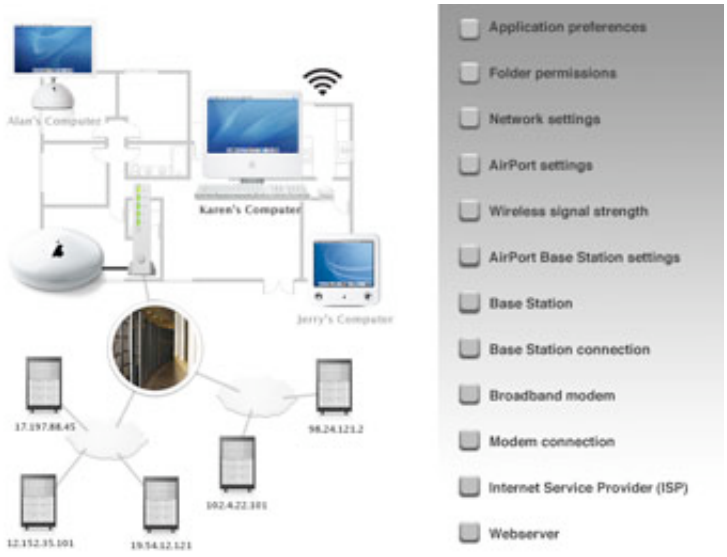
Solving Problems

Whether you are a veteran Mac user or have just plugged-in your machine for the first time, understanding how your Mac works, and how to approach potential problems, can save you time.

Through a focused, systematic approach to troubleshooting you can isolate problems, generate a list of potential solutions and apply them one at a time. In addition, an increased knowledge of how your computer works will help you make the most of your Mac.

Contents

Taking a Systematic Approach to Troubleshooting



You love your Mac because it works just the way you want it to. Of course, when something does go wrong, you want the problem fixed as quickly as possible.

When troubleshooting a problem with your Mac it's a good idea to stay calm and follow a few simple guidelines. This way you'll have your Mac back up and running in virtually no time.

Taking a Systematic Approach to Troubleshooting

What to remember when troubleshooting a problem with your Mac

1. Take notes to document the steps you took to solve the problem.
2. Gather information about hardware and software settings.
3. Isolate the problem to a specific cause by eliminating software points of failure before hardware points of failure.
4. Determine if the problem is consistent or intermittent. Problems that can be reproduced are generally easier to fix.
5. If possible, undo any recent changes to your Mac's configuration.

Taking a Systematic Approach to Troubleshooting

Take notes to document the steps you take while troubleshooting

Taking notes while troubleshooting a problem with your Mac might not help you solve the problem faster, but it will help if the problem returns. Knowing your actions and results will help you solve similar problems in the future, and is useful if you need to call technical support for additional assistance.

Start from the beginning

When an application stops responding, or Mac OS X doesn't work the way you expect, simply forcing the application to quit or restarting the computer often will solve the problem.

Isolate the problem

Before you can solve most problems you have to determine the cause. When determining the problem, start by eliminating points of failure. Start with the easy things to eliminate and work toward the more difficult. In most cases, you'll focus on software problems before hardware failure.

Determine if the problem is consistent or intermittent

One way to help isolate the problem is to determine if the problem is consistent or intermittent. When troubleshooting an intermittent problem, try to find a pattern to the problem. Often times a problem that appears to be intermittent actually occurs when you perform a specific task, or open a particular file. Once you figure out the pattern, the problem can usually be solved quickly.

Undo recent changes

If you find you start having problems with your Mac after making a configuration change, installing new software, or adding new hardware, try undoing the change or removing the new hardware. In many cases undoing a recent change will solve the problem.

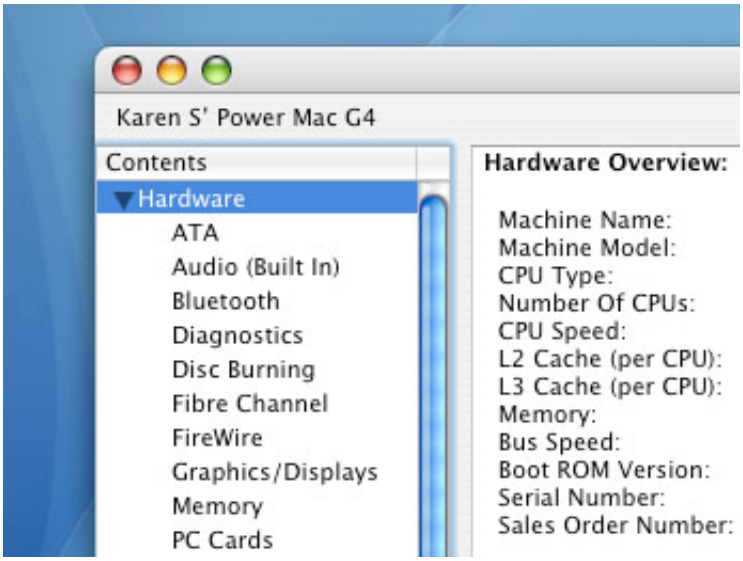
About this Mac dialog

If you need to quickly access information about your Mac, such as the OS version number, build number, or your hardware serial number, go to the Apple menu and choose About This Mac. Under the Apple logo, you'll see the the version number in grey. Click the version to view the build number, and click again to view your Mac's serial number. This information can be useful if you ever need to contact technical support.

