of an HTML coding problem or version conflict and often occurs with Web pages that include forms that can be submitted to the Web server.

**Solution:** While this error is rare, there is little you can do except to alert the Webmaster about the problem.

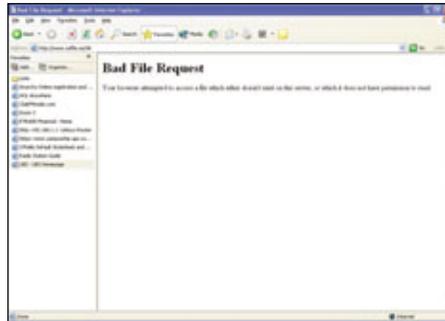
### Error Message: “502 – Bad Gateway”

**Translation:** Also termed “502 – Service Temporarily Overloaded.” A server (not always a Web server) is working as a gateway to fulfill your browser’s request. However, the gateway server cannot receive an acceptable response from an upstream server working on your request. This typically means that the gateway server is not communicating properly with upstream servers.

**Solution:** Chances are that there are communication problems between the remote gateway and its upstream servers. There is little you can do except to try again later or contact the Webmaster about the problem.

### Error Message: “503 – Service Unavailable”

**Translation:** The Web server is temporarily overloaded or down for maintenance or upgrade, but this temporary condition should



**A Bad Request error probably means that you've entered a URL improperly.**

be resolved after some delay. Some servers may refuse a connection entirely and produce a different error code.

**Solution:** The Web server is functioning (because it's returning an error code), but its content is unavailable at the moment. The easiest solution here is to try reloading or refreshing the page with the browser's Refresh button (or try again later). If the problem persists, notify the Webmaster about the situation.

### Error Message: “504 – Gateway Timeout”

**Translation:** A server (not always a Web server) is working as a gateway to fulfill your browser's request. However, the gateway server did not receive a timely response from an upstream server working on your request. This typically means that the gateway server is not communicating properly with upstream servers.

**Solution:** There is slow IP communication problems between the remote gateway and its upstream servers. There is little you can do except try the site again later or contact the Webmaster about the problem.

### Error Message: “505 – HTTP Version Not Supported”

**Translation:** This error occurs because the Web server does not support the HTTP protocol used by your Web browser. For example, the server will return a 505 error if your browser attempts a request using HTTP 1.0 or 1.1 but the Web browser only supports HTTP 0.9.

**Solution:** Most Web browsers assume that servers support HTTP 1.x, and very few Web servers will risk the poor security and performance found with older HTTP versions. Chances are that the Web operator will need to upgrade the Web server software, so contact the Webmaster about the situation.

## Cryptic Messages

### Error Message: “A Request To The Host Is Taking Longer Than Expected”

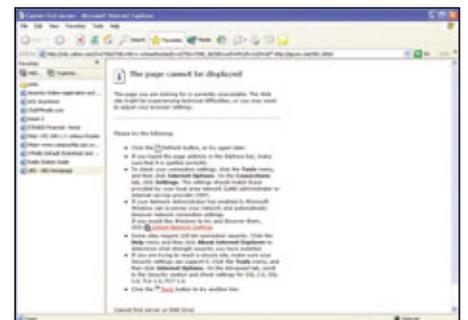
**Translation:** This is usually a result of congested Internet traffic. The Web server is busy or cannot respond to your request in a timely manner. You may notice that other online features (such as email or newsgroup access) are also taking a very long time.

**Solution:** Recheck the URL and make sure that you're trying to reach the correct Web page (see the solution for “The Most Common Error Message”). Also try other Web sites—if the error only occurs with one site, that Web server may be congested, so try reloading or refreshing the page with the browser's Refresh button (or try again later). If the trouble seems to hit every Web site you try to visit, the problem may be on your PC. One quick trick is to reboot your computer and clear the browser cache. For Internet Explorer 6.x, open the Internet Options dialog from the Tools menu, then click Delete Cookies, Delete Files, and Clear History. Now try the request again. You might also try closing any unneeded applications (especially bandwidth-demanding applications).

### Error Message: “Bad File Request”

**Translation:** There is probably a programming problem with a Web form. Form elements include features such as text boxes, drop-down menus, checkboxes, and so on. Web browsers support industry-standard form elements, but errors occur when the Web page creator made a mistake in their form programming, or incorporated nonstandard form elements to the Web page.

**Solution:** Congestion across the Internet or at the remote Web server can occasionally cause this trouble, so try reloading or refreshing the page with the browser's Refresh button



**A server or DNS (Domain Name System) lookup error often just says the page cannot be displayed.**

(or try again later). If the problem persists, contact the Webmaster about the problem.

**Error Message: “Cannot Add Form Submission Result To Bookmark List”**

**Translation:** This error occurs when you attempt to save the results of a form-based search engine (such as WebCrawler or Alta-Vista) as a bookmark. The problem is that the URL is not valid even though it may appear to be just fine.

**Solution:** You can often work around this error by saving the search results as an HTML document on your local hard drive. Use the Save As command under the browser’s File menu to save the search page, and then try adding the saved page to your bookmarks. CGI (Common Gateway Interface) scripting in the search results page can sometimes interfere with this tactic, so it is not always successful. (CGI is a standard for how servers exchange information with applications under the Web’s protocol HTTP. Typical uses for CGI include the forms that users fill out on Web sites.)

**Error Message: “Can’t Parse HTTP”**

**Translation:** This error means that your Web browser cannot process the URL that you’ve entered. For example, most browsers allow you to omit the “http://” portion of a URL, though some browsers require it.

**Solution:** See the solution for “A Request To The Host Is Taking Longer Than Expected.”

**Error Message: “Connection Refused By Host”**

**Translation:** The Web server has refused to establish a connection (socket) with your browser. You may be prohibited from accessing the requested URL, or the URL is password protected.

**Solution:** See the solution for “403 – Forbidden.”

**Error Message: “Failed DNS Lookup”**

**Translation:** Also termed “No DNS Entry.” The Internet’s DNS (Domain Name System) cannot translate the URL address into a corresponding IP address. Since DNS servers are typically redundant, the problem is more likely to be an incorrect URL on your end, or a congested Web server on the remote end. The Web server may also have failed or is down for maintenance.

**Solution:** Recheck the URL and make sure that you’re trying to reach the correct Web page (see the solution for “The Most

Common Error Message”). The Web server may be overloaded or congested with Internet traffic, so try reloading or refreshing the page with the browser’s Refresh button (or try again later). In rare cases, there may be problems with your Internet software or connection. Try rebooting the PC and restarting the connection and browser software.

**Error Message: “File Contains No Data”**

**Translation:** You’ve accessed a valid URL, but the contents of that Web page are empty. This can occur when the page is being updated or is being used as a placeholder, awaiting future content from the site operator.

**Solution:** Recheck the URL and make sure that you’re trying to reach the correct Web page (see the solution for “The Most Common Error Message”). Try reloading or refreshing the page with the browser’s Refresh button (or try again later). If the situation persists, contact the site’s Webmaster about the problem.

**Error Message: “Helper Application Not Found”**

**Translation:** Also termed “Viewer Not Found,” “No Helper Application Defined,” or “Unknown File Type.” This error means your browser did not recognize a file type that you’re attempting to download. For example, files such as Real-Audio, MPEG, or PDF files need a plug-in viewer capable of decoding and using the file.

**Solution:** You will need to download and install an application that is appropriate for each file type. For example, you would need Adobe Acrobat Reader to view PDF files. The easiest solution is to save those sound or video files to disk first and then obtain

and install the corresponding application for your browser as soon as possible.

**Error Message: “Host Unavailable”**

**Translation:** The remote Web server is down or otherwise offline. This may be as simple as a failed connection, or the server may be defective, or it may just be getting an update.

**Solution:** Try reloading or refreshing the page with the browser’s Refresh button (or try again later). If the problem persists, contact the Webmaster about the situation.

**Error Message: “Host Unknown”**

**Translation:** Also termed “Unable To Locate Host” or “Unable to Locate Server.” You cannot establish a connection with the Web server. This error occurs because the Web server is not available due to a failure or maintenance, there is trouble with your Internet connection, or you typed the URL improperly.

**Solution:** Recheck the URL and make sure that you’re trying to reach the correct

**Most Unusual Error Message**

**Error Message:** “405 – Method Not Allowed”

**Translation:** For each particular resource type, HTTP allows for a variety of actions (or “methods”) between a Web server and a browser. These methods include Options, Get, Head, URL, Post, Put, Delete, Trace, Connect, and more (depending on the HTTP version in use). Web servers can be configured to allow or reject any method. For example, your ‘read-only’ Web server may disallow PUT and DELETE methods. When your Web browser tries to use a method for obtaining a Web resource that the server prohibits, an error occurs. Bottom line—you cannot exchange desired data with the Web server.

**Solution:** You normally don’t see this error unless you’re creating Web pages. In most cases, 405 errors arise when using POST (power on self test) methods—you may be trying to provide input on your Web site (such as a form), but not all ISPs allow POST methods needed to process that form. You can try GET commands in place of POST commands. In short, most 405 errors can be corrected by adjusting the configuration of your Web server (to allow POST methods, for example). If you see a 405 error on another Web site, contact the site’s Webmaster for corrective action. □

## Online Communications

Web page (see the solution for “The Most Common Error Message”). Try reloading or refreshing the page with the browser’s Refresh button (or try again later). If the problem persists, check your Internet connection by trying other Web sites or functions such as email. Always-on connections may need to be rebooted by cycling power to the cable or DSL modem.

### **Error Message: “Network Connection Was Refused By The Server”**

**Translation:** Also termed “Too Many Connections – Try Again Later,” “Too Much Network Traffic,” or “Too Many Users.” Every server has a limit to the number of requests it can handle at any given moment. Chances are that the server is just too busy because it’s servicing the maximum number of requests.

**Solution:** The best solution is to try reloading or refreshing the page with the browser’s Refresh button (or try again later). If the trouble persists, the Web server may require additional bandwidth—contact the Webmaster about the problem.

### **Error Message: “NNTP Server Error”**

**Translation:** You are trying to read or post messages with a newsgroup. Your ISP provides the NNTP (Network News Transfer Protocol) server that supports newsgroup operations. This error occurs because you’re unable to connect to a Usenet newsgroup.

**Solution:** The newsgroup URL may have been typed improperly. Recheck the URL and make sure that you’re trying to reach the correct newsgroup (see the solution for “The Most Common Error Message”). There may also be an issue with the newsgroup itself. Try some other newsgroups (if possible). If only one newsgroup fails, the trouble may be on the remote end. If any newsgroup fails, check your software settings or contact your ISP for assistance.

### **Error Message: “Permission Denied”**

**Translation:** This error typically occurs when attempting to upload or download a file, often through FTP. You may not have authority to perform your file transfer, or the desired file does not exist. For example, you may be trying to download a file from a directory that you do not have access to. In some cases, the server may simply be too congested to handle your request.

**Solution:** Always start by verifying the exact file name that you’re trying to access

(file names are often case-sensitive). In the event of congestion, try your access at another time when the remote server may be less congested. If the problem persists, contact the system administrator for assistance. You may need adjustments to your access rights.

### **Error Message: “TCP Error”**

**Translation:** Also termed “TCP Error Encountered While Sending Request To Server.” Data is exchanged across the Internet using TCP (Transmission Control Protocol). This error occurs when there is trouble in TCP exchanges between your browser and the remote server.

**Solution:** Try other Web sites to confirm that your browser is working. If it’s not, you may need to reinstall TCP/IP on your computer. If other Web sites respond normally, there is probably a hardware fault preventing access to the Web server. Try again later, or contact the Webmaster (or ISP) about the problem.

### **Error Message: “Transfer Interrupted”**

**Translation:** Your Web browser attempts to complete a page according to the HTML and other instructions contained in that page’s coding. This error generally occurs when the request for graphic elements becomes too corrupted for the Web server to process.

**Solution:** Try reloading or refreshing the page with the browser’s Refresh button (or try again later). If the problem persists, contact the Webmaster concerning the problem.

### **Error Message: “You Can’t Log On As An Anonymous User”**

**Translation:** Some FTP sites prohibit anonymous users or only allow for a limited number of anonymous users. This error appears when you attempt an FTP anonymous logon, or the site has already reached its anonymous limit.

**Solution:** Try accessing the site again later when you expect it to be less congested. If you have a valid user ID and password, try accessing the site manually using an FTP software utility. If you need anonymous logon, contact the system administrator. **RS**

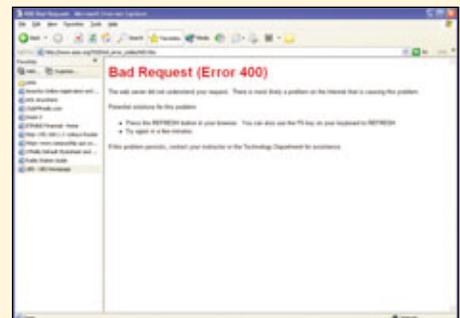
*by Stephen J. Bigelow*

## Most Common Error Message

**Error Message:** “400-Bad Request”

**Translation:** The URL that you’re trying to reach is typed improperly or does not exist. This means you’ve typed the URL improperly (a basic typo), the server does not recognize the URL, or you do not have the authorization to access the desired URL.

**Solution:** Check the URL to see that you’ve entered it completely and correctly—this can be a real challenge for long or complex URLs. It may be easier to cut and paste the URL from a document file or email directly into the address line of your Web browser. Pay particular attention to the placement of special characters such as equal signs, colons, percent signs, question marks, and ampersands (there should be no spaces in a URL). Some Web sites distinguish upper and lowercase letters, so be sure to capitalize where necessary. If the URL is exactly right, the server may be congested, so just try it again later.



**The file you requested does not exist, so check your URL and try again.**

# Revive Your Network

## Troubleshoot Network & Internet Connection Problems

**A**lthough new operating systems and networking devices make connecting to the Internet or a local network a much easier chore than it was only a few years ago, users still run into the occasional glitch. Unfortunately, the error messages that stand between you and the Internet are still cryptic and unhelpful. We'll help you understand some of the most common messages and fix the problems they identify.

### Modem Errors

**Error Message:** "The modem VxD is not present. Please refer to the troubleshooting section in the User's Guide."

**Translation:** You may see this message if you install Windows 98SE on a computer that has a winmodem. Unlike standard modems, winmodems (also called software modems) use your computer's processing power to translate analog signals to digital signals. If an IRQ (interrupt request line) conflict occurs, Win98SE will display this message during installation. You may also see this message if you haven't installed your winmodem's drivers.

**Solution:** Click OK to close the error message and then complete the installation. Once Windows starts and the Desktop appears, right-click the My Computer icon and then select Properties from the context menu. Click the Device Manager tab and scroll to Modems. Double-click Modems and then click your modem. Click the Remove button and then click OK. When you restart your computer, Win98SE will automatically install the modem's drivers. Keep your system's CDs handy in case the wizard asks for a CD.

**Error Message:** "Error 678 – There Was No Answer"

**Translation:** If your modem dials a long distance number to connect to your ISP and you receive this message, the phone line



probably doesn't have long distance service. A voice message asking you to enter a long distance access code causes the error to appear. You won't hear the message when you dial the number via the modem, but you can hear the message by using a telephone to dial the number.

**Solution:** You can solve the problem by adding a long distance phone service to the phone line, but keep in mind that you'll pay for both the long distance service and your ISP fees. If your ISP doesn't offer a local dialup number, you may want to switch to a local ISP or another ISP that offers local numbers.

**Error Message:** "Error 797 – The Modem Could Not Be Found"

**Translation:** Windows 2000/XP displays this message if the OS can't find your modem's drivers. It may also display this message if your external modem powered on after the computer booted.

**Solution:** If you have an external modem and powered on your PC before your modem, shut down the computer and the modem and then power on your modem before powering on

your computer. If this doesn't solve the problem, or if you have an internal modem, you may need to reinstall the modem's drivers. Right-click the My Computer icon, select Properties from the context menu, click the Hardware tab, and then click the Device Manager button. Double-click Modems, right-click your modem, and then select Update Drivers.

You may see the error message while using the RAS (Remote Access Service) feature, which lets you dial into a computer to retrieve files remotely. Enter the Device Manager, double-click Network Adapters, right-click RAS Async Adapter, select Properties from the context menu, and then click Update Drivers.

