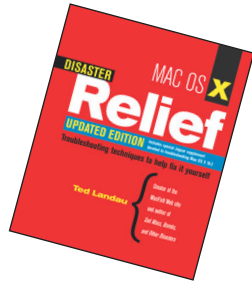




# Top Ten Troubleshooting Tips for Jaguar

By Ted Landau

When Apple upgraded Mac OS X to 10.2 (Jaguar), it didn't forget troubleshooters. Among the many new features in Jaguar are ones that are especially useful for solving problems. Here are 10 of my favorites:



## 1. Do a clean install

If your Mac OS X software ever gets sufficiently messed up that you want to start over and reinstall it, Jaguar gives you a new way to do this. It's especially useful if you have already installed 10.2.1 or later, and want to start over again by first downgrading to 10.2. In previous versions of Mac OS X, Apple insisted that doing a downgrade required that you first erase the drive entirely. Not so in Jaguar. Instead, you start-up from the Mac OS X 10.2 Install CD and select the Archive and Install option via the Options button in the Installer's Select Destination window. You'll also want to select the Preserve Users and Network Settings sub-option. The Installer will place a fresh copy of 10.2 on your drive but still preserve most of the custom changes and additions you have made. All the old software is moved to a new folder called Previous Systems, just in case there are files there that you may still want to use.

One hitch: If you have the Mac OS X 10.2 Update CD (as available via the Mac OS X Up-to-Date program) instead of the Install CD, it does not include the Archive and Install feature. Bummer.

## 2. Get permission

If you ever get an error message that says you cannot do something (typically move, delete, or open a file)—because you do not have sufficient permission—Jaguar's Finder now includes a way to work around almost all of these hassles. Previously, most solutions required either using Terminal or a shareware utility.

The Finder solution, assuming you are an administrator, is to select Get Info (Command-I) for the problem file and/or folder. From the Info window, go to the Ownership & Permissions section and make yourself the owner, via the Owner pop-up menu. You should be able to do almost anything you want without getting the permissions error. If desired, you can revert back to the previous setting when you are done.

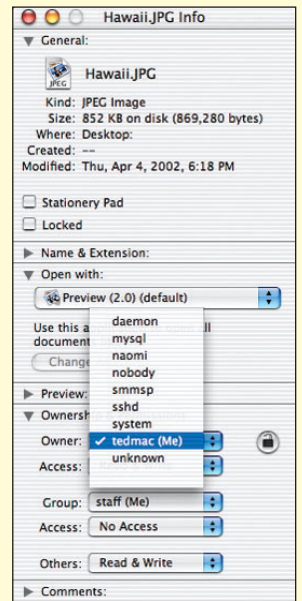
One caveat: Making changes to the contents of the /System folder or the Unix software is generally not recommended. Be cautious here.

## 3. Fix permissions

In some cases, permissions for software installed by Mac OS X (such as the files included in the /System folder) may get altered by mistake (a poorly written Installer package could do this, for example). In such cases, it would be nice if you could reset the permissions for all OS X software back to their defaults.

With Jaguar, you can. To do so, launch Disk Utility and select First Aid. Now click the Repair Disk Permissions button. This has no effect on third party software or on any files in the Users directory.

A tip: Disk Utility obtains its information about permissions settings from the Receipt files (in the /Library/Receipts folder). Do not delete the files here. In fact, if your Receipts folder is empty, the options to Verify or Repair Disk Permissions are disabled!



## 4. Do a Safe Boot

Jaguar includes a Safe Boot procedure. It disables at startup all non-essential text files (stored in /System/Library/Extensions) and third-party Startup Items (located in /Library/StartupItems). This is useful if one of these items has become corrupt and is thus preventing a normal startup.

To perform a Safe Boot, hold down the Shift key at startup immediately after you hear the chimes. Keep holding it until the Mac logo appears on the screen. If you were successful, the words "Safe Boot" should now appear in the logo box. You can now release the Shift key.

The advantage of a Safe Boot is that it can circumvent a startup crash or kernel panic that one of these files might trigger if it tried to load. Once you have succeeded in starting up, you can locate the problem file and remove it from its folder (a utility such as MOX Optimize can help do this). If you have no idea which file is the culprit, suspect recently added and/or third-party files. Once you disable the culprit, you can restart normally. Contact the vendor of the file for further advice.

By the way, a carry-over from Mac OS X 10.1.3 or later, if you hold down the Shift key at the login window (after typing your password), you disable all items listed in the Login Items System Preference. This can help bypass a crash caused by one of these items.