Hardware Test Disc

The Mac OS X installation Disc that came with your Mac is also a Hardware Test disc. To use the Hardware Test Utility insert the disc into your Mac's CD/DVD drive and restart your Mac while holding the Option key. Select Hardware Test from the list of available volumes, and then click Start Test to check your hardware. If any problems are found with your hardware you should contact an Apple Authorized Repair facility.

Taking a Look at Your Mac's Hardware



For the most part, all Macs have the same basic components. This means that using a Mac is like driving a car; you might find yourself using a different model from time to time, but the basic features and interface are the same. Once you understand how to use one Mac, you should be comfortable using other models.

Macs have many of the same components as other computers. You'll use a keyboard, mouse or trackpad, and a display. Depending on the model of your Mac, you'll also find a variety of devices and ports.

Taking a Look at Your Mac's Hardware

Use System Profiler to learn about your computer's hardware, software, and network

1. Choose About This Mac from the Apple menu.
2. Notice the processor and memory information listed in the About pane.
3. Click the More Info button to launch System Profiler.
4. In the Contents list, select a hardware component, such as Disk Burning, to view its information.
5. To view information about the software installed on your Mac, click Applications in the Contents list.
6. Click the Network item in the Contents list to view information about how your Mac connects to a network.

Taking a Look at Your Mac's Hardware

The role of your CPU, hard disk, and memory

Just like with other computers your Mac's CPU (Central Processing Unit, often called the processor) processes information; your computer hard disk stores data and applications; and your Mac's memory holds the applications and data that you have open. Depending on your Mac, you might have one or two processors. Having a second processor allows you to perform two processor intensive tasks at the same time, such as render a video clip in iMovie and listen to a song in iTunes, without impacting performance.

Get to know the type of optical drive you have

There are several types of optical drives that come with a Mac. Some older Macs have CD-ROM drives that can only read CDs. More recent Macs have either a Combo Drive or a SuperDrive. A Combo Drive can read and write CDs and read DVDs, while a SuperDrive can read and write both CDs and DVDs. In System Profiler, click the ATA item in the Contents list to find out what kind of optical drive you have if you're not sure.

Using external devices with your Mac

Most Macs come with built-in FireWire and USB ports so that you can connect a variety of peripherals from printers to scanners and digital cameras, and even external hard disks. In most cases you can use the same devices on your Mac as you do on a FireWire or USB equipped PC.

What is FireWire?

FireWire is also known as IEEE 1394, i.link and Lynx. There are two different versions of FireWire, FireWire 400 and 800, supporting throughput of 400 Mbps and 800 Mbps respectively. Unlike USB, FireWire 400 and 800 use different connectors to connect devices to your computer. A single FireWire port can be used to connect up 63 external devices. FireWire supports both Plug-and-Play and hot plugging, and also provides power to peripheral devices.

Know which graphics card your Mac uses

The type of graphics card that you have in your Mac will determine the size of display you can use with it. Most graphics cards built in to a Mac will allow you to view a screen size of 1024 x 768 or larger with millions of colors, as well as use multiple displays to extend your desktop. To find out why type of card you have, open the System Profiler, and then select PCI/AGP Cards from the Contents list.

What is Open Firmware?

Firmware is a combination of software and hardware, which controls a computer from the time that it is turned on, until the primary operating system starts. Computer chips that have data or programs recorded on them that can be modified are firmware. Open Firmware in many ways is similar to BIOS on PCs.

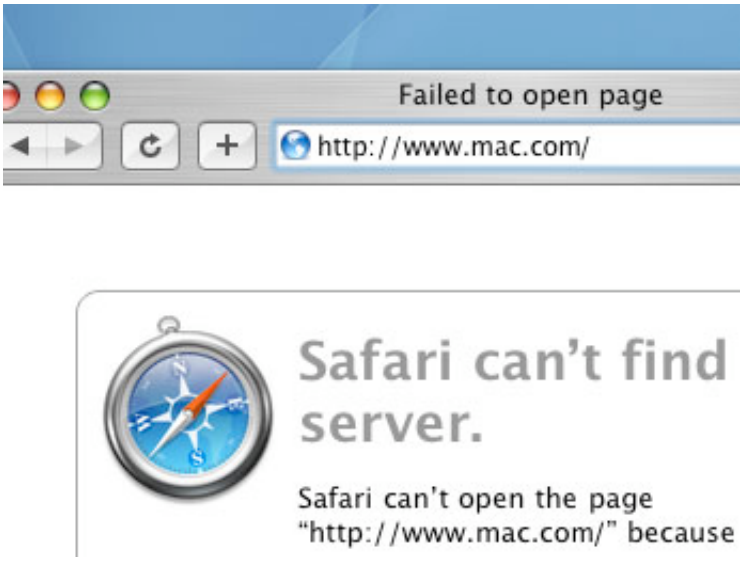
What is parameter RAM (PRAM)?