**Error Message:** "Rundll32.exe Has Performed An Illegal Operation"

**Translation:** If your PC runs Windows 95, this message may appear when you uninstall a modem. Win95 generates the message if it tries to update its modem list before it completely removes your modem from the list.

**Solution:** You can avoid this message by using the Device Manager or Modem Properties to uninstall the modem. (If you leave both windows open while uninstalling the modem, the error message may appear.) To uninstall a modem via the Device Manager, right-click My Computer, click Properties, click the Device Manager tab, double-click Modems, and then click your modem. Click Remove and then click OK in the Confirm Device Removal dialog box. To uninstall a modem via Modem Properties, click Start, Settings, Control Panel, and then double-click Modems. Click the appropriate modem under The Following Modems Are Set Up On This Computer, and then click Remove.

### Broadband Errors

**Error Message:** "Your Network Configuration Is Not Complete"

**Translation:** This message may appear when you use Win98SE's ICS (Internet Connection Sharing) to share your Internet connection with other computers. The error message means either that your computer has only one network card or that one of the two network cards is not correctly installed.

**Solution:** ICS requires a computer that has two functional network cards. The first network card connects to your broadband Internet connection (such as a cable modem) and the second network card connects the PC with

which you want share the connection. If your PC has only one Ethernet port, add another Ethernet network card. If you already have two Ethernet ports, reinstall the cards' drivers. (Download the latest drivers from the Web.)

**Error Message:** "Fatal Exception OE At 0028:c001545a; Exception OE At 0028:c810a23a In vxd AFVXD (01) +0000164a called from 0028:c00457ec in vxd ND15 (01) + 0000 4860"

**Translation:** You may encounter this error while surfing the Internet if you have a cable modem and Windows 98.

**Solution:** You'll need to edit the Windows Registry to fix this problem. If you damage the Registry, Windows may not start (in which case you might need to reinstall Windows), so be sure to back up the Registry before you change its contents. To back up the Registry, click Start, Run, and then type **regedit** in the Open field. Next, click File, Export. Enter a name for your backed up Registry in the File Name box, and then select the folder in which you want to save the Registry. Click the All radio button under Export Range, and then click Save.

Once you have backed up the Registry, click Start, Settings, Control Panel, and then double-click the Add/Remove Programs icon. Click the Windows Setup tab, double-click Communications, and then remove the check from the Dial-Up Networking box. Click OK, and then click OK again when the Dial-Up Networking dialog box appears. Restart your computer.

Next, reenter the Registry and then delete all WinSock2 keys from these Registry folders:

- HKEY\_LOCAL\_MACHINE\System\CurrentControlSet\Services\VXD\AFVXD
- HKEY\_LOCAL\_MACHINE\System\CurrentControlSet\Services\VXD\DHCP
- HKEY\_LOCAL\_MACHINE\System\CurrentControlSet\Services\VXD\MSTCP
- HKEY\_LOCAL\_MACHINE\System\CurrentControlSet\Services\VXD\Winsock
- HKEY\_LOCAL\_MACHINE\System\CurrentControlSet\Services\VXD\Winsock2
- HKEY\_LOCAL\_MACHINE\System\CurrentControlSet\Services\Winsock
- HKEY\_LOCAL\_MACHINE\System\CurrentControlSet\Services\Winsock2

- HKEY\_LOCAL\_MACHINE\System\CurrentControlSet\Services\RemoteAccess\Authentication\SMM\_Files.

Close the Registry. Click Start, Settings, Control Panel. Double-click Add/Remove Programs, click Windows Setup, double-click Communications, and then check the Dial-Up Networking box. Click OK and restart your PC.

**Error Message:** "Your network is configured such that you cannot make phone calls" or "You cannot make phone calls or start voice or video conversations with Windows Messenger"

**Translation:** One of these messages may appear if you have a Linksys EtherFast cable/DSL modem that has version 1.38 or older firmware. The problem prevents network users from using Windows Messenger's Voice and Video Conversation features.

**Solution:** You can resolve this problem by downloading the latest firmware version from Linksys. Visit [www.linksys.com/support](http://www.linksys.com/support). Click Technical Support, Product Pages, and select Driver/Firmware from the Search For dropdown menu. Next, select your model and OS, and click Firmware. Affected Linksys models include BEFSR11, BEFSR41, BEFSR41W, BEFSR81, BEFSRU31, BEFSX41, BEFVP41, and HPRO200.

**Error Message:** "RawESR.sys Cannot Be Found"

**Translation:** This message may appear if you have WinXP and your ISP requires a username and password. SBC DSL service users may encounter this error.

**Solution:** To create a new DSL connection, click Start, Control Panel, and then double-click Internet Options (if you don't see this icon, click Switch To Classic View on the left to display Control Panel icons). Click Setup to start the New Connection Wizard and then click Next. Click the Connect To The Internet radio button, and then click Next again. Click the Set Up My Connection Manually radio button, Next. Click Connect Using A Broadband Connection That Requires Using A User Name And Password and then click Next. Enter a name for your connection in the ISP Name box, click Next, and then enter your connection's username and password. Click Next, check the Add A Shortcut To This Connection To My Desktop box, and then click Finish. You can use the shortcut to access the Internet. **RS**

by Joshua Gulick

### Most Confusing Error Message

**Error Message:** Invalid page fault in module: kernel32.dll At 015f:bf766f6

**Translation:** Generally speaking, users only encounter networking errors when they try to connect to the Internet or a network. However, you might find yourself facing a modem problem while using Microsoft Windows Media Player. When this error occurs, a blue screen displays the above error message, which indicates that your modem does not have the correct drivers.

**Solution:** Fortunately, fixing the problem is much easier than deciphering the cryptic message. Chances are, the modem manufacturer's Web site offers driver downloads. If so, determine your modem's model number and then download the appropriate drivers from the Web site.

To install new drivers, right-click My Computer, click Properties, click the Hardware tab, and then click Device Manager. Double-click

Modems, right-click your modem, and then select Update Driver from the context menu. In the Hardware Update Wizard, click the Install From A List Or Specific Location (Advanced) radio button and then Next. Click the Don't Search. I Will Choose The Driver To Install radio button, and then click Next. Select your modem from the Models list and then click Have Disk. When the Install From Disk dialog box appears, click Browse, navigate to your new drivers, and then click Open. Complete the wizard to install the new drivers.



# Browser Errors

## What You Can Do When The Surf's Not Up

Thomas Jefferson once said, "Ignorance is preferable to error, and he is less remote from the truth who believes nothing than he who believes what is wrong." Although Jefferson was talking about beliefs in the 18th century, anyone who has ever used a computer in this century can identify with the sentiment. There you are, happily surfing the Web, and suddenly the error message I explore Caused An Invalid Page Fault In Module Urlmon.dll pops up. Say what? Many error messages are so confusing or misleading that they lead you further away from understanding what's really going on.

But error messages are a fact of Web browsing life, and deep down you know ignorance isn't the best way to handle them. Understanding what an error message means and how to solve the problem will lead to more productive surfing in the future. So here are interpretations of the more common error messages and solutions to keep them from reappearing.

### Netscape

#### Error Message: "Error 214, File Not Found"

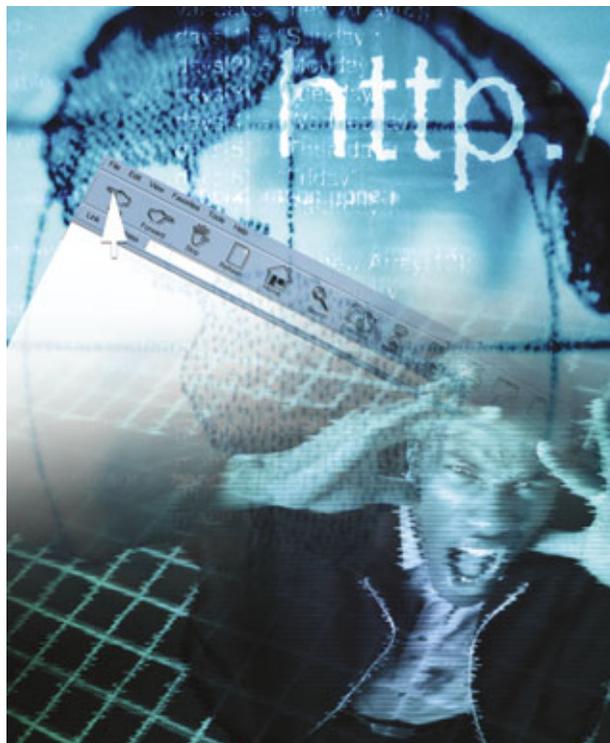
**Translation:** This message sometimes appears when you're installing Netscape 7. (It also appears occasionally when installing earlier versions of Netscape, including Netscape 6. We recommend you install the most recent version of the software, however.) The message may appear if you downloaded the software during a server or connection glitch or if you had already installed some of the Netscape plug-ins prior to attempted Netscape 7 installation.

**Solution:** Exit the setup process and completely turn off your PC. Restart your computer. Once the startup is complete, exit any running programs, including virus-protection software. These programs are located in the

System Tray, at the far right of the Taskbar. Restart the setup process by launching the Netscape installation file.

#### Error Message: "XX Could Not Be Found. Please check the name and try again."

**Translation:** The XX represents the Web site you're attempting to connect to, such as [www.smartcomputing.com](http://www.smartcomputing.com). If this message occurs in a dialog box when you're launching



the software, it's possible that your Internet connection is down. Each browser provides its own error message for this situation, although the other browsers' messages tend to be more self-explanatory. (For instance, AOL users see "Unable to connect to the AOL Service.")

**Solution:** Yes, it's fairly obvious; check your Internet connection. Make sure all cables and lines are securely connected, and if you're on a dial-up connection, ensure the phone is not in use by another person or application.

You can view the status of the connection by placing your pointer over the icon in the System Tray.

#### Error Message: "Internal Page Fault"

**Translation:** If you're visiting a site that uses Shockwave or Flash, as an increasing number of sites do these days, you may see this message. The Shockwave or Flash player you have is old and not compatible with Netscape.

**Solution:** Go to the Macromedia site at [www.macromedia.com](http://www.macromedia.com) and download and install the latest version of Shockwave or Flash. Also, be aware this message may appear when using other software that is not current, and you may need to download another program, such as an image viewer.

#### Error Message: "Invalid Page Fault"

**Translation:** This message occurs in multiple situations. One common instance is when you're launching Netscape by clicking your profile in the Profile Manager. Another is when you're printing a Web page.

**Solution:** In the first situation, it's possible you have a corrupted plug-in associated with your profile. Head to [wp.netscape.com/plugins/manager.html](http://wp.netscape.com/plugins/manager.html) to view your plug-ins; here you can download and reinstall them. In the second case, make sure printer drivers are up-to-date by contacting the manufacturer. If they are, your cache may be full. Empty it by going to the Edit menu, selecting Preferences, clicking Advanced, and clicking Cache. Select the Clear Cache (version 7) or Clear Disk Cache (version 6) button. Click OK.

#### Error Message: "JavaScript Error"

**Translation:** HTML programmers commonly use JavaScript, a scripting language that spices up Web pages. For example, JavaScript makes possible image rollovers, or characters that change when you place the pointer over them. If JavaScript is not enabled in your browser, this message may appear in a dialog box, and your only possible action is to click OK.

**Solution:** Enable JavaScript by going to the Edit menu and selecting Preferences. In the Category box on the left, click the Advanced

## Online Communications

heading and then the Scripts & Windows (version 6.x) or Scripts & Plugins (version 7.x) sub-heading. Place a check mark in the Navigator checkbox under Enable JavaScript For. Click OK. Depending on your version, you may be able to turn off JavaScript error messages entirely—although the error will still exist—by choosing the Debug subheading in the Preferences window and unchecking Show Strict JavaScript Warnings.

### Mozilla

**Error Message:** “Mozilla cannot use the profile ‘default’ because it is in use. Please choose another profile or create a new one.”

**Translation:** This message may appear when you begin to launch Mozilla, even though it is apparently contradictory, as it implies your profile is in use but you haven’t yet opened the software program. That’s because you probably have Netscape already running. Mozilla shares many files with later versions of Netscape, including profiles, and it recognizes the open profile.

**Solution:** The easy solution is to close Netscape and log onto Mozilla. But doing so may lead to lost bookmarks, email, or other settings in either program. We recognize that Mozilla users as a group tend to be sophisticated Internet users, and you may use multiple browsers. This should be fine as long as you use separate profiles, so follow the on-screen instructions for creating a new profile and use it each time you use Mozilla.

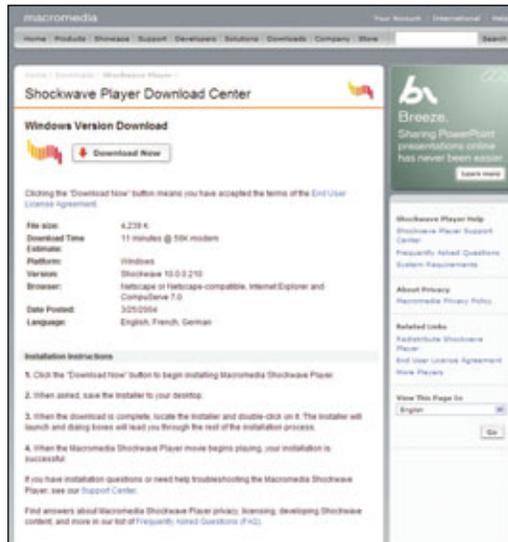
**Error Message:** “Operation Timed Out”

**Translation:** When you attempt to connect to a slow Web site, if the site does not load in a “reasonable” amount of time—Mozilla’s default value is 30 seconds—this message appears.

**Solution:** Increase the amount of time Mozilla will contact a Web site. Type `about:config` in Mozilla’s address bar to call up a list of Mozilla’s options. Scroll down until you see the option `network.http.connect.time-out`. Highlight the option, right-click it, and select Modify. In the Enter Integer Value dialog box, type the desired amount of time, in seconds, and click OK.

**Error Message:** “Redirection Limit For This URL Exceeded. Unable To Load The Requested Page.”

**Translation:** You’re visiting a Web site that is attempting to redirect you to another page, but the redirection is not happening. This is likely because you have blocked cookies the server is trying to place on your hard disk; servers may need to place cookies before they complete a redirection. When the server



**Downloading the latest version of Shockwave can cut down on Internal Page Fault errors in Netscape.**

cannot place a cookie, it tries repeatedly until this error message appears.

**Solution:** Make cookie settings less restrictive. You don’t have to do this globally; you can do it individually by site. Go to the Tools menu, choose Cookie Manager, and select



**Mozilla and Netscape recognize the same profiles. This message may mean you already have a version of Netscape running.**

Allow Cookies From This Site. When the Cookie Permissions Changed dialog box appears, click OK.

**Error Message:** “Java Not Installed” or “Java Not Enabled”

**Translation:** You may think that Java is working perfectly fine, but apparently Mozilla disagrees.

**Solution:** First, select Preferences from the Edit menu, click the Advanced category, and make sure Enable Java is checked. Click OK. Open your computer’s Control Panel and double-click the Java Plug-in icon (in Windows XP, use the Classic view). Select the Browser tab. Make sure Mozilla is checked and click Apply. This should take care of the problem. To confirm, type `about:plugins` in Mozilla’s address bar and view the various Java Plug-in entries (scroll down to see the entire list); each will have Yes under the Enabled box.

### Opera

**Error Message:** “Your Current Login Session Is Expired, Please Re-Login Before Using Our Services.”

**Translation:** You may have already discovered Opera handles cookies differently than most other browsers. In order to log onto a Web site, you must enable cookies in your browser or the above message appears. (Opera is working on changing this feature in future browser versions.)

**Solution:** From the File menu, click Preferences. Select Privacy and place a check mark in the box next to Enable Cookies. Sometimes, however, even when cookies are enabled, you may receive an error message that states your browser doesn’t support cookies. If so, according to the folks at Opera, the reason this happens is the remote server is looking for Netscape or Internet Explorer and doesn’t recognize Opera. There’s not much you can do to solve this problem.