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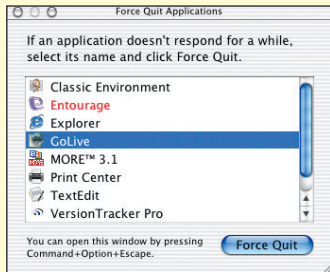
## 5. Check Kernel panic logs

If you get a message that tells you (in several languages) that "You need to restart your computer. Hold down the Power button for several seconds or press the Restart button," you just got what is called a kernel panic. It is Mac OS X's equivalent of a system crash. As the message states, you need to restart. New in Jaguar, after a kernel panic occurs, details of what happened are recorded in the panic.log file in /Library/Logs. In general, the contents of this log file will only be intelligible to developers, helping them to debug the cause of the panic. However, if you are technically-inclined, check out this Apple document which explains what the log text means: <http://developer.apple.com/technotes/tn2002/tn2063.html>.

## 6. Check for red text in Force Quit window (or "Force Quit" text in Dock item)

New in Jaguar, if an application is frozen (not responding to any input and having an endlessly spinning cursor icon), the Force Quit window (accessed via Command-Option-Escape) displays the application's name in red, rather than black, text. This is a helpful way to confirm that the application truly is frozen, rather than just taking an unusually long time to complete a task.

Similarly, if you select the Dock menu for an application, the Quit item will automatically shift to Force Quit (no need to hold down the Option key), if the application is frozen. One advantage of selecting to Force Quit from the Dock menu is that it bypasses the Force Quit window. This may allow a Force Quit to succeed in situations where the Force Quit window is not responding.



## 7. Access CUPS from your browser

Apple overhauled the printing software in Jaguar to use something called CUPS (Common Unix Printing System). Print Center is now a front end for CUPS, but you can also access CUPS software directly by entering this URL in your browser: <http://127.0.0.1:631/>. From the CUPS Administration page that appears, you can do almost anything you can do from Print Center, plus some things you cannot do any other way. For example, you can select to print a test page from the CUPS Manage Printers page.

Of particular interest, click the Manage Jobs button from the main CUPS page. From here, click Show Completed Jobs. When you do this, you get a list of the names of all the documents you have printed. This information is stored in the page\_log file in /var/log/cups. By editing the cupsd.conf file (in /etc/cups), you can adjust the maximum number of jobs that are preserved in page\_log (MaxJobs; default is 500). You can similarly set whether or not to preserve the list of completed jobs at all (PreserveJobHistory; default is Yes).

## 8. Get third-party Menu Extras working

Apple changed Jaguar so that most third-party Menu Extras (those items that appear in the right hand side of the menu bar) no longer work. Happily, you can re-enable these banned Menu Extras via a utility called Menu Extra Enabler ([www.unsanity.com/haxies/](http://www.unsanity.com/haxies/)).

A few Menu Extras will still crash, even with Menu Extra Enabler installed. For these uncooperative items, an additional step is needed. Launch Terminal and type the following (the {space} text indicates potentially non-obvious places where a space exists):

```
sudo ln -s {space}
/System/Library/Frameworks/ApplicationServices.framework/Versions/
A/Frameworks/HIServices.framework {space}
/System/Library/PrivateFrameworks/HIServices.framework
```

## 9. Fix Finder oddities by deleting plist and cache files

A variety of occasional problems in the Finder—such as applications that look like folders, applications that crash on launch, Finder menu commands that do not work, or an inability to get drag-and-drop to work—can be fixed by deleting one or more of an assortment of preferences (plist) and cache files that may have become corrupt.

If you don't want to be bothered hunting down and deleting these files yourself, there are several shareware utilities that automate the procedure for you. I especially recommend Dragster (<http://www.ifthensoft.com/>). It also provides a complete list of all the files/folders it will delete. Don't worry about trashing these files. New default copies are re-created automatically.

## 10. Search and view package contents

This last tip is not unique to Jaguar, but is still worth a mention.

The Finder's Find command does not search the contents of packages (files that end in pkg, such as installer package files). If you want to quickly search for a file that you believe is inside a package somewhere on your drive (but you are not sure where), a great solution is to use Locator (a front end for Unix's locate command). The simplest way to use it is to type "/" (root level) in the In text box; then enter the desired search text in the Locate text box.

A related tip: You can quickly navigate anywhere on your drive, including inside packages, by typing file://local in your Web browser. Each directory listed is a hypertext link to the contents of the directory (assuming you have permission to view it). As a bonus, the Web listing even shows normally invisible folders and files.

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