PRAM stores certain system and device settings in a location that Mac OS X can access quickly. Exactly which settings are stored in the computer's PRAM varies depending on the type of computer as well as the types of devices and drives connected to the computer. Some information stored in PRAM includes: time zone settings, startup volume choice, and speaker volume. If PRAM is reset, you may need to verify your time zone, startup volume, and volume settings using System Preferences. Certain firmware updates may reset PRAM as a normal part of their installation process.

Send System Information to Apple

If you are having a problem with your Mac and you need to contact AppleCare, you can send information about your Mac to Apple using the System Profiler. To send your information, go to the File menu and choose Send to Apple.

Troubleshooting Your Internet Connection



The Internet is a part of our everyday lives. Whether you browse the web, send email to coworkers or family, or use iChat to talk with friends, you've come to trust that your Internet connection will work.

When your Internet connection doesn't work properly it can be frustrating and sometimes difficult to determine the exact problem. In many cases, the problem will be with a server on the Internet or maintained by your ISP, and your connection will be back up in no time.

Troubleshooting Your Internet Connection

When you have an Internet connection problem, check the following

1. Determine if the connectivity problem effects all of your Internet applications or just one.
2. Try to access a web page with an IP address rather than a domain name.
3. Verify that your network settings are correct.
4. If you're connected to the Internet using an AirPort base station, make sure you're in range of the base station.
5. Power-cycle your modem or router.
6. Contact your ISP to check for known outages, or scheduled maintenance.

Troubleshooting Your Internet Connection

Determine if the problem effects all your Internet applications or only one

When troubleshooting an Internet connection problem, try to determine if the problem affects only one application, or every application. For example, if you're having trouble sending or receiving email, check to see if you can browse the web. If you can browse the web, then you know the problem is with your mail client or the mail server, and not your Internet connection.

Use an IP address rather than a domain name to access a web page

If you're having trouble browsing the web, checking email, or using other Internet applications, try accessing a web page using its IP address rather than a domain name. If you can access web pages using IP addresses, you'll know there isn't a problem with your connection. If you can access a web page using an IP address but not its domain name, the problem lies with your ISP's DNS server.

Verify your network settings

When troubleshooting your Internet connection, one good place to check is in System Preferences. Even if you haven't changed anything, it's a good idea to verify your network settings before calling your ISP for assistance. In many cases a setting may have been configured incorrectly, or your computer might simply have not been assigned an IP address from your ISP.

Make sure you're in range of your base station

If you're using an AirPort base station to connect to the Internet, make sure that you are in range of the base station. Go to the AirPort icon in the menu bar and choose Open Internet Connect to check your signal strength, turn AirPort on, or change the network you are using.

Power-cycle your modem or router

If you've already checked your Mac's network settings, you can turn off your modem or router and then start it back up. In some cases this can get you reconnected to your ISP without having to call them.

Contact your ISP to check for known outages or scheduled maintenance

If you've checked that all your cables are connected, checked and rechecked your settings, and power-cycled your modem, but still can't connect to the Internet, you might need to call your ISP. Rather than waiting for a technical support representative, listen to any automated messages first. In many cases the ISP might be having problems with a server and will have a message describing the problem, with a repair estimate.

Network Diagnostics tool

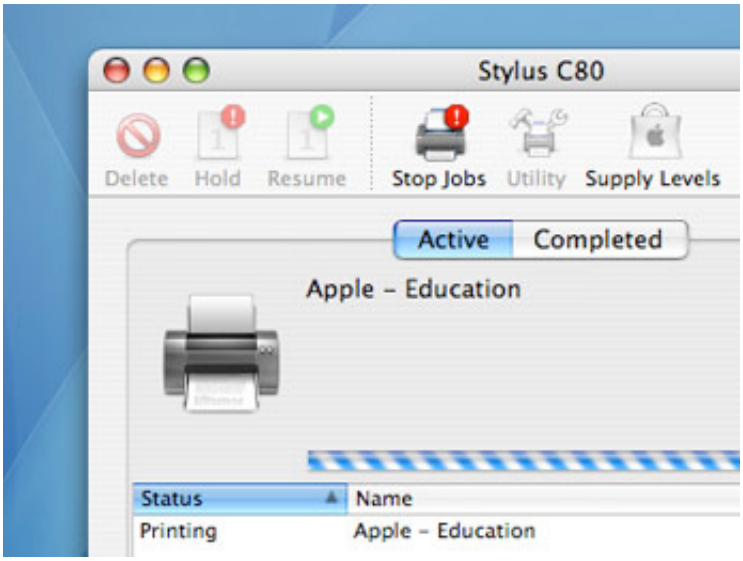
You can use Network Diagnostics to help solve Internet connection problems. If you can't connect to the Internet using Safari or Mail, for example, Network Diagnostics opens and walks you through solving the connection problem. You can use Network Diagnostics to

diagnose problems related to your Built-in Ethernet, AirPort, or Internal Modem connections.

Network status overview

In the Network pae of System Preferences you can quickly check the status of any of your network connections. Choose Network Status from the Show pop-up menu to view your active network ports. A green dot means the port is active and connected, yellow means the port is active but not connected, and red means the port has not been configured.