**Error Message:** “Could Not Find Acrobat External Window(s) Handler.”

**Translation:** You’re trying to view an Adobe Acrobat file—one with a PDF extension—but you get this message instead. You likely either do not have the Adobe Acrobat Reader, or the reader is corrupt.

**Solution:** Your best bet is to install a clean copy of the software. To uninstall the Adobe Reader, use the Add/Remove Programs option in your Control Panel. Then, go to [www.adobe.com/products/acrobat/read-step2.html](http://www.adobe.com/products/acrobat/read-step2.html) and download the latest copy. There are also several workarounds. You can open Adobe Reader first and then try to open the PDF file in Opera. Or, disable Web Browser

Integration in Adobe Reader so that the file automatically opens in Adobe Reader rather than a browser. In Adobe Reader 6.0 (instructions vary slightly in earlier versions), select Preferences from the Edit menu. Click Internet. Deselect Display PDF In Browser. Click OK.

**Error Message: “Upgrade Your Browser” or “Browser Unsupported”**

**Translation:** Developers design Web sites with particular browsers in mind. If you’ve ever experimented with Netscape or IE, you may have noticed some sites look different in the two browsers. Unfortunately for Opera users, some designers write browser detection script that looks for Netscape or IE, and if the script doesn’t find either, the site is inaccessible.

**Solution:** You can configure Opera to “pretend” it is the widely used IE. In the Preferences dialog box, click Network. In the drop-down menu next to Browser Identification, select Identify As MSIE 6.0 (or the latest available version of IE). Click Apply and click OK.

**Error Message: “Permission Denied”**

**Translation:** The remote server does not want you to access it. If you have a personal firewall, it’s likely you have a proxy connection, and in Opera, a common cause of this message is incorrect proxy settings. Don’t know what a proxy is? A proxy server receives Web page requests from a user, fetches the page from the Internet, and then serves it to the computer that requested it in a process transparent to the user.

**Solution:** Check your proxy settings. Read the documentation for your personal firewall, or, if you’re on a network, ask your system administrator to verify the correct settings. Then, in the Preferences dialog box, select Network. Click the Proxy Servers button. Verify that the host name and port numbers are correct; if not, edit them now. Click OK, and click OK again.

**AOL**

**Error Message: “Unable To Connect To The AOL Service”**

**Translation:** The error message is clear, but what isn’t so obvious is why you can’t connect to the service. If you’ve tried the usual culprits, such as a loose cable or phone line, or a family member using the same telephone line your dial-up service uses, the problem may be with your AOL location configuration.

**Solution:** AOL locations are the places from which you connect to AOL. Typical desktop users will use the same location each time they log on, but others may use more than one location. For instance, suppose you have a notebook. You use it to connect to AOL both at home, where you use a dial-up connection, and at an office, where you have a broadband connection. You must sign on using the appropriate location. On the Sign On screen, click the drop-down menu next to Location, choose the correct location, and sign onto AOL.

**Error Message: “AOL Has To Reset Your Connection”**

**Translation:** This message appears when you have been online and the connection fails. Like the prior error message, the statement is clear, but the possible causes are numerous. The problem could be with your modem or router, or it could be on the AOL side.

**Solution:** AOL has a Fix It For Me button at the bottom left of this error message that goes through the necessary steps to re-establish the connection and attempt to keep it from reoccurring. Click the button to launch the Abnormal Disconnect dialog box. Save any open work, ensure your modem is turned on and connected to the computer, and click Continue. Follow the on-screen instructions.

**Error Message: “An AOL Error Has Occurred.”**

**Translation:** In another case of stating the obvious, this error message tells you there’s a problem but it doesn’t say why. It can occur when you’re browsing the Web—perhaps the program is incompatible with another open program—and it can also occur in other situations. What it means is you need to close almost every program running on your PC and reopen only the necessary ones.

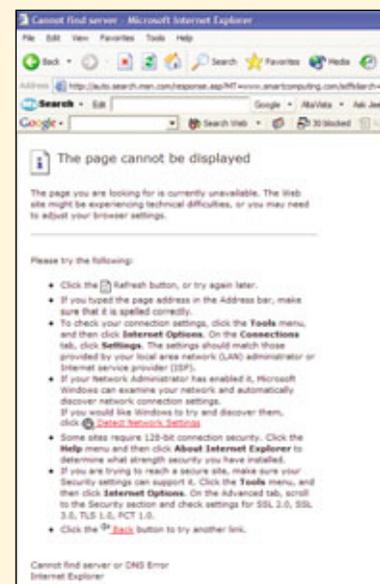
**Solution:** Open the Windows Task Manager (in WinXP) by pressing and holding down CTRL-ALT-DEL. In the Applications tab, highlight each program and click the End Task button. Once the Applications tab is empty, close the Windows Task Manager. Then, launch AOL again. (If you’re using an earlier OS, such as Windows 98, press CTRL-ALT-DEL to open the Close Program window,

**Most Common Error Message**

**Error Message:** “Page Cannot Be Displayed”

**Translation:** This is by far the most common error message we’ve experienced when browsing the Web. It generally means you’ve asked the Web browser to deliver a Web page it can’t find. The reason may be that the file doesn’t exist (for more information on “404 not found” and related messages see the article “General Online Error Messages” on page 123), but there are multiple other causes, including technical difficulties and incompatible software.

**Solution:** The solution for most browsers is to check your Internet connection, check the Web site address, and try again. But AOL users have an additional tool, called the Web Browser Auto Fix, which diagnoses and fixes the problem. Open the software but do not connect to AOL. Click Help on the AOL toolbar and then click AOL Help. Select the Index tab. Type **FIX** in the text field and then press Enter on your keyboard. Solving Common AOL Problems appears. Simply follow the on-screen instructions. □



and close every program except Explorer and Systray.)

### Error Message: “Not Implemented”

**Translation:** This may occur when you’re viewing a Web page that the AOL browser cannot read correctly. It often happens when you’re submitting an online form.

**Solution:** There’s not much you can do, as this usually happens because the Web page designer has included code the AOL browser cannot handle. As we mentioned in the Opera section, designers typically design with particular browsers in mind, especially IE, the most commonly used Web browser. If you get this message, you may want to help yourself and future visitors by emailing the site’s contacts and notifying them of the problem. Look for contact information on the Web site.

### Error Message: “Too Much Network Traffic”

**Translation:** Too many people are trying to visit the same Web site you are, and the site can’t handle the traffic. If you get this message often, however, the cause is possibly your browser cache. When you visit Web sites, the browser stores a copy of them on your hard drive for faster loading in the future. When this cache is full, this message may appear.

**Solution:** Click the Settings icon on the AOL toolbar. In the Settings: Essentials dialog box, select the Essentials tab and click Internet [Web] Options. In the Internet Options dialog box on the General tab under the Temporary Internet Files section, click the Delete Files button. Wait a moment as the software empties out your cache and click OK.

### Error Message: “You Do Not Have The Plug-In Needed To View The ‘Application/Plug-In’ Type Of Information On This Page. To Get The Plug-In Now, Click View Plug-In Directory”

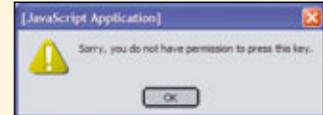
**Translation:** Plug-ins are scripts, utilities, or instructions that add to the functionality of a program without changing the program’s base code. The Macromedia Shockwave plug-in, for example, allows special animated Web content to be displayed in the AOL browser. When you visit a Web site that requires a plug-in you don’t have, this message appears.

**Solution:** Click the View Plug-In Directory button on the message. This takes you to a

## Most Hilarious Error Message

**Error Message:** “Sorry, You Do Not Have Permission To Press This Key”

**Translation:** Excuse me? Yes, this message really did happen to us. We were filling out an online survey, and we attempted to type the letter **a** in a text field. We tried the letter **b** and got the same result. Who is this site to tell us that we can’t press a letter on our computer keyboard?

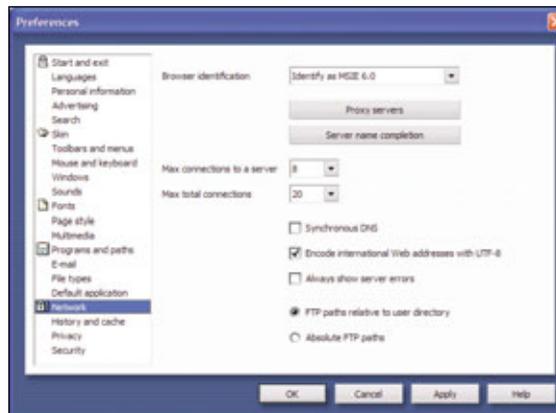


**Solution:** Because the error message was in a dialog box titled JavaScript Application, we knew the problem didn’t lie with our keyboard—plus, we’d used it just fine in filling out other online forms—and rather was because the Web page designer had used some incorrect code. We emailed the Webmaster to let the site know about the problem. A few days later, the site was fixed. □

Web page from where you can download the appropriate plug-in. Click the download button or link—it will vary by Web site—and write down the location the file is being saved to. Close AOL. Go to My Computer (via an icon on your Desktop or through your Start

some reinstallations, this error message appears.

**Solution:** WARNING! There, did we get your attention? There is a solution to this problem, but it involves editing the Registry, the database that contains information about user preferences and system configuration. Use extreme caution when editing the Registry because errors in it can disable Windows and prevent the PC from booting. First, we recommend you visit the *Smart Computing* Web site and search for articles on the Registry. Then, if you’re an experienced PC user, log on as an administrator, click Start, and click Run. In the Open box, type **regedit**, and click OK. Locate the appropriate Registry sub-key, right-click the IsInstalled(REG\_DWORD) value, and then click Modify. Use the following Registry key: HKEY\_LOCAL\_MACHINE\SOFTWARE\MICROSOFT\ACTIVE\_SETUP\INSTALLED COMPONENTS\{89820200-



**By configuring Opera to “masquerade” as Internet Explorer, you may encounter fewer error messages while browsing.**

menu) and browse to the saved file. Double-click to install it. Once installation is complete, relaunch AOL and revisit the Web page.

## Internet Explorer

### Primarily Windows XP

### Error Message: “Setup Has Detected A Newer Version Of Internet Explorer Already Installed On This System. Setup Cannot Continue”

**Translation:** By default, Internet Explorer 6 is installed on all versions of WinXP, and you won’t need to install IE. But if the software is corrupted, you may wish to reinstall IE 6. In

ECBD-11cf-8B85-00AA005B4383} Change the value data from 1 to 0. Click OK. Quit Registry Editor and then install Internet Explorer 6.

### Error Message: “Internet Explorer Has Encountered A Problem And Needs To Close. We Are Sorry For The Inconvenience.”

**Translation:** Crashes are a fact of computing life, and when it happens while you’re using IE on your WinXP machine, this message may appear. Fortunately, you can use the Internet Explorer Error Reporting tool, installed by default on WinXP, to diagnose the problem. (A variation of the message appears

in earlier Windows versions, but if you do not have the error-reporting tool, the following solution is unavailable to you, and Microsoft instead recommends you restart your computer or contact the program vendor.)

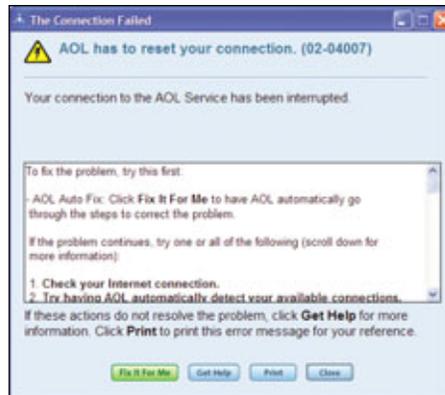
**Solution:** After IE closes, you'll see a dialog box that says, "Please tell Microsoft about this problem. We have created an error report that you can send to help us improve Internet Explorer. We will treat this report as confidential and anonymous." Click the Send Error Report button to send that information to Microsoft so the company can work on creating a fix or workaround. If one already exists, you'll see a More Information link. Click it and you'll often be transported to a Microsoft Web page with specific instructions on how to prevent a future similar crash.

**Error Message:** "Problems With This Web Page Might Prevent It From Being Displayed Properly Or Functioning Properly. In The Future You Can Display This Message By Double-Clicking The Warning Icon Displayed In The Status Bar."

**Translation:** The message is fairly straightforward; it's telling you that the HTML code in the Web page you're visiting doesn't display properly in your IE browser. This message occurs in IE 6 and earlier versions.

**Solution:** First, determine whether the problem lies with the page in particular or your browser settings in general. If the error doesn't exist on other pages, or exists only infrequently, it's likely the error is in the page design, and you can't do much about it. (You may try to view the page in another browser, such as Mozilla or Opera, on your system.) If this is a widespread problem, check any antivirus or firewall programs on your system to ensure they aren't blocking scripts, ActiveX controls or Java applets. Cleaning out your cache, cookie file and history may also help. Go to the Tools menu and select Internet Options. On the General tab, click the Delete Files, Delete Cookies, and Clear History buttons, responding affirmatively to their prompts. Click OK to close the Internet Options dialog box.

**Error Message:** "Internet Explorer Script Error. An error has occurred in the script on this page. Line: 49 Char: 1 Error: This command is unavailable because the license to use this application has expired. Code: 0 URL:



**AOL's "Fix It For Me" button can help you re-establish communications when you lose connections to Web sites.**

res://C:\PROGRA~1\MICROS~1\OFFICE10\EXCEL.EXE\3000 Do you want to continue running scripts on this page?"

**Translation:** There are a variety of known script errors. The clue to this one is in the URL; it shows that the trouble lies when you have an inactivated copy of Excel 2002 on your hard drive. For other script errors, look at the URL line for hints as to the cause.

**Solution:** Go to Start, All Programs, Microsoft Office Tools, and click Activate Product. Follow the on-screen steps of the activation wizard. When done, click Finish.

**Error Message:** "Error. A Runtime Error Has Occurred. Do You Wish To Debug?"

**Translation:** Unlike the previous error message, where you didn't fully install and

activate an Office product, this situation may occur after you install Office 2003. If you select Web Debugging during the Office 2003 installation, IE's disable script debugging feature is turned off, and you must reconfigure it.

**Solution:** In IE's Internet Options dialog box select the Advanced tab. In the Settings menu, under Browsing, place a check mark in the Disable Script Debugging box. Make sure the Display A Notification About Every Script Error checkbox is empty. Click OK.

**Error Message:** "Unable To Download An Appropriate Decompressor. (Error=80040200)" or "One Or More Codecs Required To Open This Content Could Not Be Found. (Error=C00D10D1)"

**Translation:** You're visiting a Web page that contains a media file. You click the file to launch Windows Media Player, but if you do not have the required decompressor software, the file will not play.

**Solution:** Possible causes include an outdated version of IE, but if you're running IE 6 on WinXP, it could be that your security settings are too high. Open IE's Internet Options dialog box. Choose the Security tab. Under Security Level For This Zone, click the Default Level button. Is the slider set to High? Then move it to Medium, click OK, and restart your computer.

**Error Message:** "IEXPLORE Caused An Invalid Page Fault In Module KERNEL32.DLL At 025f:Bff87ede" or

### Most Unusual Error Message

**Error Message:** "Object Doesn't Support This Property Or Method.:Onmove"

**Translation:** This error message occurs when you're using a WinXP machine with IE and Commerce Server 2000 BizDesk or IE6 and Commerce Server 2000 BizDesk, and you arrange assigned properties within a product definition.

**Solution:** The odds of coming across this error message are, well, fairly slim, and we expect you probably won't be referring to this information often. Still, if you see the error message, resolve the problem by opening the BizDesk site folder on the drive where you unpacked your Commerce site. Locate the Common.asp file. Open Common.asp in a text editor and change all instances of **OnMove** to **OnMovex**. Then, in BizDesk site folder that you opened earlier, locate the Edit\_ProductDefinition.asp file. Open this file in a text editor, as well, and change all instances of **OnMove** to **OnMovex**. □

### Most Confusing Error Message

**Error Message:** “Invalid DHCP Lease”

**Translation:** Try as we could, we couldn't figure out a plausible phrase that fit the acronym until we searched the Microsoft Knowledge Base. Doesn't Have Complete Priority? Dogs Hate Cat People? Don't Hassle Computer Pros? Turns out, DHCP stands for a Dynamic Host Configuration Profile. If you use a cable modem, it may try to automatically obtain an IP address from a DHCP server. Meanwhile, WinXP is automatically assigning an IP address, and the two may conflict. When this happens, IE produces this error message.