Troubleshooting Your Printer



Printing is an important part of working with your Mac, especially if you make your living using your computer. There might come a time where you have difficulty printing a document.

If you run into a problem printing a document, you'll be happy to know that by checking a few simple things you'll be printing again in no time.

Troubleshooting Your Printer

If you're having trouble printing, try the following

1. Check to make sure that all your cables are properly connected.
2. If you're using a network printer, check to see if other computers can print to it, or if you can print to another network printer.
3. Check to see if you can print from another application.
4. Check the lights on the printer. Sometimes they'll tell you if the printer is out of paper, out of ink, jammed or if there is another problem.
5. Upgrade the printer drivers.
6. Remove and reinstall the printer in Printer Setup Utility.
7. Reset the printing system

Troubleshooting Your Printer

Make sure all your cables are properly connected

It might seem like a trivial thing to check, but many printer problems can be traced to a disconnected or loose cable.

Troubleshoot a network printer

If you're having trouble printing to a network printer, try printing to another printer, or printing from another computer. If you can print to another printer on your network, check to make sure the printer you want is turned on and connected to the network. If you can print to the printer from another computer, make sure your computer is connected to the network.

Check your print queue

Use Printer Setup Utility to check the status of your print job. Open System Preferences, click Print & Fax, click Printing, and then click the Set Up Printers button. Double-click the printer in the Printer List and check the status message next to the printer's icon. If you see Jobs Stopped, choose Start Jobs from the Printers menu. You can also check the Status column to see if a print job is holding up the queue because of an error. If it is, delete the job.

Update your printer drivers

Because installing printer drivers is optional when installing Mac OS X, it could be that the drivers for your printer were never installed. Check the printer manufacturer's web page for the latest drivers for your printer.

Remove and reinstall the printer

Open Printer Setup Utility, remove the printer, and then reinstall the drivers. This can correct the problem if the driver was installed incorrectly the first time, or if it has become corrupted.

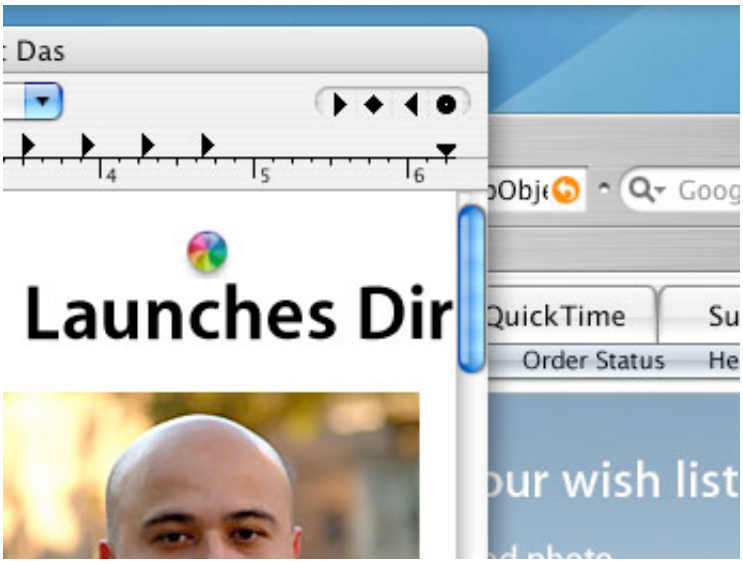
Make sure you're printing to the printer you expected to

Make sure you used the printer you expected to use. Go to the File menu, choose Print and check the name of the printer that's selected in the Printer pop-up menu. If you did have the wrong printer selected, you might also want to go pick up your document from the other printer.

Reset the printing system to restore defaults

If you suspect that a corrupted printer preference is causing printing problems, use the Printer Setup Utility to reset the printing system. Open Printer Setup Utility, go to the Printer Setup Utility menu and then choose Reset Printing System. After entering an administrator's password, all your printer's preferences revert to default settings, and all print jobs and queues are deleted.

Troubleshooting an Application that has Stopped Responding or Unexpectedly Quits



Occasionally an application may take longer than you think it should to perform a task. If you believe that an application has become unresponsive, and you want to force it to quit, you can do so without affecting other applications. When you force an application to quit, you lose any unsaved changes to its open files.

Forcing an application to quit should be a last resort. In most cases, you can wait a few extra minutes for the computer to finish what it's doing. If you do force an application to quit, you can usually reopen it and not see the problem again.

Troubleshooting an Application that has Stopped Responding or Unexpectedly Quits

When an application stops responding, try the following

1. Force the application by choosing force quit from the Apple menu, and then reopening the application.

2. If an application stops responding when you open a particular document, try opening the document in a different application, or try another document.

3. If the application consistently stops responding, create a new user on your Mac and open the application from that account.

4. If you can open the application as another user, but not from your account, return to your account, delete the application's preference files, and then attempt to reopen the application.

Troubleshooting an Application that has Stopped Responding or Unexpectedly Quits

Open the document in a different application

If you find that a specific document causes your application to stop responding, try opening the document in a different application if you can. If a document has become corrupted it can cause your application to stop responding or quit unexpectedly.