**Solution:** The workaround solution depends upon whether you're using a one-way cable modem or a two-way cable modem, and fixing the problem entirely may involve modifying your registry, so this is a procedure best left to the experts. Contact your ISP for further instructions. □

**“IEXPLORE Caused An Invalid Page Fault In Module <Unknown> At 0000.78581f00.” (The latter portion of the message may include different numbers or symbols.)**

**Translation:** Radiate, also known as Aureate, is adware related to banner ads you view in your browser. The Radiate software monitors which banner ads you click and how much time you spend reading a given banner. You may not have heard of Radiate, but at one point it was behind more than 250 shareware programs, and it may cause this message to appear when you're closing IE.

**Solution:** We don't recommend it in most cases, but your best option is to do nothing. The error message doesn't prevent you from doing what you were attempting to do—close the IE program—so go head and close it. The Aureate company appears to be defunct, so this error message soon should cease to exist.

Primarily Windows 98/Me

**Error Message:** “ERROR: OE: 0028: C0012D2C” followed by

“ERROR: 0D: 0246: XXXXXXXX Press Key To Continue.” (The eight-digit string of Xs stands for the memory location.)

**Translation:** Windows Me users may see a black screen followed by this error message in a number of situations. The most common situations are if you have software incompatible with IE or a damaged copy of IE.

**Solution:** Antivirus or personal firewalls may be incompatible with your version of IE.

An easy fix would be to remove these programs, but they can be essential to the smooth operation of your PC, so we recommend you download and install a new copy of IE or attempt to repair your current version. Click Start, Settings, and open your Control Panel. Double-click Add/Remove



**The Internet Explorer Error Reporting tool sends information to Microsoft that can help pinpoint what is wrong with your browser.**

Programs. Select Microsoft Internet Explorer 5.x And Internet Tools, click Add/Remove, and click Repair Internet Explorer. Click OK, click Yes to repair the installation, and then restart the computer when you are prompted.

**Error Message:** “HTTP Error 403 Forbidden Internet Explorer. You Are Not Authorized To View This Page. You Might Not Have Permission To View This Directory Or Page Using The Credentials You Supplied.”

**Translation:** Don't let the first part of the message fool you. (For more information about the HTTP 403 errors, see the article

“General Online Error Messages” elsewhere in this section.) If you're a Win98 user accessing the Windows Update Web site, you might get the following message.

**Solution:** Clear out your cache by opening the Internet Options dialog box and clicking the Delete Files button on the General tab. Click OK. Click OK to close the dialog box. Go to the Tools menu and select Windows Update.

**Error Message:** “Page Cannot Be Displayed”

**Translation:** This message appears frequently and in a range of situations—that's why it's our Most Common Error Message (see sidebar), but one situation deserves special mention here. Win98 users who install and uninstall the popular Gator program may still have an incompatibility that causes this error.

**Solution:** When you installed Gator, you also likely installed OfferCompanion. Removing Gator doesn't ensure removal of OfferCompanion, which can interfere with IE. In the Add/Remove Programs Properties dialog box, click OfferCompanion, and click Remove. Follow the on-screen instructions and restart the computer when prompted.

**Error Message:** “Unable To Print Document, Either Document's Application Is Not Installed Correctly, There Is Not Enough Memory To Load The Application, Or This Application Does Not Support Printing (For Example Sound Files Can Not Be Printed)”

**Translation:** Win98 users who select Print All Linked Documents may run into this error when they try to print Web pages, especially if on a slower dial-up connection.

**Solution:** Print the Web pages while offline. First, you must download the Web page and its linked pages. In IE 5, go to the Favorites menu and select Add To Favorites. Check the Make Available Offline box and then click the Customize button. The wizard will walk you through adding linked pages. When finished, close IE and disconnect. Start IE, go to the File menu, and select Work Offline. Find the Web page in the favorites list, go to the File menu, select Print, and select the Print All Linked Documents checkbox. Click OK. **RS**

by Heidi V. Anderson

# Memory, CPU, BIOS & Port Headaches

## Tough Solutions For Tough Issues

If buggy application and OS errors are a royal pain in your backside, then you'll probably agree that Processor, Memory, and other BIOS (Basic Input/Output System)-level errors can be a bone-jarring sort of disturbance. A fleeting Windows GPF (General Protection Fault) error has nothing on the sort of issue that renders your machine completely useless. You could even fix the problem with an OS reinstall, if your rig would actually boot, that is. Hardware-level errors like these are also often the most difficult to diagnose because the root cause could be a setting or the fact that you are dealing with a physical configuration problem or physical damage to a component. We'll cover some of the most common and plaguing hardware-related error messages here, from the benign nuisances to the big ugly errors that keep your system offline for days or weeks.

### Bad Mojo In Your BIOS

When bad things happen to good BIOS images, your system can sometimes act like it is possessed. Fear not, here are solutions to a few common problems, sans the voodoo doll pin sticking.

**Error Message:** "BIOS ROM checksum error—System Halted, Insert Disk"

**Translation:** We might as well tackle the tough one first here, folks. This one in particular has caused many a late night and numerous cases of heartburn to be sure. This occurs when you have corrupted your computing system's BIOS image somehow, like with a failed flash attempt, for example. Shorting the jumper on your motherboard for clearing CMOS (complementary metal-oxide semiconductor) may or may not get you back up and running. However, depending on your particular BIOS version and its capability, you should be able to restore a clean BIOS image through the following flash method.

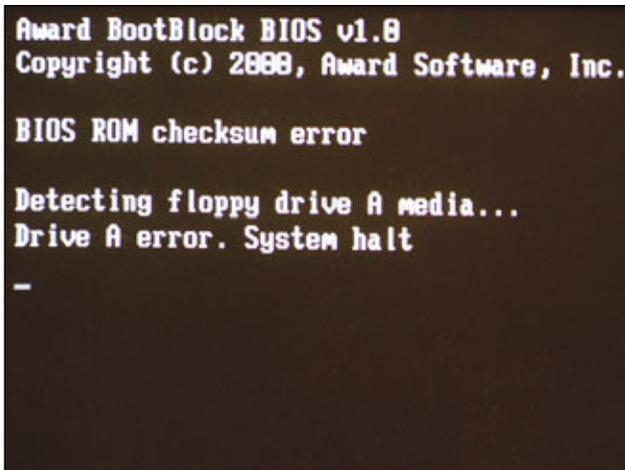
**Solution:** Assuming you have access to another machine to work with, create a bootable floppy disk, either DOS-based or Windows-based. Copy the BIOS flash loader utility for your BIOS type (usually either Award or AMI) onto the disk, as well as the latest version of your motherboard's BIOS. Most likely you can find both the latest BIOS file and the flash utility on your motherboard manufacturer's Web site. If your machine is actually prompting you to "insert disk and strike any key," then you're almost done. The flash utility will automatically load and flash the BIOS or prompt you to enter the BIOS file name to flash. Make sure you jot down the exact name of the BIOS file in case you need it for this process.

For AMI BIOS types and other versions of Award's flash utility, you can follow the same syntax convention but obviously you need to replace the AWDFLASH command with the proper flash utility command that is specific to your motherboard BIOS. Upon power up, with this floppy disk in your

drive, the AUTOEXEC.BAT file should load the flash utility and BIOS file for reprogramming your BIOS chip. If your machine does not boot to your floppy drive, disconnect all other hard drives and optical drives in the system and then power down and power up the system again. Follow the on-screen instructions, and once the process is complete, you should be able to boot your machine normally.

A checksum value is generated by the CMOS and is saved for error checking on subsequent boot-ups. This error message will appear if the checksum is different from one boot-up to the next. The BIOS has auto loaded a basic default configuration so that your motherboard boots properly. The good news is, typically entering your BIOS menu, checking your settings, adjusting them if need be, and resaving before exit will clear up the error. This error may also have been caused by a weak battery. Check the CMOS battery (it looks like a small disk-style watch battery on your motherboard) and replace it, if





The BIOS (Basic Input/Output System) ROM error message comes up after a failed POST (power on self test) attempt, if your BIOS image has been corrupted in some way.

necessary. You may also have to clear CMOS by shorting jumper pins on your motherboard, as well, to remedy the problem.

**Error Message:** “Hardware Monitor Found An Error, Please Check Power Setup.”

**Translation:** Most recent motherboards have a system “health monitoring” chip on them that keeps vital stats on things such as voltages, temperatures, and fan speeds. Typically this is a small chip made by Winbond known as the system “Hardware Monitor.” You’re getting this particular error message because the chip has detected something that it doesn’t like in your current configuration.

**Solution:** Monitoring functions for these chips are typically set in the BIOS setup menu. In the power setup menu or health monitoring sections of your BIOS, you’ll see settings for disabling or enabling monitoring functions for system fan speeds and temperatures. Typically this error message is caused by a fan not being plugged into a power header that is being monitored in the BIOS. Because the system is looking for an rpm speed reading from the fan and isn’t getting one, it alerts you with this message. Check to see that your fans are plugged in and spinning at their proper speeds. If you need to, go into the BIOS and disable the monitoring function on the specific fan power header that you may not be using. However, in general you should leave monitoring enabled on any fan power port that is in use in your system. If a fan fails on you in the future, you’ll certainly want to know

about it via this error message, obviously. It’s definitely a good thing.

### Connection Or Port-Related Errors

There are many potential points of failure in today’s modern PC in terms of physical connections between peripherals. If you are not the neat and tidy type, that rat’s nest inside your PC could be the source of your problems.

**Error Message:** “Floppy Disk Fail (40)”

**Translation:** BIOS notification errors like these are significantly easier to work with than ones like the previous ROM checksum error. Most likely your floppy drive’s data or power cables have been disconnected from the motherboard floppy controller port.

**Solution:** You simply need to power down, open your case, and reseat the connectors for the floppy drive. If this doesn’t work, it is remotely possible that either your motherboard floppy controller channel has gone south on you or your floppy drive itself is bad.

**Error Message:** “Keyboard Error Or No Keyboard Present.”

**Translation:** Here again, the most likely cause for this error is that the PS/2 or USB (Universal Serial Bus) cable for your keyboard has been disconnected from the system, whether it be just a mechanical disconnect or actually damage to your keyboard cabling.

**Solution:** It may not be immediately obvious, but many times keyboard cables are given a hard workout due to repetitive user stress on the cable or keyboard itself. So don’t rule out the possibility that your cable is bad on that old keyboard.

**Error Message:** “80 Wire Cable Not Installed”

**Translation:** This is a fairly noninvasive error message that really doesn’t have much of a symptom besides the error message itself. This error comes up when you’ve plugged a legacy 40-pin IDE (Integrated Drive Electronics) cable on to an 80-pin ATA100 or ATA133 channel. This may happen perhaps when you install a new CD or CD-RW drive. These drives often come with only 40-pin cables, because they usually don’t make use of the newer ATA100 and ATA133 80-pin standard. However, the ATA100/133 channels on your motherboard are backward compatible, so even with older 40-pin cables, you shouldn’t have any issues.

**Solution:** Motherboard OEMs (original equipment manufacturers) have just taken the steps to notify you if perhaps you have an ATA100 or ATA133 capable drive on that channel that actually needs an 80-pin cable. If this is the case, just replace your existing 40-pin cable with a new standard 80-pin cable and all should be well.

**Error Message:** Primary (or Secondary) master hard disk fail—Fixed Disk Failure

**Translation:** This error can occur at POST (power on self test), as well, and could be indicative of a bad hard drive cable connection or perhaps that your hard drive has actually up and died.

**Solution:** Either way, if you are able to recover from this error, you should back up your critical data if possible. You should then again check the data and power cable connections to your drive and motherboard

A screenshot of a blue screen error message. The text is white on a blue background. It reads: "IRQ\_NOT\_LESS\_THAN\_OR\_EQUAL".

The “IRQ\_NOT\_LESS\_THAN\_OR\_EQUAL” blue screen error is typically followed by a complete system reset. Tracking down the root cause of this one can be a tough problem to solve.

to make sure they are properly seated. Also try entering the motherboard BIOS setup menu to see if the drive is detected and configured properly. If the problem is with the hard drive itself, you may have to replace the drive.

## Memory & Processor Errors

Memory and processor errors can often be difficult to troubleshoot due to the myriad of ailments that could be the root cause of a system error. Here are some standard issue error types and a few more exotic and complex problems, along with solutions.

### Error Message: "IRQ\_NOT\_LESS\_THAN\_OR\_EQUAL"

**Translation:** This is a fairly serious error you can get while trying to boot Windows XP or other Windows OSes. This error manifests itself in the classic blue screen of death, or BSOD as it is popularly known. The problem is that tracking down the root cause of this error can be like finding a needle in a haystack. Blue screen errors are known as hardware or software "stop" errors. This is Microsoft's particularly clever way in which they classify a type of error that, well, . . . stops your computer. The problem with this particular error message is that it could represent either a hardware or software level issue. For example, we've seen this error from time to time during a failed attempt at overclocking. Sometimes it could be due to excessive heat buildup in the processor; other times it's due to system memory not being able to meet the aggressive timings or bus speeds you've set.

**Solution:** This error also could be the result of a software installation or driver installation that is now causing a hardware conflict within Windows. The general rule of thumb for troubleshooting these types of issues is tracking down and remembering specifically what recent changes you've made to your system OS, drivers, or hardware. Usually, the last thing you did before you got the blue screen error is the demon that is causing you the heartburn. Microsoft also has detailed step-by-step troubleshooting techniques for this error message, located at [www.microsoft.com/windowsxp/pro/usin/howto/gettingstarted/guide/troubleshoot.asp#GSE](http://www.microsoft.com/windowsxp/pro/usin/howto/gettingstarted/guide/troubleshoot.asp#GSE).

As a last resort, a complete hard drive format and OS reinstall may be needed, as well, to eliminate a possible driver level conflict.

### Error Message: "PAGE\_FAULT\_IN\_NON-PAGED\_AREA"

**Translation:** This is another blue screen error that has a more specific and targeted area of concern. This error occurs as a result of a system memory problem, whether it is physical memory space or virtual memory space. We've often seen this error occur with bad memory sticks or when system DRAM (dynamic RAM) timings are too aggressive for the memory modules. Nine times out of 10, it's the result of overclocking or RAS/CAS (row address strobe/column access strobe) latency timings that are beyond the limits of your installed memory.

**Solution:** The best thing to do in this scenario would be to turn down your bus speeds or increase VDIMM (voltage settings for dual in-line memory module) voltages until you reach a point where you boot normally and have full OS stability. However, it is also possible that this error occurs as a result of an error in virtual memory or the Windows swap file. Operating systems such as WinXP require more operational memory than some systems have installed in actual physical memory. Because the Windows swap file is set up in "pages," this file is also called a "page file." So if Windows runs out of physical memory, it goes to the page file on your hard drive and "swaps" data back and forth to run applications and other tasks. The problem is that if Windows starts

running out of swap or page file area (perhaps your hard drive is filling up), you could possibly get this page fault error. The solution is either freeing up disk space and increasing your available swap file size or adding system memory. The latter is the better solution overall. More system memory equates to more goodness for the ever resource-hungry GUI (graphical user interface) driven OS from Microsoft.

## Most Unusual Error Message

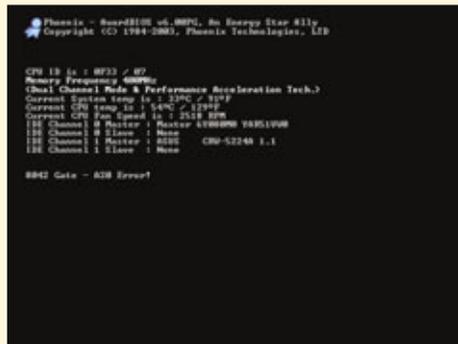
**Error Message:** "8042 Gate—A20 Error!"

### Translation:

This error occurs on rare occasions, and while it is typically a lower severity error message, it's a rather ambiguous technical-sounding sort of message punctuated sternly with an exclamation point. I mean "8042 Gate – A20" . . . Are we talking CPU transistor gates here? Is your processor about to spontaneously combust in a ball of fire? Fortunately this error isn't nearly as traumatic as it could sound to some not in the know. Your keyboard's controller chip, a small micro-controller that provides low-level control intelligence for your keyboard to communicate to your main system, has a "Gate A-20" functional block on it that has failed to communicate with your host CPU.

### Solution:

Try powering down the system, disconnecting the keyboard, and then reconnecting it again before you power your system back up. If this doesn't work, unfortunately you may have to replace the keyboard, although that's not typically an expensive proposition unless you have a really high-end model. Either way, this issue will probably come up only on older keyboards that may be ready for replacement regardless. □



**The Gate A20 error looks ominous but its worst-case scenario is only a matter of replacing your keyboard, which may be faulty.**



The “PAGE\_FAULT\_IN\_NON\_PAGED\_AREA” blue screen error crops up many times when your system memory is being pushed to its limits. On the other hand, don’t rule out a Windows swap file issue as well.

### Error Message: “CMOS Memory Size Mismatch”

**Translation:** This error occurs on occasion, and we’ve seen it more so with motherboards that have AMI BIOS types. It occurs most times after a user has either installed or uninstalled system memory. At the next boot up, the BIOS expected a certain memory size during its count diagnostic and got something different. That makes the BIOS somewhat unhappy, and you end up with this error message.

**Solution:** Usually if you just hit the F1 key to continue, the system will continue to boot your OS, and then next time you boot up, you won’t see this message again. That’s how we like it. However, on occasion, this error could pop up due to the CMOS battery on the motherboard that is failing. That’s not how we like it. Because the BIOS can’t retain the system’s memory size data, it could give you a false alert with this error. If this is the case, replacing the CMOS battery on your motherboard could fix the issue.

### Error Message: “Memory Test Failed”

**Translation:** This is also an error message you can get reported from the BIOS during POST. Typically this is the result of a bad memory stick or a remote possibility that your memory timings in the BIOS are too aggressive.

**Solution:** Check to see that your memory modules are seated properly in their sockets and make sure the bus speeds and timings are set to default in your BIOS. If you’re still getting this error message, you may have to

replace one or more memory modules in your system.

### Error Message: “Override Enabled—Defaults Loaded”

**Translation:** If the system cannot boot based on your current CMOS settings, perhaps due to an over-aggressive overclock, for example, a good motherboard BIOS implementation will sometimes show this error message. This is another case of a completely non-life-threat-

ening error message. In fact, if you’re getting this message at all, then you have your motherboard manufacturer to thank for making your life significantly easier, at least as far as your PC is concerned.

**Solution:** As the message suggests, this is a case where the BIOS has detected a nonbootable setting and reset itself to the most stable, low performance factory default settings available for the motherboard. Typically, memory timings are automatically set to SPD Detect, and frontside bus speeds for your processor are dialed down to the stock bus speed that is detected from CPU microcode. Stock operational voltages for RAM and CPU are also set by default when this error message occurs.

So, whether it was the memory, processor, or some voltage

setting that your motherboard didn’t like, your BIOS version was designed well enough that it could recover on its own from a bad setup. You should reenter the BIOS menu, perhaps choose less aggressive settings, save, and reboot your machine. You may also have to readjust some of your particular peripheral settings for things such as integrated audio, LAN (local-area network), or RAID (redundant array of independent disks) controllers, etc., because those may have been reset to a factory default setting, as well. Some extreme cases may render your PC unbootable. In these scenarios you may need to reset your BIOS in hardware (usually by moving a jumper over and rebooting). Please consult your motherboard manual before proceeding on this path. **RS**

by Dave Altavilla

## Most Daunting Error Message (When The Screen Is Blank)

**Error Message:** BIOS Corruption Error with no message at all

**Translation:** Probably the most daunting BIOS (Basic Input/Output System)-related error message is actually not a text message at all. In fact, if you’re lucky, you may only hear two low-pitched tones from your motherboard. You may hear or see nothing at all, as well. This is akin to the BIOS ROM checksum error except it’s a bit more evil since you may not be prompted by any screen message at all.

**Solution:** If your motherboard is not prompting you to enter a BIOS flash diskette but will not boot due to a corrupted BIOS image, you still may be able to save your bacon. However, you need to add an autoexec.bat file to your floppy disk, which will give the proper commands to your machine, call a BIOS flash utility from your floppy disk, and load its respective BIOS file. Use a text editor or the edit command at the DOS prompt after you’ve booted from a floppy disk. Make sure that you’ve created the file name as AUTOEXEC and that the extension is .BAT.

For Award flash types, the syntax should look like this:  
@ECHO OFF  
@AWDFLASH BIOSFILENAME.BIN

# Drive & Storage Problem Solving

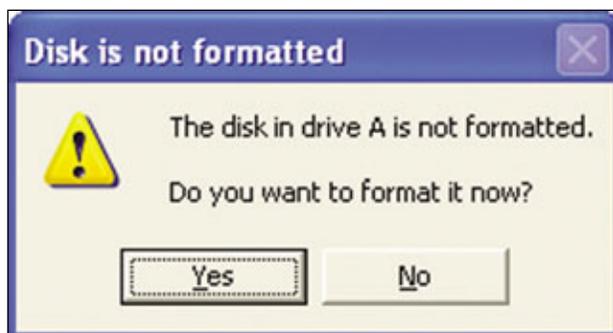
## Your Data is Gone! Or is it?

**F**ew things are more frustrating than getting an error message when trying to access important data. The drives used in modern computers all have moving parts and store files on sensitive media. Should the drives or media get damaged in any way, and you're confronted by some cryptic error messages, those vital bits of data may be lost forever. Most error messages aren't a sign of doom, however. They arm you with the information you need to resolve your problems, and in some cases, get that data back.

■ **Floppy Drive Errors.** The death of the venerable 3.5-inch floppy drive has been predicted for years, and yet these aged devices can still be found in the majority of computers being sold today. Luckily, most error messages regarding 3.5-inch disks require little effort to resolve. The worst-case scenario entails replacing an inexpensive disk or cheap drive.

**Error Message:** "Disk is not formatted. The disk in drive X is not formatted. Do you want to format it now?"

**Translation:** The disk you are trying to access either hasn't been prepared for use with



**Without being properly formatted, floppy disks cannot be read by your computer.**

your OS, or it has been damaged and the data can no longer be read. Every floppy and hard disk needs to be formatted to prepare the media for use with a particular file system.

**Solution:** If you get this message after inserting a blank floppy disk or when trying to access a brand new hard drive for the first time, click Yes, and format the disk. After it's formatted, Windows (or whichever operating system you run) will then be able to read and write to the disk. Should you get this message after inserting a disk that contains important data—don't format it! Formatting the disk will wipe out any files that may still be accessible. There is a chance you've lost the data, but don't assume the worst until you've verified the disk can't be read by another system. The floppy drive itself may be malfunctioning. Try some other disks in the drive to see if they can be read. Then, try accessing the disk from another system, preferably the system that was last used to write to the disk.

**Error Message:** "Copy. The file being copied is too large for the destination drive. If possible, insert a higher-capacity disk."

**Translation:** Floppy disks don't have an unlimited capacity. In fact, the amount of data they can store is miniscule by today's standards. A typical 1.44MB floppy disk, when formatted, can hold only 1.38MB of data. If you try to copy more

than 1.38MB of data to the disk, this error message will appear. You'll get a similar error when your hard drive reaches its maximum capacity.

**Solution:** Copying more data than the disk can hold is simply not an option. What you can do, however, is compress the files or folders you're trying to copy with a utility such as WinZip or WinRAR to make one archive that can be stored in less space, but don't expect any miracles, compression will take you only so far. Invest in a USB (Universal Serial Bus) thumb drive or CD-RW drive when you've outgrown floppies. They can hold much more data and are far less fragile.

**Error Message:** "Copying File or Folder. Cannot copy error\_copying: The disk is



**Your 3.5-inch floppy disk has a plastic slider that is used to write-protect the disk. When it's down you can write to the disk, when it's up the disk is write-protected.**

write-protected. Remove the write-protection or use another disk."

**Translation:** The file or folder you're trying to copy to the disk cannot be written because the disk is write-protected. Data cannot be written to the disk until the write-protection has been removed.

**Solution:** 3.5-inch floppy disks have a small, plastic slider at the top corner that is used to lock, or unlock the disk. When the slider is in the top position, creating a hole in the corner of the disk, it is locked and files cannot be written or modified on the disk. Move the slider to the lower position to unlock it and remove the write-protection. If you're being frugal and trying to recycle an old driver disk, for example, that doesn't have a slider, simply place a piece of tape over the hole in the corner of the disk. As long as that hole is covered, it's not write-protected.

■ **Hard Drive Errors.** The hard drive is arguably the most "mission-critical" component in any computer. Motherboards, processors, and memory may fail and bring down a system, but lose a hard drive and not only is



**Make sure you have enough free space on your disk before you try copying that large file.**

your system hosed, but your data is gone as well. Pay attention to the warning signs and frequently back up important data.

**Error Message:** “Error Copying File or Folder. Cannot copy XX: There is not enough free disk space. Delete one or more files to free disk space, and then try again.”

**Translation:** A hard drive can only hold so much data. If you try to copy 2GB worth of files to a drive that only has 1GB of free space left, you’ll get this error.

**Solution:** In order to cram those new files onto your hard drive, you’ll have to free up some space. Before you begin uninstalling infrequently used applications, run Disk Cleanup (go to My Computer, right-click on your drive, select Properties from the menu, and then click the Disk Cleanup button) to free you drive of unnecessary temporary files, and compress files that you haven’t accessed in awhile. You can also try clearing older System Restore points that won’t be used any longer (click on the More Options tab in the Disk Cleanup menu, and click on the Clean Up... button in the System Restore section). You’ll be surprised by the amount of space that you can free by doing these two steps if you’ve never used Windows’ Disk Cleanup feature before. If that doesn’t free up enough space, though, you can start uninstalling applications that you no longer need. Once you’ve you free up the necessary amount of space, try copying the files again.



**If you’re logged in as a restricted user, the disk is write-protected, or the file you trying to delete is in use, you’ll get an “Access Denied” error.**

**Error Message:** “Error Deleting File or Folder. Cannot delete XX: Access is denied. Make sure the disk is not full or write-protected and that the file is not currently in use.”

**Translation:** If you try to delete a file that is write-protected or is cur-

rently in use by another user or application, Windows will not allow you to delete it. Access to the file can also be denied if you’re logged into the system with a restricted user account that does not have the necessary privileges to delete files.

**Solution:** Generally, all that is necessary to resolve this problem, provided you are logged into the system with sufficient privileges, is to shut down all running applications. Once the apps are closed, try deleting the file(s) again. We commonly see this error when doing routine maintenance on some of the systems in the lab. The Windows TEMP folder usually contains files that can be safely deleted, but when applications are running, some files are placed in this folder and cannot be removed until the application is closed. Email clients and antivirus software are the most common culprits.

**Error Message:** “Bad Sectors Found on Drive X:”

**Translation:** The platters used in today’s hard drives are broken down into tracks and sectors. Each sector is a small portion of the drive where data is stored. Inevitably, some of these sectors become corrupt and can no longer be used. When a sector goes “bad” the data stored there is usually lost.

**Solution:** Disk diagnostic utilities, such as Scandisk or Norton Disk Doctor, inspect a drive and will attempt to repair bad sectors.

More often than not, however, that bad sector can no longer be used because it has become corrupted in some way. These diagnostic utilities will then mark that bad sector as unusable, and the system will no longer attempt to write new data there. Most drive manufacturers also have free, downloadable

diagnostic utilities that can attempt to repair bad sectors. Should it be beyond repair, the bad sector will then be marked and hidden, so the OS never even knows it’s there.

A hard drive that starts reporting bad sectors may be on its last leg; so be sure to back up any data that is important to you as soon as you come across this error. One or two bad sectors isn’t something to get alarmed about, but if your drive reports a few more each time you run Scandisk, you’ll definitely want to replace it.

■ **CD/DVD Drive Errors.** The data stored on CDs or DVDs should last for years if the discs are properly cared for. This durability, coupled with the fact that optical drive technology is very mature and reliable, means error messages regarding CD/DVD drives are few and far between.

**Error Message:** “Invalid Write State, Could Not Perform EndTrack, Command Sequence Error, Could Not Perform Fixation...”

**Translation:** CDs and DVDs are burned using a specific process. Tracks are written to a disk and the locations of the tracks are then stored in the disk’s TOC (Table of Contents). Then, the disk is closed and no more data can be written. Should any part of the burn process fail, your CD-/DVD-authoring software of choice may report errors like the ones listed above.

**Solution:** We used Nero 6 Ultra Edition with a scratched CD-R to replicate all four of these errors, but Roxio Easy Media Creator 7 (or other authoring applications) should report something similar. Errors like these will occur when either the drive is malfunctioning or the media being used is defective. If this only happens occasionally, your drive is probably working properly and low-quality media is the culprit. Try using a different brand of writable discs. Browse over to your drive manufacturer’s Web site to check for updated firmware as well. New firmware revisions are usually released to increase compatibility with different types of media and to resolve bugs that weren’t discovered in previous firmware releases.

**Error Message:** “Burn Process Failed at YYx (ZZZZKB/s)”

**Translation:** If your recordable drive reports any major errors while burning a CD/DVD, it will likely result in a “Burn Process Failed” error and the burned disc will be unusable.

**Solution:** There are quite a few things that can cause the burn process to fail, such as buffer under-runs, low-quality media, and even a dirty or defective drive. Most modern burners have large buffers and incorporate technology designed to prevent buffer under-runs, but to increase your chances of a successful burn don't run any disk or memory intensive applications while writing a



**Bad media or a defective drive, among other things, could cause your CD burn process to fail.**

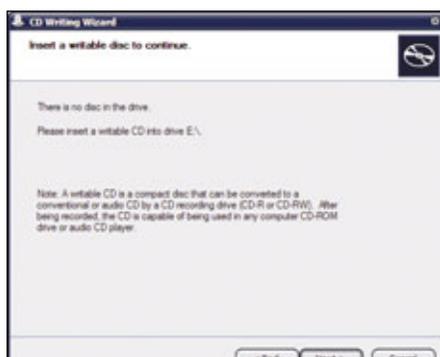
CD/DVD. If your hard drive is constantly being accessed, it may not be able to feed data to the burner fast enough to sustain the burn. Also, simply try using a new blank disc or a different brand of media.

Should your drive be the culprit, update its firmware and try again. If nothing helps, and you're not happy about your ever-increasing stack of coasters, the drive may need to be replaced.

**Error Message:** "Insert a writable disc to continue. There is no disc in the drive. Please insert a writable CD in drive X:"

**Translation:** The CD drive (represented by X) is reporting to the OS that there is no disc in the drive.

**Solution:** Microsoft's CD Writing Wizard will scan your drive before the burn process begins to ensure there is enough free space on the disc to accommodate all of the files you want to copy. If during that scan the



**Insert a blank CD, or try a different brand of media if Microsoft's CD Writing Wizard tells you there is no disc in the drive.**

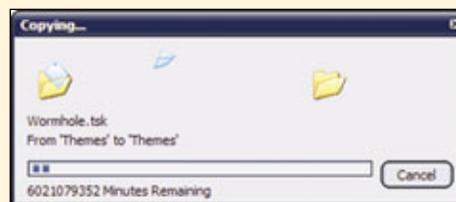
drive reports that there is no disc in the drive, you'll get this error. Obviously, if there is no disc in the drive, simply insert one to resolve the problem. If, however, you're getting this error when there is a disc inserted, there may be a problem with your media or the drive itself. Reboot your system and try another blank CD (or a different brand of blank CD).

Also try a different application to burn the disk, as the utility built-in to Windows isn't the most powerful tool available. If, no matter what you try, the drive continually reports that there is no disc available, it may have to be replaced. **RS**

by Marco Chiappetta

## See You in 2005

**S**ome errors can be rather amusing if you know what steps to take to work around them. Microsoft Windows isn't always a good judge of time, so don't panic when Windows tells you your senior thesis won't be done copying for a few years.