Create a new user to test the application

If an application consistently stops responding you can create a new user and open the application as that user. If the application stops responding as the new user, you've eliminated a corrupted preference file as the cause of the problem.

Delete an application's preference files

If an application works when run from another user account, but not yours, return to your account and try deleting the application's preference files. To locate an application's preference files open the Library folder in your home folder, and then open the Preferences folder. In the Preferences folder look for any files or folders containing the name of the application and drag them to the trash.

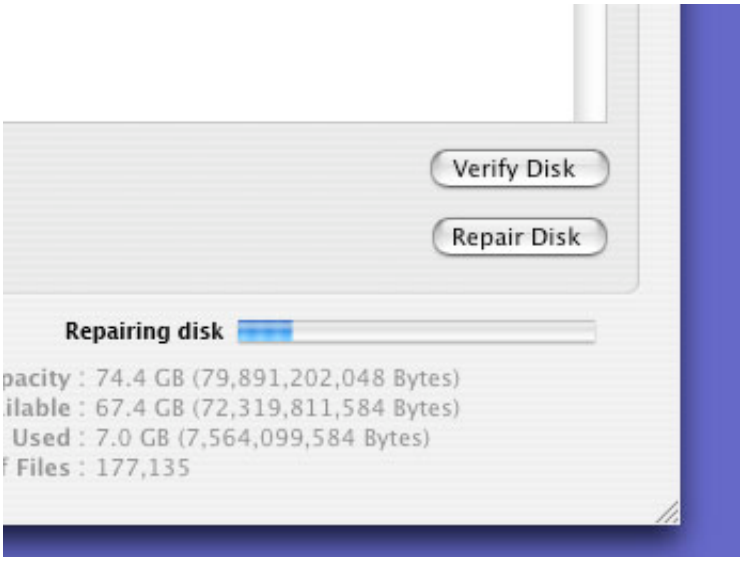
Use Disk Utility to repair file permissions

If an application quits as soon as you try to launch it, open Disk Utility, select your hard disk and then click the Repair Disk Permissions button. If an application's permissions are incorrect, it might not be able to open normally.

Safe Launch

If an application unexpectedly quits you can use Safe Launch to reopen the application. Safe Restart backs up the application's preference files and creates new ones. This way, if a corrupted preference caused the application to quit, it won't happen again.

Troubleshooting a Persistent or System Problem



If an application consistently stops responding or quits unexpectedly, or the problem occurs with multiple applications or Mac OS X, you might have a problem with the operating system itself.

Mac OS X includes tools to help you diagnose and fix just about any system problem that might arise.

Troubleshooting a Persistent or System Problem

If you suspect that you have a system wide problem, try the following

1. Restart your Mac.
2. Start your Mac in Safe Mode.
3. Use Disk Utility to repair file permissions.
4. Boot from the Mac OS X installation disc and use Disk Utility to repair the hard disk.
5. Reinstall Mac OS X.

Troubleshooting a Persistent or System Problem

Restart your Mac

If you are having a persistent problem with your Mac, try restarting it. Restarting your Mac will close any open applications, clear the memory, and empty the system cache. In most cases this is enough to fix minor problems you encounter with your Mac.

Use Disk Utility to repair file permissions

If an application quits as soon as you try to launch it, open Disk Utility, select your hard disk and then click the Repair Disk Permissions button. If an application's permissions are incorrect, it might not be able to open normally.

Use Disk Utility to repair hard disk errors

If you suspect that the problem you're having is caused by disk errors, you can use Disk Utility to check for and repair most hard disk errors. To check for or repair disk errors you'll have to start your Mac from the installation disc, go to the Utilities menu and choose Disk Utility. In Disk Utility click the Verify Disk button to check for errors, or the Repair Disk button to fix any errors.

Start your Mac in target disk mode

If you don't have an installation disc handy, but have a second Mac, you can start your computer in Target Disk Mode by holding down the T key when you start your Mac. When you see a blue screen with a FireWire logo, connect your Mac to another with a FireWire cable, and it will show up in the SideBar of a Finder window as a FireWire drive. You can then run Disk Utility to repair disk errors on the troubled Mac.

Use the System Profiler from the installation CD

You can use the System Profiler from the Mac OS X installation disc to view information about your Mac even if you can't start it from your hard disk. This will allow you to gather information about any possible hardware or software problems, and allow you to make better decisions as to how to resolve the problem.

Use Safe Boot to fix a Mac OS X problem

When you start your Mac using Safe Boot, your font cache is deleted and Mac OS X ignores any user fonts. If the problem was with a corrupted font in your font cache, the problem will be fixed. If it is a corrupted user font, the problem is isolated to the Fonts folder in the User's home folder.

Understanding the Mac OS X Startup Process

Most people will never know exactly what happens when they start their Mac. All most people need to know is that after they press the power button the Finder appears, allowing them to access their documents and applications.

But, knowing what happens when you start up your Mac is the first step in better understanding how your Mac works. Whether you're a system administrator supporting other users or a Mac enthusiast who just wants to know more about how your computer works, knowing the startup process can help you troubleshoot potential problems.

Understanding the Mac OS X Startup Process

What happens when you turn on your Mac?