**Windows may power 97% of the world's personal computers, but can it tell time correctly?**

**Error Message:** "Copying . . . XX Minutes Remaining"

**Translation:** Occasionally, when trying to copy a file or unusually large group of files, Windows will report an astronomically long time is left to complete the process. Windows calculates the amount of time left to copy a file in the first few moments of the copy process. If the file(s) is in use, or another application is excessively taxing the drive at that particular moment, the time reported can be way off the mark. This problem could also occur when trying to copy a corrupt file to a new destination.

**Solution:** Should you be confronted with this pseudo-error, the first thing to do is cancel the copy process. Then, shut down as many applications as possible, and simply try copying the file again. If you continue to have trouble, restart your computer, and before running any other applications, try copying the file once more. Should the problem persist, run Scandisk or a similar diagnostic utility on the drive where the file resides to ensure there isn't a problem with the disk itself. When the scan is complete, and you're relatively certain there isn't a problem with the drive, reboot your system again. Once Windows is done booting and all of your background applications have launched, disable any antivirus or security software that may be running in the background and then press CTRL-ALT-DEL to bring up Task Manager. Next, click on the Processes tab and then click on the User Name header to sort all of the running processes by your username. Highlight each of the processes associated with your username, except for explorer.exe and taskmgr.exe, and then click on the End Process button (don't worry, they'll all be back the next time you restart your system). With all of the background processes closed, try copying the file again—you should be all set.

# Troubling Printing & Scanning

## Documents Check In, But Try These Tips When They Don't Check Out

**W**e won't sugar coat it: There are a lot of things that can go wrong during printing and scanning, and for better or worse the fact is that most of the problems will be due to a lack of user knowledge rather than an outright technical glitch. This is actually good news, because it means that most of your troubles can be remedied with a little background reading. On the other hand, sometimes you're bound to get snagged by a bona fide bug of some sort.

For times when your document handling hits a brick wall, see if some of these solutions save the day.

### **Error Message:** Paper jam.

**Translation:** Somewhere between the paper tray and the output bin, a piece of paper has misfired and become gummed up in the printer's innards, stalling the printing process.

**Solution:** There are two imperatives to remember: Do not rush and do not pull the paper out backwards. Rushing often results in torn sheets, and the last thing you want is irretrievable snippets of paper left behind in your equipment, waiting for a critical print job during which to jam your gears. The reason not to pull paper out backwards is that many printers are carefully designed to only feed paper through in one direction. If you force the components to move backwards, you may damage the equipment and are more likely to increase resistance that in turn leads to tearing.



**Good manufacturers make driver installations easy for you. This example shows Samsung's laser printer driver instructions.**

If you keep getting jams, you may need to clean the unit. Consult your manual (most manufacturers make manuals downloadable in PDF format) for specific instructions on how to do

this. And don't be nervous, this isn't brain surgery. Alternatively, you may be getting paper jams due to high humidity. Before you put a new stack of paper in the printer, flex the ream so that air can briefly get between the sheets.

### **Error Message:** Printer failed to initialize. (The printer may also simply hang during printing.)

**Translation:** You've sent off a print job, but the printer never actually starts to output the data. This is often the result of something in the system prohibiting a file called Spool32.exe from executing correctly. Spooling is the process of storing your print job until the printer is ready to accept the job.

**Solution:** Try disabling the print spool settings in Windows. Click Start, (Settings, in pre-XP Windows), and Printers. Highlight your printer. In earlier Windows versions, such as 98 and Me, select Properties from the File menu, click on the Details tab, select Spool Settings . . . , and click Print Directly To Printer. In the Spool Data Format drop-down menu, choose Raw and then click OK twice.

In Windows 2000/XP, select the Advanced tab on your printer's Properties box. Check the Print directly to the printer option, then click the Print Processor . . . button. In the Default data type area, select RAW. Click OK twice to save the new settings.

### **Error Message:** An "illegal operation error" occurs when you try to print or scan.

**Translation:** No, the printer police aren't en route to your desk. You probably have a corrupted printer driver,

that little piece of software that tells your operating system how to work with the printer. Your driver could have been corrupted by a virus, hard disk damage, or an

incompatibility glitch from a newly installed application, among other things.

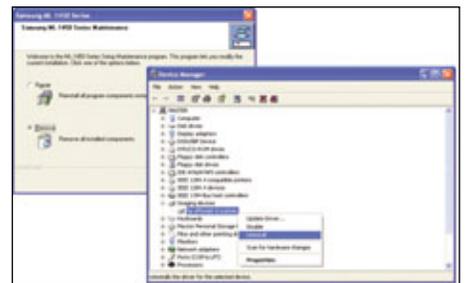
**Solution:** Reinstall or update your device driver. Most printer and scanner manufacturers will post several driver revisions to their support sites after a product's initial release.



**You can improve the performance and stability of your printer or scanner by making sure you're using the latest device drivers.**

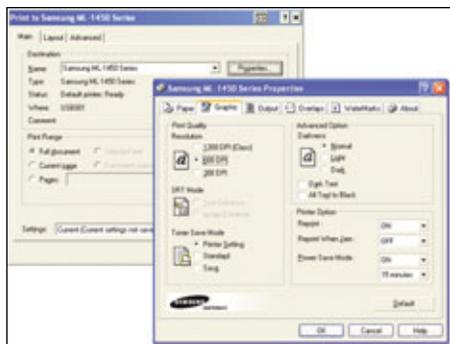
Odds are that if you haven't updated your drivers in the last few months, you're probably not benefiting from the latest set of bug fixes and performance enhancements.

Visit your manufacturer's support site and download the latest official (not beta) driver for your device and operating system. Most of these downloads will be self-executing. All you have to do is download the file, run it, and follow the instructions. In some cases, though, you may need to install the driver manually. The best way to go about this is to uninstall the existing driver. Ideally, your device will have a Start menu item noting



**You may want to uninstall your present driver before upgrading or replacing drivers.**

some sort of "uninstall" or "driver maintenance" routine. If so, run this and remove the current driver. If not, check the Add/Remove



**Large print jobs troublesome? Use the printer Properties to reduce your output resolution.**

Programs list in Control Panel and look for driver software for your printer. In some cases, you'll want to check the hardware Device Manager in Control Panel. For instance, if you're trying to uninstall a scanner, click the plus sign (+) next to Imaging Devices, right-click your scanner, and select Uninstall.

With the current driver eliminated, look at the new file you downloaded. If it's a compressed file, such as one ending in .ZIP, uncompress it to a folder you'll remember. If it's an .EXE file, simply double-click on it in My Computer to run it. Now, go back into Device Manager and click Action, Scan for hardware changes. Windows should detect your device and either locate the correct new driver on its own or let you point Windows to the proper location where you stored the uncompressed files. Your device should reappear in Device Manager with no exclamation point next to it, and you'll be innocent of further illegal operations.

**Error Message:** "Error 20—Memory Overflow" (on the printer's readout).

**Translation:** A large print job has flooded and locked your printer's memory. This is especially common in older systems where print job memory management wasn't handled as well as it is under modern operating systems.

**Solution:** Your options here will vary depending on your hardware and needs. If you've recently moved the printer and are seeing a lot of this error, then your memory module(s) may have come loose and simply needs to be reseated. Consult your manual to see where your printer's memory is located and how to access it. While you're there, consider if perhaps your print jobs are becoming larger than they used to be. If so, try adding more memory to what you already have. Your manufacturer likely sells upgrade modules, but you may score a better deal with a

third party such as Viking ([www.vikingcomponents.com](http://www.vikingcomponents.com)).

If hardware tweaking isn't an option, try tackling the problem from the software side. If your job is graphical in nature, try lowering the output dpi (resolution) in the File, Print Setup options. Dropping a job down from 600dpi to 300dpi may not give the output quality you want, but if your print job works at the lower resolution, then you know you need more memory. Also try disabling print spooling as detailed above.

**Error Message:** None (because the device isn't being detected by Windows).

**Translation:** You plug in the printer or scanner and nothing happens. No driver requests. No entry in Device Manager. Nada.

**Solution:** There are plenty of possible causes as to why Windows would fail to detect your USB printer or scanner when you plug it in. The most obvious is that you haven't plugged in the device's power cord. (Don't feel bad—everybody does it.) Slightly less obvious is that your operating may not support USB. Specifically, Win95 and Windows NT do not fully support USB functionality. The printer software should kick out an error message about an "unsupported operating system" when you try to install it. Upgrade to Win98 or later and see if this fixes the problem.

A lack of device response might also fall under another area . . .

**Error Message:** Various (including initialization errors and "scanner not found").

**Translation:** This is a catch-all entry. Power-related problems can spawn any number of odd errors.

**Solution:** Plug the device directly into your PC's USB port. Many USB hubs are non-powered, meaning they have no AC power running to them and only rely on the power coming through the USB connection. This is insufficient for

most larger USB devices, such as printers and scanners. You want to use a USB hub (preferably with support for USB 2.0) with AC power; although, be aware that we've seen plenty of cases where a device refused to work (or conflicted with another device) on even a powered hub. The surest bet is to plug the device straight into a PC's USB port. If you have a choice, use the USB ports in the back of the PC because there is always a chance that the cables providing USB to the front of the case may have come loose.

Also, be aware that there are many documented cases of a PC's native USB ports still not having enough power for a printer or scanner. Both Dell and NVIDIA (with the nForce chipset) have documented instances of this. You might be able to work around this by using a properly powered USB hub. And if that's not frustrating enough, there are also some cases (older Belkin models for one) where the powered hub doesn't supply enough power for the device. You just need to experiment. RS

by William Van Winkle

## Most Unusual Error Message

<b>Error Message:</b>	The printer indicates that it has received an "Offending Command".
<b>Translation:</b>	As entertaining and/or accurate as it might be to assume this means you've told the printer to go do something unmentionable to itself, it actually means that the printer can't output your file. Often, this has to do with erroneous PostScript code involved in the software used to generate the PDF document you're trying to print.
<b>Solution:</b>	If possible, set your printer to PostScript Level 1 or Level 2. If that doesn't help, try changing the fonts in your document to something simple, such as Arial or Times New Roman. Some systems choke on overly-intricate fonts or unusual characters. If you're still scrambling, try using the Print As Image option on your print menu. This will print each page as a big graphic rather than text. It's a slow process, but it's better than being stalled. Finally, as with nearly any other computer error, try the most obvious thing: reboot. That includes turning the printer off for five seconds and then turning it back on. <input type="checkbox"/>

# Sound Solutions To Audio Problems

## Clearing Up What You Can Hear

**A**udio errors fall into a variety of categories because some you can hear and others you can't. Then there are popular and less popular sound cards along with those embedded audio chips. Let's take a look at some of the more common errors to come up with a good, sound solution.

### Sound Blaster/Creative Labs Errors

The Creative Labs Sound Blaster sound cards are amongst the most popular series of cards available. To that end we thought we'd look at this series first.

**Error Message:** *PlayCenter 3 or Surround Mixer gives an error in "CTDPROXY.DLL" or "Ctplay2 has generated errors and will be closed by Windows."* This applies to the Sound Blaster Audigy family under Windows 2000/XP.

**Translation:** PlayCenter and Surround Mixer are applications that come with Audigy sound cards and interact with the CTDPROXY.DLL driver module. Most likely there is another audio device—probably either another audio adapter or a USB (Universal Serial Bus)-based device with audio capabilities—somewhere in the system conflicting with this module.

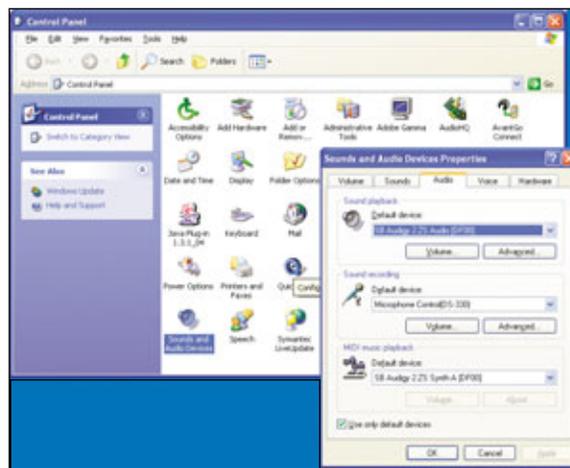
**Solution:** Go to the Sounds area in Control Panel and click the Hardware tab. You should see a list of devices in the following order: optical drive(s), Audigy card, Creative game port, Audio Codecs, Legacy Audio Codecs, Media Control Devices, Legacy Video Capture Devices, and Video Codecs. If you see additional devices listed after these, highlight each in turn as necessary and click the Properties button. If you see a Mixer Devices item, click the plus symbol (+) next to it, select the mixer device listed, and then click Properties (yes, again). Check the option for Do Not Use Mixer Features On This Device.

Once you have disabled the device's mixer features, reopen your Audigy application and the error should be gone.

**Error Message:** *"Ctplay2.exe/Eacontrol.exe has encountered a problem and needs to close. We are sorry for the inconvenience."* This message appears in WinXP after installing a Creative Labs Audigy card and its attendant software.

**Translation:** Windows hasn't properly adjusted its settings to make the Audigy your new default sound card.

**Solution:** Go into the Sounds And Audio Devices area of Control Panel. Click Sounds And Audio Devices and then the Audio tab. In the Sound Playback area, use the Default device pull-down menu to select your Audigy card. Click Apply and then OK.



**You may not hear anything from your system if Windows does not know which audio adapter to use.**

**Error Message:** *"Could not create file for recording, please ensure the recording folder exists."* This message occurs when using the Creative Recorder that ships with your Sound Blaster to record a WAV file.

**Translation:** Creative Recorder defaults to storing files at a specific folder location. If the system can't find the folder, this error pops up.

**Solution:** Use Windows Explorer or My Computer to browse to the C:\PROGRAM FILES\CREATIVE folder. Highlight the Recorder folder and click File, New, and Folder. Give the new folder the name RECORDINGS. This is the specific folder name Creative Recorder is looking for.

### Other Sound Errors

Okay, so you've gotten comfortable with the Sound Blaster cards. It's time to look at other types of audio-related errors.

**Error Message:** *"Access to the specified device, path or file is denied."* This message can occur in Win2000 OSES when you insert an audio CD for playback.

**Translation:** When you pop an audio CD into your system, the autoplay function defaults to using the built-in audio player in Win2000. However, if you install a third-party player, and especially if you delete that player, Windows can get confused about the proper path or file with which to play your disc.

**Solution:** This one is a bit tricky. The system file you need to modify is hidden, so the first thing to do is "unhide" it. From the Desktop, right-click My Computer and select Explore. From the Explorer File menu, select Tools, Folder Options, the View tab, and then Show Hidden Files And Folders. Now uncheck the options for Hide Protected Operating System Files and Hide File Extensions For Known File Types. Click Yes on the warning box that will appear and then click the Apply and OK buttons.

Now click Start, Search, and For Files Or Folders. In the Search For Files Or Folders field, type the name `sysoc.inf`, confirm that you're searching in the C: drive, and click Search Now. When the file appears in the search results area, double-click it and then select the Notepad application to open the file with. Within Notepad, locate the line that starts with "old base components." You want to remove the command and HIDE characters so that the line goes from `reading MultiM=ocgen.dll,OcEntry,multimed.inf,HIE, to MultiM=ocgen.dll,OcEntry,multimed.inf,7`. Next, locate the line that starts with "AccessUtil=" and delete the word Hide from it. Save the file and close Notepad.

You're almost done. Dig into the Add/Remove Programs area of Control Panel, click Add/Remove Windows Components,

Accessories, Utilities, and Details. Check the Multimedia box and then click OK. Click Next and, if prompted for it, insert your Win2000 CD-ROM. Click Finish. When you reboot the PC, everything should be back to normal.

**Error Message:** “Your Sound Card does not support hardware buffering. Sound will only playback from software buffers.” You will see this when attempting to run the Microsoft DirectX Diagnostic tool (dxdiag.exe).

**Translation:** This error will appear on systems using VIA’s AC’97 audio codec, which you only need to worry about if you’re using the integrated audio on a VIA-based motherboard. What the message really means is that your audio system doesn’t support the 22,050Hz audio sampling rate, which is one frequency tested for by DXdiag. Microsoft notes that this problem only applies to the WinXP operating systems.

**Solution:** Relax. The built-in mixer within Windows will automatically switch to a sampling rate that is supported by the VIA codec. Your actual playback or recording will remain unaffected.

**Error Message:** “Code 28 (The drivers for this device are not installed).” You may see this message in your sound card’s device properties after upgrading from Win2000 to WinXP.

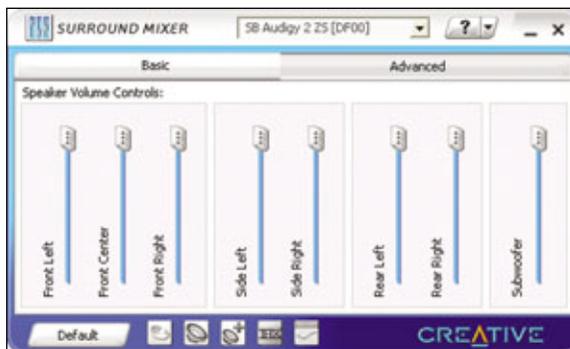
**Translation:** In the process of upgrading your operating system, the WDM (Windows Sound System Compatible) drivers are deleted. WinXP no longer needs these files, so they are eliminated. The problem is that your sound card’s software is designed to look for these files.

**Solution:** Check with your sound adapter manufacturer for new drivers specifically compatible with WinXP. If such driver’s don’t exist, you’re out of luck and your sound card will not work.

## Speaker Errors

“Huh,” you say, “I’ve never seen a speaker error message.” Quite right. Speakers don’t generate error messages. We wish they did! Still, we’ve collected some of the most common speaker-related glitches you’re likely to encounter, and we hope the solutions will be music to your ears.

**Error Message:** Humming or buzzing gets louder as the volume is raised in your operating system or sound application.



**Check your mixer settings if you can hear some speakers but not others. Oh, and make sure your speakers are plugged in.**

**Translation:** Often, this is the result of a poor wire connection to the sound card, although it can also result from a lot of electromagnetic interference being pumped out by a poorly shielded component within the system, especially the power supply.

**Solution:** Unplug and replug all internal and external wire connections to the sound card, making sure that each is firmly seated. Also make sure that in your sound mixer software (in Windows, double-click the speaker icon in your System Tray) you have the CD volume slider set to maximum and the Master/Play Control slider at a lower level. Be sure to mute any devices not in use.

As for buzz from poor shielding, this is a harder item to fix as finding the culprit often involves swapping out suspect parts. You can try unscrewing the power supply from the case without unplugging any wires and let it run outside the chassis to increase distance from the sound card, but this can be a more involved operation than many beginners are willing to undertake.

**Error Message:** You hear background hiss from your speakers, even if nothing is playing.

**Translation:** A certain amount of hiss is inevitable in any amplified playback device. This is figured into the specs of your speakers during manufacture. At a reasonable range of volumes and a recommended listening distance range, you should not be able to hear any hiss. With your ear against the speaker, you will hear some. The thing to be aware of is that hiss can increase to noticeable levels because of poor quality components in your sound adapter.

**Solution:** You may be too close to the speakers. See if there is a way to get them further away from you. Many speaker models can be mounted to a wall, and this may be

an option in your environment. Midlevel speakers should be at least 2 feet from your ears, and the high-end equipment (Logitech Z-680, Creative GigaWorks, and so on) should be at least 3 feet away.

A good quality sound card, such as those from Creative Labs or M-Audio, should not introduce additional hiss into your playback at reasonable volume levels. You’re more likely to pick up hiss from very cheap sound cards

or bottom-quality integrated sound adapters built into motherboards. The easiest way to test this is to plug in a good quality sound card to replace your existing audio adapter. If the extra hiss vanishes, you’ve pinned your problem.

**Error Message:** You can hear audio, but not from all of the speakers.

**Translation:** There are several possible causes for this. The most obvious is that one or more of the speakers is damaged or that the speaker jack in your amplifier/subwoofer is damaged. The only fix for this is replacement, but there are some other more likely possibilities, too.

**Solution:** Most surround sound speaker sets use three audio cables: green for the front left and right, orange for the center/sub, and black for the rear left and right. Many sound cards use the same color coding on their jacks to make sure that you plug the right cables into the right holes. However, some cards don’t do this (Audigy cards in particular, which rely on you putting a color-coded sticker on the card’s backplane), and some users accidentally mix up the colors anyway. Misrouted speaker signals may not play properly, so double-check your connections.

Next, bring up your audio adapter’s channel mixing software. You should see somewhere in the software (perhaps in the advanced settings) a set of sliders or similar controls for your different speaker channels. Make sure that all of your channels are cranked up and not muted.

If none of these ideas works, try plugging the speakers into a different PC. If this works, then your sound card is likely broken. **RS**

by William Van Winkle

# Video Card & Monitor Errors

## Some Are More Visible Than Others

**H**ere's the good news: Our in-house experience with hundreds of video cards and monitors leads us to believe that you can cure more than 90% of all video-related problems by updating and properly configuring your graphics card's drivers. The bad news is that there are still plenty of errors that can hit when you least expect them. We've singled out some of the most prominent glitches you're likely to encounter.

**Error Message:** Cycles of eight beeps when you try to power up the PC. This is called a "Display Memory Read/Write Failure" and can happen on systems that use the AMI/Award BIOS (Basic Input/Output System).

**Translation:** This beep sequence indicates a video card memory error.

**Solution:** In the old days, you used to be able to pull the memory modules off of video cards and replace them. Now, video memory is hardwired into the circuit board, and



**You can increase hardware acceleration in your display properties to fix some playback errors.**

it would cost more in labor to replace the memory than buy a new video card. However, before you run out for a replacement, try removing the card from the system, blowing any dust or dirt out of its slot, and firmly reseating it. The problem could be a

loose connection between the card and the wires in the slot.

*(NOTE: AMI/Award has two additional beep codes that can signal video card trouble. The first is one long beep followed by two short beeps. The second is one long beep followed by three short beeps. Both essentially mean the same thing: Your video card is dead. If you get one of these errors and reseating the card doesn't work, try using it on another computer. If you still don't have video, your card is dead.)*

**Error Message:** "The device cannot start. (Code 10)."

**Translation:** This can occur with NVIDIA-based display cards when the PC does not assign the correct system resources to the adapter.

**Solution:** For starters, know that this could be the result of incorrect drivers or a conflict with previous drivers from a different card vendor. You should download the latest ForceWare drivers from NVIDIA at [www.nvidia.com/content/drivers/drivers.asp](http://www.nvidia.com/content/drivers/drivers.asp) and follow NVIDIA's instructions for proper installation.

If new drivers don't help, then you probably need to make a quick change to one of your BIOS settings. You can access the BIOS by tapping the DELETE key when your system checks its memory during boot up. (If in doubt, keep hitting DELETE about twice per second from the time the system first lights up until you see the main BIOS screen.) Now, somewhere in the BIOS Features area, you may find an option called Assign IRQ To VGA. This is especially prevalent on older systems. This option must be enabled. (Some newer boards may lack this option and merely enable it automatically.) Save your settings and exit.

**Error Message:** "Cannot Create Video Window" or "Create Overlay Failed" or "Playback Failed Due To One Of The Following Reasons..." or a similar error in the interActual DVD Player software. Similar errors may be seen in other DVD playback titles.

**Translation:** Your video adapter has insufficient resources to play back your DVD-Video content.

**Solution:** First, make sure your video adapter is doing as much work as possible.

Check your hardware acceleration settings by right-clicking on the Windows Desktop and



**You can cause video problems if your screen resolution is set too high.**

selecting Properties. Click the Settings tab and then the Advanced button. In many systems, you'll then want to click the Performance tab, but this can vary according to your drivers. In ATI's recent CATALYST drivers, for example, the hardware acceleration slider is found under the Troubleshoot tab. When you find the slider, make sure it is set to Full. Then click Apply and see if this fixes the problem.

Another way to ease the load on your video card is to reduce your resolution and color depth. As above, get to the Settings tab in your Display Properties. Drop your screen resolution down to 800 x 600 and your color quality to 16-bit rather than 24- or 32-bit. You may notice some color banding in your video, but at least you'll have ascertained if your card is up to the task of DVD playback. If so, what you probably need is a video adapter with more video memory in order to operate properly at higher settings. If you're using a video adapter that is built into your motherboard and gets its memory by "sharing" RAM, consult your manual on how to allocate more system memory for the video subsystem.

One other thing to try is making sure that you have DirectDraw acceleration enabled. Click Start and Run and then type `dxdiag`. Click the Display tab and make sure that your DirectX

features are all enabled. On that same screen, double-check that your monitor type is not



**You may need to increase your display settings if your display looks blocky.**

listed as Unknown. If it is listed as Unknown, you should reinstall your monitor driver.

(NOTE: We recently found the exception to the hardware acceleration rule above while reviewing JetWay/Mach Speed's TwinMagic motherboards, which enable one PC to serve two users simultaneously. We found that with hardware acceleration set to Full, DVD-Video playback from two DVD drives to separate users did not work properly. Reducing hardware acceleration fixed the problem.)

## Monitor Errors

Just like speakers, monitors usually don't generate errors beyond letting you know that they're not receiving a signal. There is one very common exception to this that we'll detail in a second, but otherwise we thought you might appreciate some info on a couple of other common monitor-related maladies, as well.

**Error Message:** "Sync Out of Range" You will see this on an otherwise blank screen.

**Translation:** Assuming that the data cable is plugged in correctly, the video card is feeding the monitor a signal stream in excess of what the monitor can accommodate. The two main causes for this are that the user has set either the resolution or the vertical frequency rate too high. For example, you might set a new graphics card to display at 1280 x 1024, but if the monitor is only capable of 1024 x 768 resolution, you'll get a Sync Out of Range error. This is especially common in 14-inch monitors.

**Solution:** Because you obviously can't make settings changes from within regular Windows, you'll need to reboot into Windows Safe Mode.

When you restart the system, there is a point during boot up when the system switches from reporting diagnostics and detected components to loading Windows. This point is usually accompanied by a beep and the screen going black. Just before this point, you want to start repeatedly hitting the F8 key. This should bring up a menu of Windows boot options. The one you want to pick is Safe Mode.

From Safe Mode, right-click the Desktop and select Properties. Go to the Settings tab and use the slider to drop your resolution a notch or two. Reboot and let Windows try to go into Normal mode. If this still doesn't work, go back into Safe Mode and get to the Settings tab of Display Properties. Click the Advanced button, go to the Monitor tab, and check your refresh rate. The lowest advisable rate is usually 60Hz, although this works better for LCD (liquid-crystal display) screens than CRTs (cathode ray tubes). Apply the change and reboot.

**Error Message:** The color on your CRT looks all messed up.

**Translation:** There are various possible causes of this.

**Solution:** If you're lucky, your color skewing is a result of electromagnetic interference from a nearby device or static build-up within the monitor. Start with trying to degauss your screen. Some monitors have a button to perform this task. If yours doesn't, turn the monitor off for 15 minutes; then turn it back on.

Poorly shielded speakers are a leading culprit of monitor oddities, and these can also cause your display to jitter, sometimes violently. The interference source might also be wiring in your wall. Try moving the monitor to another place in the room at least several feet from its original position. To isolate potential video card problems, try plugging the monitor into a different PC.

Still stumped? Check your 15-pin VGA connector for bent or missing pins. If you're gentle and careful with a set of needle-nose

pliers, you can straighten bent pins and fix the problem.

If none of this works, you're probably dealing with a faulty color gun inside the monitor that needs repairing at the factory or replacement.

**Error Message:** You observe image persistence, or "burn-in," on your display.

**Translation:** You have left one image sitting on your screen for so long that you can still see sort of a ghost image of it when you switch to a different image or turn the display off.

**Solution:** With CRT screens, burn-in is permanent, just as it has been with TVs for decades. This is why CRT users should always take care to leave a screen saver of some sort enabled, if only to go into standby mode after a given period of inactivity.

If you see burn-in on your LCD display, don't panic. LCD technology is impervious to long-term burn-in. All you need to do is leave the screen off for a while, and the ghost image should fade away. RS

by William Van Winkle

## Most Common (And Annoying) Video Card Error

**Error Message:** "You Have Not Connected The Power Extension Cable To Your XX."

**Translation:** You guessed it. This is the only thing, along with a suggestion to refer to the Getting Started guide, that will display on your monitor if you forget to plug the four-wire power cable in to any ATI performance-level card from the RADEON 9700 PRO forward. High-end NVIDIA-based cards also require a power connection, but at least they will boot and run in a lower performance mode if you forget to plug in the power. We can't decide which approach is better. But the fact remains that leagues of system builders and upgraders everywhere are still in the habit of not needing an extra power cable for their graphics adapter and inevitably will forget and boot up without it.

**Solution:** Plug in the cable. Tie a ribbon around your finger to help you remember next time.

# Speaking BIOS

## How To Decipher What Your Computer Is Saying

**W**hen you press the power button on your computer, the BIOS (Basic Input/Output System) is the first thing to swing into action.

The BIOS is actually a piece of software stored on a chip built in to the motherboard that is responsible for booting your computer and making sure all of the devices work. At startup, the BIOS initiates a multistage process, which includes testing the hardware and loading the OS. The testing stage, or POST (power on self test), scans your devices and system to see if everything is communicating properly.

BIOS manufacturers have created a code system to communicate the POST status in the form of BIOS beeps. Some newer motherboards include a voice recording that literally tells you the status of your computer. In most cases, however, we are pleasantly unaware of the BIOS and its low-tech language. If everything is working like it's supposed to, all you hear is a beep, and the computer starts.

### All Beep & No Work

In the event of a critical error during the POST, most BIOSes use beeps via the internal speaker (or external speakers in the case of voiced messages) to alert you to what's wrong. This communication is very rudimentary. During the startup process think of your system as a metal primate, only instead of using grunts to communicate territorial rights, your PC resorts to beeps or a combination of beeps and pauses to indicate it has encountered specific problems. The "language" your PC uses depends on what type of BIOS it has. You have to translate beep codes based on the model and manufacturer. The two most dominant BIOS manufacturers are AMI (American Megatrends, Inc.) and Phoenix Technologies, but there are many others.

To determine your BIOS manufacturer and version number, click Start and Programs (All Programs if you're using Windows XP). Navigate to Accessories, click System Tools, and then click System Information. In the

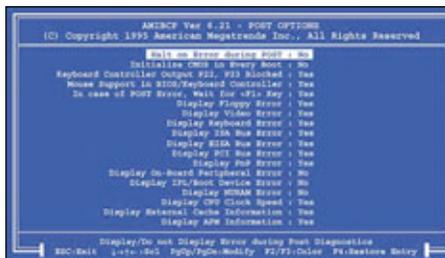
System Information window, scan the right pane for BIOS Version/Date under the Item column. In the adjacent Value column, you will find the manufacturer and version of your BIOS. For example, here's the data you might see for popular BIOS versions from the two leading manufacturers:

Phoenix Technologies, LDT 6, 00 PG, 8/21/2003

American Megatrends Inc. 1006.005, 5/6/2003

### Configure Your BIOS

Most computers have the default BIOS configuration set up so that the POST Status (sometimes called Power On Status, which is essentially the beep code) is enabled. If you



**Using the BIOS (Basic Input/Output System) configuration menu, you can disable or enable the POST (power on self test) notification.**

don't hear a beep during a normal boot, check your BIOS configuration to make sure POST Status is enabled. The users manual that came with your computer is your best source for information on how to access the BIOS setup utility. You can't assume that one Phoenix or AMI BIOS setup utility will look the same as any other setup utility by Phoenix or AMI; the setup utilities can vary in appearance depending on your system's hardware and BIOS version. If you need to enable your POST status (beep codes) look for something to the effect of POST Status or POST Notification in your setup utility, and enable it by using the appropriate key commands, checkboxes, or selectable options.

Your system's manual will likely describe the features of your BIOS and include the

settings that work best for your computer. Take caution when changing your BIOS settings because the improper configuration can prevent the system from recognizing your peripherals or even from booting. Typically pressing and holding (or pressing repeatedly) a designated key such as ESC, DELETE, F1, or F2 as the computer starts up will display the BIOS setup utility. Your manual will tell you which key to use.