1. When your Mac is first turned on, it checks to see if the basic hardware components are working properly. If they are, you'll hear the startup chime if your Mac's volume is not muted.

2. After the startup chime, your Mac determines which operating system to use. This is when you can hold down the C key to boot from a CD, for example.

3. When the screen turns grey with the Apple logo in the center, the operating system is being loaded into memory. While the operating system loads you'll see a spinning gear below the Apple logo.

Understanding the Mac OS X Startup Process

Starting Your Mac in Safe Boot

If you're trying to solve a problem that might be caused by a third-party kernel extension or a startup item, starting your Mac in Safe Boot can help isolate the problem. To start in Safe Boot, hold down the Shift key after the startup chime.

What does it mean that Mac OS X is UNIX based?

Beneath the surface of Mac OS X is a UNIX foundation, which ensures that your computing experience remains free of system crashes and compromised performance. You also don't have to worry about the number of applications you have open—just continue working and the memory management will allocate memory as you need it. If an application quits unexpectedly, the protected memory prevents it from causing the rest of the system, and other applications, to stop responding.

Start in Mac OS 9 or a different version of Mac OS X

When starting your Mac you can hold the Option key to choose which volume to start your Mac from. This can be useful if you're starting your Mac from an external hard disk, a CD with more than one bootable volume, or from a second partition of your internal hard disk. Starting your Mac from another volume allows you to restart your Mac normally without changing settings in System Preferences.

How the login window works

Many Mac OS X users won't see the login window, but it's still there and doing its job. If you have multiple users on your Mac, or if you have turned off auto login, you can choose your name from the list of users, and then type your password to log in. For added security, you can even change the login window to require a username and password, rather than displaying a list of users.

Troubleshooting a Mac that Won’t Start Properly

When you turn on your Mac you’re used to hearing that familiar tone, and a few moments later seeing Mac OS X fully started and ready for you to do your work. But what can you do if your Mac doesn’t start properly, or doesn’t start at all?

There are a few quick and easy things to check if your Mac won’t start up at all, such as making sure the power cord is plugged in properly. If your Mac does start up, but Mac OS X doesn’t start properly, you can try starting from a CD or use Safe Boot to better diagnose the problem.

Troubleshooting a Mac that Won’t Start Properly

Check the following things if your Mac won’t start

1. Make sure the power cable is properly connected to your Mac and the power outlet.
2. Remove any external devices connected to your computer.
3. Remove any third-party internal hardware, such as RAM or PCI cards installed in your Mac.
4. Try booting to Safe Mode, from the Mac OS X installation CD, or the Apple Hardware Test CD.
5. If the problem persists, consider reinstalling Mac OS X from the installation disc.

Troubleshooting a Mac that Won't Start Properly

Remove any external devices

If your Mac won't start properly, try removing any external devices, except for your display, keyboard and mouse. If an external device isn't working properly it can cause startup problems. If you find that the cause of problems is an external device, try attaching it to another Mac to see if you have the same problem.

Remove 3rd party internal hardware

Defective memory or incompatable PCI cards in your Mac can prevent it from starting properly. If you've removed external devices from your Mac and still cannot boot, try removing any 3rd party memory or PCI cards that you have added to your Mac. If removing these components solves the problem, reinstall them one component at a time to find which is the cause of the problem.

Boot from a CD

If your Mac doesn't boot properly and you suspect a problem with Mac OS X, try starting your Mac from your Installation disc. From the Installation disc you can run diagnostics to check your hard disk for errors, and perform other troubleshooting steps. Also, if you can start your Mac from a CD, you have isolated the problem to either your hard disk, or some data on your hard disk.

Start Mac OS X in Safe Boot

Safe Booting forces a directory check of the boot volume and loads only required kernel extensions and Apple-installed startup items. To Safe Boot your Mac into Safe Mode, start your Mac and as soon as you hear the startup tone, press-and-hold the Shift key.

Start your Mac in FireWire target disk mode

Starting your Mac in FireWire target disk mode will allow you to connect it to another Mac to run diagnostic utilities on your hard disk, or copy important files from one Mac to another. To start your Mac in FireWire hold the T key when starting your Mac. Your screen will turn blue with a yellow FireWire logo, when you see this you can connect your Mac to another Mac with a FireWire cable and your Mac will show up as a FireWire disk drive.

Using the Archive and Install option when reinstalling

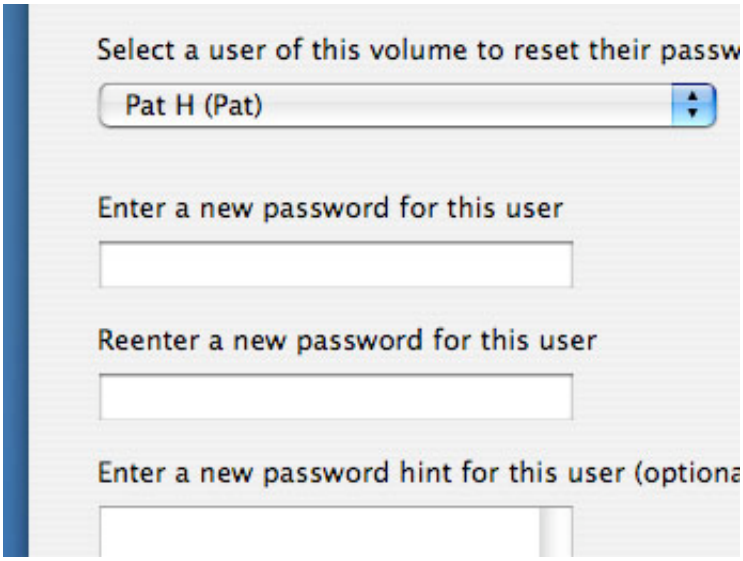
If you are unable to back up your important information before reinstalling Mac OS X, use the Archive and Install option to install Mac OS X. This will back up your current installation and install a new operating system, while preserving your user preferences and most applications. After performing an Archive and Install you will need to reinstall some of your applications for them to work properly.

Reinstall Mac OS X

If you are unable to resolve a problem with Mac OS X, and you know that the problem isn't hardware related, you might try reinstalling Mac OS X. The best option when

reinstalling is to erase your hard drive and install Mac OS X. Before doing this, make sure that you've backed up all of your important data to an external hard disk, CD or DVD, or another computer.

Resetting User Passwords



One of the most common problems many users have when using their Mac is forgetting their password. This can prevent the user from installing applications, accessing other passwords in their keychain and even logging in to their account.

With an administrator's account or a Mac OS X installation disc, you can easily change the password for any account on your Mac. When you reset a password for another user on your Mac it's a good idea to have them change it again immediately,so they have a more secure and memorable, and secure,password.

Resetting User Passwords

Start your Mac from the installation disc to reset a password

1. Insert the Mac OS X installation disc and restart your Mac.
2. Hold the C key while your Mac restarts.
3. Choose the language you want to use, and then click Next.
4. From the Utilities menu, choose Reset Password.
5. Choose your hard disk, and then choose the user you would like to change the password for.
6. Enter a new password, verify the password and then click Save.
7. Close the Reset Password window by clicking the red button in the upper-left corner.
8. Go to the Installer menu and quit the installer.
9. Restart your Mac and log in to the account with the new password.

Resetting User Passwords

Resetting a forgotten password

An administrator can change the password of any user by selecting a user in the Accounts pane of System Preferences and typing a new password in the password field. This will change the user's login password, allowing them to log in to their account and change their password to something more secure and memorable.

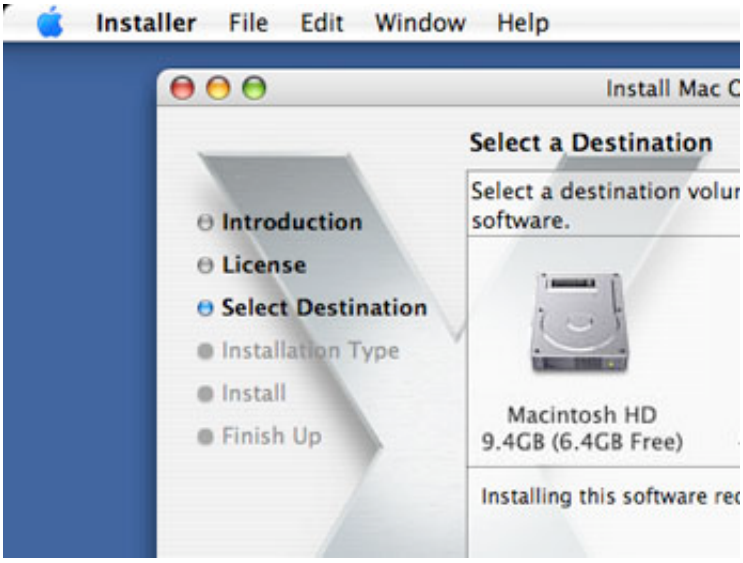
Using the installation disc to change a password

When you use the installation disc to change a user's password, only their log in password is changed. Other passwords, such as their FileVault password and login keychain password will not be changed. An administrator with a Master Password will have to change their FileVault password. However, a user can change their keychain password simply by changing their own password in the Accounts pane of System Preferences.

Prevent an unauthorized user from changing passwords with the installation disc

If you want to make sure that other users can't change passwords by starting the Mac from the installation disc, protect your Mac with an Open Firmware password. This will make it so that your Mac will only start from the hard disk unless a password is supplied. To enable an Open Firmware password, download and install the Open Firmware Password application and follow the on screen instructions.

Installing and Setting Up Mac OS X



New Macs come with the latest software pre-installed, so when you start your new Mac for the first time youï¿ðll just answer a few questions to personalize your computer. The Mac OS X Setup Assistant is the tool youï¿ðll use to configure and personalize your Mac.

When Apple releases an update to Mac OS X you donï¿ðt have to start from the beginning with your Mac. Mac OS X upgrades allow you to keep all your files and settings when moving to a new version.

Installing and Setting Up Mac OS X

Upgrade your Mac to the latest version of Mac OS X

1. Insert the Mac OS X installation disk to your optical drive.
2. Restart your computer and hold the C key until the Apple logo appears.
3. Follow the on-screen instructions to install Mac OS X to your hard disk.
4. Restart the computer when prompted, and then follow the instructions to configure Mac OS X.