### What's That Beep?

Occasionally an add-in card may issue beep codes during the POST that are not directly associated with the BIOS, which would explain why your system is operational despite emitting more than one beep. If you start hearing beeps and your system fails to fully boot, the problem is not necessarily that your hardware is faulty. You may simply have jostled components out of place by moving your system. You can sometimes solve the problem by reseating (removing and reinserting) memory modules or other hardware cards within your computer's case. Always practice extreme caution when working with the inner components of your case, and make sure to eliminate static electricity by touching a metal surface before handling any piece of your computer's hardware. Also be sure to unplug your computer.

### Decode That Code

■ **American Megatrends Inc.** If your computer came with an AMI BIOS, and it fails to boot after your internal speaker emits one, two, or three beeps, then the problem most likely lies with your memory modules. Open your computer case (remembering to dissipate static electricity by touching a grounded piece of metal). Replace one module at a time and turn your system on. If the computer boots up, then you know the memory module you just inserted is operational. Next, insert another module and start your system again. Repeat this process until all modules are replaced or until the beep code reoccurs and the boot process fails. If that happens, you

can conclude that the module you put in last is faulty. Replace it with a new module and your system should be fine.

When your system fails to boot after four to seven, or nine to 11 beeps, it indicates a problem with your motherboard or your expansion cards. As before, dispel static electricity and carefully remove all expansion cards (except the video adapter) and boot the system. In the event that the error code occurs again, there is little you can do but contact the manufacturer of your motherboard or system. If the error does not occur, replace the expansion cards one by one, starting the system after each new card. Using this process of elimination, you can determine which card is causing the problem.

If your AMI BIOS beeps five times, you may be looking at a processor error. At this point you should contact the manufacturer of your computer, though the company will likely tell you that you need to get a new CPU. In instances where a serious error such as this occurs which requires a significant investment to repair, you should attempt to duplicate the error several times to eliminate any other (possibly cheaper)

possibilities. Another reason for this error could be that the CPU fan has failed, so check to see if it is rotating. Reseating the CPU may also solve your problem.

If your AMI BIOS beeps eight times, direct your attention to the system video adapter. In the event that your video adapter is integrated with your motherboard, the board may be faulty. If the video adapter is an expansion card, remove it (again dissipate static electricity first) and start your system. If all goes well, reseat the video adapter card and start your system. If the beep code reoccurs and the system fails to boot, then your card is likely to blame. If the system boots fully, then reseating the card solved the problem.

■ **Phoenix Technologies.** If your computer came with a Phoenix BIOS, the beep codes consist of a series of beeps and pauses, which will direct your attention to the appropriate aspect of your system that is malfunctioning. In the event that your Phoenix BIOS beeps once, pauses, beeps twice, pauses, beeps twice, pauses, and beeps three more times, direct your attention to the BIOS itself. If your BIOS is upgradeable, you may need

to flash update it to solve this problem. You can visit your motherboard manufacturer's (not the BIOS manufacturer's) Web site for information on how to update your BIOS, should it require an update. Reseating or checking the expansion cards may also lead to an answer to the problem. Again, make sure to dissipate static electricity prior to handling your computer's internal components. You might need to replace the BIOS should the beeps persist, in which case you should contact your motherboard manufacturer.

A Phoenix BIOS that beeps once, pauses, beeps four times, pauses, beeps twice, pauses, and then beeps once more is alerting you to a problem with the CMOS (complementary metal-oxide semiconductor), which is the memory that stores the BIOS. Attempt to remove all expansion cards (except the video card) and then reseat them one at a time. If the error still occurs, contact your motherboard's manufacturer as you probably need to replace the CMOS.

When your Phoenix BIOS beeps once, pauses, beeps three times, pauses, beeps once, pauses, and beeps one more time, the error lies with the memory modules. You should check to see

if your motherboard supports the installed memory, or reseat the memory modules one at a time, restarting your system after each reseat.

### Post Script

The lack of an industry-wide standard for BIOS beeps means that to successfully troubleshoot your beeps you need to look up your BIOS manufacturer's beep code list for your particular BIOS version. Phoenix and AMI both have downloadable PDF documents that detail beep codes and what they refer to. You can obtain a list of AMI BIOS beep codes at [www.americanmegatrends.com/support/bios.cfm](http://www.americanmegatrends.com/support/bios.cfm). Phoenix beep codes are available at [www.phoenix.com/resources/biospostcode.pdf](http://www.phoenix.com/resources/biospostcode.pdf). 

by Andrew Leibman

AMIBIOS *Source: AMI Beep Code List (v1.6)		
# of Beeps	POST (power on self test) Technical Description*	Troubleshooting Tip
1 (booting halted)	Memory refresh timer error	Reseat memory modules one at a time and replace faulty memory.
2	Parity error	Reseat memory modules one at a time and replace faulty memory.
3	Base memory read/write test error	Reseat memory modules one at a time and replace faulty memory.
4	Motherboard timer not operational	Remove and reseat all expansion cards one at a time (except video card).
5	Processor error	Remove and reseat all expansion cards one at a time (except video card).
6	8042 Gate A20 test error (cannot switch to test mode)	Remove and reseat all expansion cards one at a time (except video card).
7	General exception error	Remove and reseat all expansion cards one at a time (except video card).
8	Display memory error	Remove and reseat video card; if integrated, motherboard may be faulty.
9	AMIBIOS ROM checksum error	Remove and reseat all expansion cards one at a time (except video card).
10	CMOS read/write error	Remove and reseat all expansion cards one at a time (except video card). Check CMOS.
11	Cache memory test failed	Remove and reseat all expansion cards one at a time (except video card).

PhoenixBIOS *POST beep codes descriptions published courtesy of Phoenix Technologies.		
Beep Patterns (Numerals refer to number of beeps and hyphens represent a pause.)	POST (Power On Self Test) Technical Description*	Troubleshooting Tip
1-2-2-3	PhoenixBIOS ROM checksum error	Remove and reseat all expansion cards one at a time (except video card). If possible, update BIOS.
1-2-3-3	Error in DMA-Controller	Contact the manufacturer, service motherboard, or replace motherboard.
1-3-1-1	Test DRAM refresh	Reseat memory one at a time and replace faulty memory, or check to see if motherboard supports installed memory.
1-3-1-3	Keyboard-controller test failure	Reseat memory one at a time and replace faulty memory.
1-4-2-1	CMOS read/write error	Remove and reseat all expansion cards one at a time (except video card). Check CMOS.

# The Fatal Exception Error

## Deciphering Processor Exception Codes



**T**alk about a scary sight. No one likes to see error messages on their personal computer, but some Windows messages are downright alarming:

“A fatal exception 0E has occurred at 0028:xxxxxxx in VXD IFSMGR(04) + 0000D4F1. The current application will be terminated.”

FEEs (fatal exception errors) don’t mean that anything has died—not your computer and unfortunately not even that annoying paper clip in Microsoft Office. They do mean that Windows 9x/Me/XP has encountered an error so severe that the application or the OS can’t continue to run. An error message like the one above can show up in its own window or in a full-screen announcement often called a Blue Screen of Death (for more on the dreaded BSOD, see “Big, Bad & Blue” on page 7.

Usually, you can bring the computer back to life with a reboot. Unfortunately, the problem that caused the error could remain unsolved. Sleuthing out a solution can be tricky, so it pays to learn about FEEs and why they occur. Read on for a deeper understanding of FEEs and for tips to help you troubleshoot your system.

### Post-Mortem

Microsoft says that FEEs happen most often when you’re launching an application or starting or shutting down Windows. Several things

can cause them, the company says, such as:

“Access to an illegal instruction has been encountered.” The application has an error in its programming or is trying to do something that the OS or processor can’t logically let it do.

“Invalid data or code has been accessed.” Some data or part of the application may be corrupted or written incorrectly.

“The privilege level of an operation is invalid.” The application is trying to do something without permission.

Most often, buggy software is to blame for these problems. Applications often have programming mistakes that ask the computer to do something it can’t or shouldn’t, which the OS will report as an FEE. Occasionally, applications that work fine by themselves may conflict with each other to cause trouble like this. Viruses and worms can also muck things up.

Some hardware problems can also spawn FEEs. Your computer’s RAM modules store the OS, applications, and data the PC is currently using as electric charges within solid-state memory chips. These memory chips need constant electronic refreshing, as they can’t retain data for long without power. If the RAM isn’t of the highest quality, it doesn’t take much to disrupt the delicate balancing act of storing 150MB or more data in a typical computing session. Heat buildup can also affect RAM’s ability to properly store data, which is why a computer without good ventilation will typically have more errors than a cooler-running PC.

Because Windows uses some hard drive space as extra room for the RAM, calling it virtual memory, any problems on your drive can crop up as FEEs. Hard drives tend to be

susceptible to excessive heat, just like RAM modules. They can also be physically damaged if they’re dropped or even set down roughly.

The same goes for your PC’s motherboard, or main circuit board. If any memory modules or device cables aren’t completely connected, you’ll see at least some errors. Dirty electrical contacts, kinked cables with broken wires inside, faulty capacitors, and hairline cracks in the motherboard are some of the most elusive sources of maddeningly intermittent errors.

All of these causes mean that there can be a wide variety of FEEs. Windows offers a helping hand by breaking these down into types. Let’s have a closer look at the Win9x/Me error message above.

“A fatal exception 0E has occurred at 0028:xxxxxxx in VXD IFSMGR(04) + 0000D4F1.”

The 0D is a hexadecimal number code that tells you the type of FEE you’re dealing with. These codes range from 00 (0) to 09 (9) and from 0A (10) to 11 (17). Microsoft offers a list of technical descriptions of each kind of FEE (go to support.microsoft.com and search for article 150314). You can also search for specific types of FEEs in WinXP, such as general protection faults, in Microsoft’s Knowledge Base. We’ve listed the main errors below in the Customary FEEs section of this article.



**Microsoft’s Knowledge Base has grown into a highly useful resource. This particular article (search for 150314) discusses all the fatal exception errors common to Windows 9x/Me.**

“VXD IFSMGR” names the file involved in the error, with the file extension switched around to the front. In other words, it’s IFSmgr.VXD.

The parts of the error message with numbers, such as “0028.xxxxxxx,” designate things such as the part of the program’s code (the list of instructions that makes up the application) that triggered the error. These numbers are probably only of interest to the software developer.

WinXP tells you the type of error in a more plain-English way. Here’s an example from Microsoft. This error happens when someone tries to run AOL 4.0 on WinXP:

“WAOL caused a General Protection Fault in module SUPERSUB.DLL at 0001:325B”

## Customary FEEs

Some FEEs are much more common than the others, so we’ll hit the highlights here.

A GPF (general protection fault; [type 0D]) is kind of the catch-all category among FEEs, so you’ll probably see it the most. This also makes its root cause harder to pin down. However, Microsoft says that GPFs often stem from a memory problem.

Data corruption in RAM should be your chief suspect here. That could mean faulty RAM modules, memory sticks not seated properly, and/or too much heat.

Microsoft also says that GPF errors can also happen if the computer’s video adapter has a faulty or corrupted driver (software that lets an OS use a hardware device, such as a printer or sound card). Some software that expects

certain video adapter driver settings, such as Hardware Acceleration set to Full, can cause a GPF if the drivers are set otherwise. Old multimedia applications can also be to blame, as well as missing system files, the company says.

A page fault (0E) happens when the OS can’t find the data it’s expecting to discover in virtual memory on the hard drive. A page refers to the section of RAM or virtual memory storing a piece of data. A page fault can also occur if the OS tries to access data in the wrong way or if a VXD (virtual device driver) file is located in the wrong folder on the hard drive.

A stack fault (0C) occurs when an application tries to access data that it thinks is stored outside its assigned stacks or areas of memory allocated to it.

## Resurrection

Click the Details button in the error window if one is offered. Jot down the first line or two of the error message so you can look it up later. You don’t have to include all the “Press any key to continue” parts, but you should write down the type of error and filename, such as:

“A fatal exception 0E has occurred at 0028:xxxxxxx in VXD IFSMGR(03) + 000CF7C”

Sometimes you can close an error window and try to continue your computing session. If you can, run an antivirus scan. Some nasty bugs can get a better toehold on your system during the bootup period before antivirus and anti-spyware software starts to run, so it’s a good idea to first try to root out any possible nasties before you shut off your PC.

More often after an FEE, you’ll have to reboot. This is especially true if your error message came in the form of a blue screen. To do this, press CTRL-ALT-DEL, press your PC’s reset button, or shut the computer off and turn it back on again after a few moments.

If Windows suggests that you start it in Safe Mode, do so for now. Safe Mode starts the OS with only essential drivers and processes. This may let you more easily troubleshoot the problem that led to the FEE, especially if a third-party app or driver is to blame.

Windows will probably offer to run ScanDisk to check for errors resulting from the reboot, as Windows can only properly end all its processes when you shut down the normal way (click Start, Shut Down, and OK or Shut Down). Let the disk scan run a complete check of your drive.

If you didn’t see any FEEs before you installed a new program, there’s a strong likelihood that the new application is at least partly to blame. Uninstall it and reinstall it. Also, check its manufacturer’s Web site for a list of FAQs (frequently asked questions), one of which may describe the problem you’re having. If so, try the remedy the FAQ suggests. For example, if the application is known to conflict with another one, you may need to uninstall one of them or download a newer version.

The software vendor site’s Tech Support or Downloads sections may offer updates or patches you can download and install. Even if an update’s description doesn’t specifically mention your problem, it may still fix a bug in the software that indirectly affects your situation. Likewise, if you suspect your video card or other hardware, look for a new driver or FAQs at the manufacturer’s site.

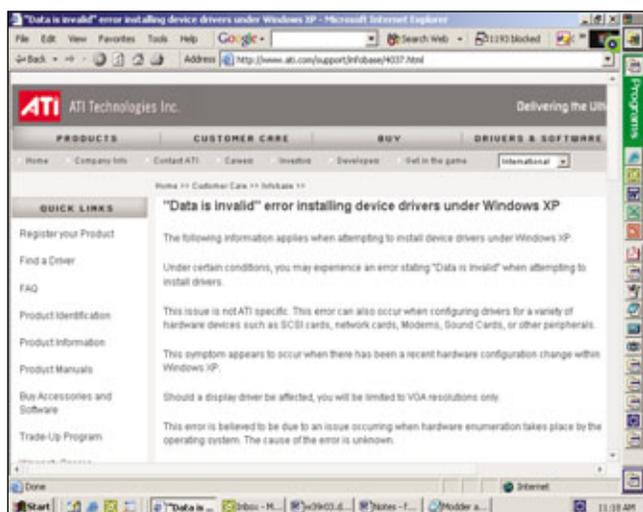
If your FEE seems to have come out of the blue, try looking it up in Microsoft’s Knowledge Base for troubleshooting help. Try keywords such as the type of error and the file name, such as “fatal exception 0E IFSMGR,” rather than the strings of numbers in the message.

On the hardware side, make sure that your computer’s fans are all working and that ribbon cables aren’t blocking the airflow through the case. With your computer off, remove and reinstall your RAM modules to make sure they’re seated properly. RAM from a quality manufacturer, such as Corsair, Micron/Crucial, or Kingston, is generally more trouble-free than cheaper brands.

Finally, check your hard drive for errors using ScanDisk or CheckDisk and defragment it using Disk Defragmenter. If your drive has very little free space, uninstall apps or delete data you don’t need or upgrade to a bigger drive.

Fatal exception errors can be tricky to diagnose, but now you know that you don’t have to let them kill your computing fun. **RS**

by Marty Sems



**Besides buggy applications, hardware device drivers are often to blame for fatal exception errors. Video card drivers top the rogues’ gallery, so if you encounter FEEs, you may need to spend some time browsing the FAQ section on the Web site of the manufacturer that produced your card.**



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It wasn't so long ago that if you wanted to bring your data with you, your hardware had to come too. Well, that's all in the past now thanks to the new SanDisk Cruzer™ Mini. At under half an ounce, the Cruzer Mini goes anywhere, and with up to 256MB of flash memory, it takes a lot with it. Hi-speed USB 2.0 compliant, SanDisk's Cruzer Mini lets you transfer data faster than ever before. And at less than 8mm thick, all it needs is a single USB slot. Just drag, drop, and go. It's all about convenience – no extra hardware, no worries.

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## X

XX An error has occurred in your program. To keep working anyway, click Ignore and save your work to a new file. To

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