Installing and Setting Up Mac OS X

You have options when upgrading your Mac

When you upgrade your Mac to a new version of Mac OS X you have three options. The first option is to upgrade to the latest version of Mac OS X, preserving all of your files and settings. The second option is to archive your existing Mac OS X installation and install the new version, which might require that you reinstall third party applications after installation. The third option will erase your hard disk and install Mac OS X, which will require that you have your files backed up before upgrading.

Use the Mac OS X Migration assistant when moving to a new Mac

If you're moving to a new Mac and want to copy all of your files, applications, and settings from your old one, you can use the Mac OS X Migration Assistant to set up your new Mac. The Migration Assistant will let you transfer files either from another Mac using a FireWire connection or from an upgraded operating system in your Mac.

Install a new version of Mac OS X on a second Hard Disk

When installing Mac OS X you have the option of installing to any drive or partition on your Mac. This means that you can keep your current installation untouched and install a new version onto another drive. This gives you the chance to make sure all your current applications work correctly on the new version before moving all your files over to the new drive. After you've installed Mac OS X on a second drive, simply go to the Startup Disk system preference and select which volume to boot from.

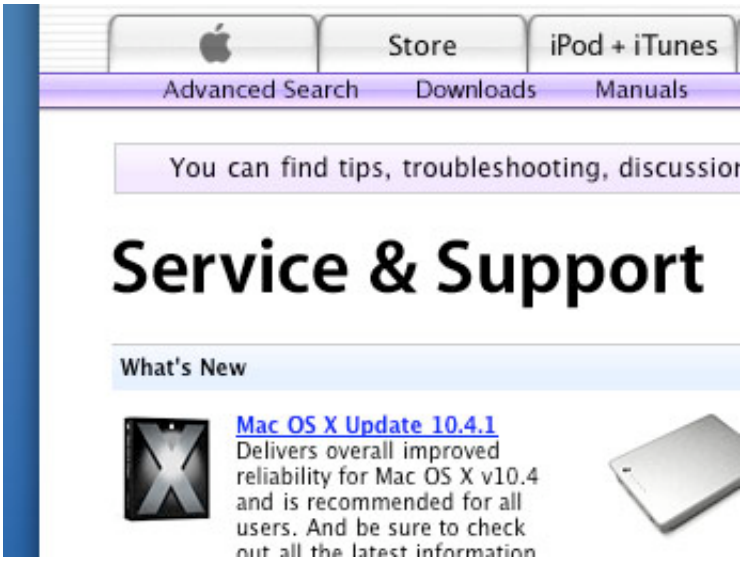
Use Target Disk Mode to connect your Mac to another computer like an external hard disk

You can start your computer in target disk mode by holding down the T key. When you start in target disk mode, your display will be blue with the FireWire logo in the middle of the screen. Using target disk mode allows you to run diagnostics, install a new version of Mac OS X, or just transfer files just like you would with an external storage device.

Use Software Update to keep your Mac up-to-date

Mac OS X comes with a software update feature that is set to check for updates to your Apple software every week. If you want to check for updates more or less frequently, simply open Software Update from System Preferences. In addition to changing how frequently Mac OS X checks for updates, you can also view previously installed updates and manually check for the latest software.

Understanding the Resources Available



When troubleshooting a problem it's also good to have help with the problem. In some cases that help might be someone working at your company or school's help desk, or a friend who also uses a Mac.

In addition to asking for help, you also have access to a wealth of knowledge on Apple's web site. You can quickly browse through the Apple Support site for a solution to a problem, or discuss the symptoms with other mac users on one of Apple's discussion boards.

Understanding the Resources Available

When researching the solution to a problem with your Mac, use the following resources

1. Use the help system built in to Mac OS X.
2. Consult any documentation that came with your Mac, or Mac OS X.
3. Friends and coworkers.
4. The Apple Support web site.
5. The Apple Support discussion groups.
6. The Apple Store for books on troubleshooting Mac OS X.

Understanding the Resources Available

Using Mac OS X help

The Mac OS X help system contains a lot of useful information that will let you get the most out of your Mac. You can access Mac OS X help from the Help menu. In the Mac OS X Help Viewer you can find instrucitons to common tasks, troubleshooting tips and even access AppleCare Knowledge Base articles.

Consult the documentation provided

In many cases the documentation provided with a computer application will have a troubleshooting section, which will usually list common problems and solutions. Consulting the documentation is a good first step when researching possible solutions to a problem with your Mac.

Ask for help from friends

Friends, coworkers and family members can be a good resource when troubleshooting a problem. In some cases, other people you know might have had the same or similar problem, and can help you isolate and fix the problem quicker than you could by yourself.

Use the Apple Support web site

The Apple Support web site is a great place to check for solutions to problems with your Apple hardware and software.

Post a question in the Apple Discussion groups

Chances are if you're having a problem with your Mac, you're not the only one who has ever encountered it. Whether you're troubleshooting a hardware or software problem, looking through the discussion groups can help you find possible solutions. If you don't find what you're looking for, post a question and another Mac user who has encountered a similar problem will provide guidance.