

# MAINTENANCE

## Topics to Cover

1. Repair Disk Permissions
2. Run Routine Maintenance Scripts
3. Clear Caches
4. Repair and Back Up Preferences
5. Do a File System Check and Repair Disk
6. Defragment a Hard Drive That is Low on Free Contiguous Space
7. Clear Your Desktop
8. Reset Safari
9. Rebuild Spotlight's Database

I have colored some URL's red that I think you might want to look at and perhaps bookmark as sights to use as a reference. I have used the book, Mac Maintenance and Backups, by Joe Kissell. Also used to reference this presentation is the article by Randy Singer at <http://www.macattorney.com/ts.html>

These ideas are designed for the **AVERAGE** mac user.

1. The RAM (memory) that comes with your computer is the bare minimum.
2. It is good idea to have an up to date backup of all of your important data before using any disk utility. Check out <http://www.shirt-pocket.com/SuperDuper/SuperDuperDescription.html>
3. Consider getting a FireWire hard drive to backup to.

## Repair Disk Permissions

- Run Repair Disk Permissions from within **Disk Utility**, located on your hard drive at:  
Applications/Utilities/Disk Utility
- *If a permissions issue prevented you from booting off your normal boot volume, Apple recommended using the Repair Permissions function while booted from the Mac OS X Install disc.*
- Dan Frakes has written an excellent article for Macworld on permissions and the need to repair them:  
*Repairing permissions: What you need to know*  
<http://www.macworld.com/2006/08/secrets/repairpermissions/index.php>

# RUN ROUTINE MAINTENANCE SCRIPTS

1. OS X runs its own (very basic) built-in maintenance routines, sometimes called "cron jobs," or "maintenance scripts," automatically between 3:00am and 5:30am each day. (There are daily, weekly, and monthly scripts.)
2. prior to OS X 10.4.3, if you didn't leave your computer on 24 hours a day, or if you left it on but let it go into sleep mode, these routines weren't run.
3. You can run these routines manually, whenever you want, with a free utility such as **MacJanitor**:\_

[http://personalpages.tds.net/~brian\\_hill/macjanitor.html](http://personalpages.tds.net/~brian_hill/macjanitor.html)

4. Under OS X 10.4.3, missed scheduled routine maintenance scripts are automatically run at the next opportunity.
5. to be sure that the built-in maintenance tasks have been run, the daily, weekly, and monthly maintenance scripts each write the details of every run into their own log file, which you can check. Open the **Console** application (located at: Applications/Utilities/Console), go to File->Open Quickly->/var/logs/. Select "daily.out", "weekly.out", or "monthly.out" for the maintenance logs.
6. **Anacron** is a utility that will automatically run the built-in maintenance scripts at a time of your choosing. Install it and forget it. Nothing ever has to be manually launched to take care of all the maintenance scripts. **Anacron** does that job as well as the popular utility **Macaroni**, but it's free.

**Anacron** 3.1 for Tiger (OS X 10.4):

<http://members.cox.net/18james/anacron-tiger.html>

# CLEAR CACHES

1. None of the system caches are touched by routine maintenance scripts.
2. Deleting caches won't hurt anything. However, over time a cache speeds up your computer (assuming that you do some things repetitively), so if you aren't experiencing any problems, you may want to leave your caches alone.
3. It is a good idea to occasionally clear out application-specific caches. Clear out the two main cache folders in Mac OS X: 1) /Library/Caches, and 2) ~/Library/Caches. ("~" stands for the folder with your username on it in your Users folder.)
4. Look into **downloading 'YASU'** at <http://www.macupdate.com/info.php/id/13416>

# REPAIR AND BACK UP PREFERENCES

1. If an application or applications quit unexpectedly under OS X, the first thing to suspect is that you have one or more corrupted user preferences files.
2. **Preferential Treatment** <http://www.jonn8.com/> is a free utility that will check for corrupted preferences files. (It will sometimes even locate preferences files that are corrupted before you start experiencing any problems from them, so it is a good idea to use **Preferential Treatment** regularly. **Preferential Treatment** allows you to delete any corrupted preferences files from right within the program, so that they will be rebuilt on restart.

3. Once all of your preferences files are known to be in good shape, it is a good idea to back them up. That way, in the future if you have a problem with a corrupted preferences file, you can replace the entire corrupted file instantly with a clean copy. This also allows you to avoid having to re-set any application or system preferences.

4. If an application unexpectedly quits under OS X 10.4 (Tiger), you are given the option of restarting that application with its ".plist" (preferences) file(s) deactivated, to see if that was the problem, and if it was, a new ".plist" is substituted for the old one.

## DO A FILE SYSTEM CHECK AND REPAIR DISK

1. Occasionally restart your Mac, and hold down the Shift key right after the startup chime is played, and keep it held down until the spinning black bar cursor appears. This procedure invokes what Apple calls a "Safe Boot":\_

<http://docs.info.apple.com/article.html?artnum=106214>

and your Mac will report that it has been booted (started up) into Safe Boot mode. During startup in Safe Boot mode your Mac will do a file system check, entirely in the background, with no working status indicated, or report generated, and any problems will automatically be repaired. It may take a while for your Mac to start up in Safe Boot mode. Once it has fully started up, you should immediately restart your Mac normally, because certain files are deactivated when you startup in Safe Boot mode.

**Note:** To startup (boot) into Safe Boot mode you must have a wired keyboard and mouse. A Bluetooth keyboard and mouse won't allow you to startup in Safe Boot mode.

2. Under OS X, **Disk Utility**/Repair Disk is the replacement for **Disk First Aid**.

# DEFRAGMENT A HARD DRIVE THAT IS LOW ON FREE CONTIGUOUS SPACE

SOME Macs running OS X can benefit quite a bit from defragmenting their hard drive. But not for the reason that you might expect. There is often little in the way of performance to be gained by defragmenting your hard drive. But defragmenting your drive can stave off some very flaky behavior, out of memory errors, and possibly even data loss. (file vs. drive) Do this when approaching 80%

Another option, instead of defragmenting your hard drive, is to simply purchase a new, bigger, hard drive; copy all of the data on the old drive to the new drive, and then reinitialize (i.e. wipe clean) the old drive and start over with it. Moving all of your data from one drive to another will automatically defragment your data. *Though it won't optimize it.*

OS X automatically defragments files. OS X doesn't do any drive defragmentation at all.

Here is a drive with no file fragmentation. All of the files are contiguous, but free space is fragmented. In other words there is no file fragmentation but there is disk fragmentation:

AAAAA\_\_BBB\_\_CCCCC\_\_DDD\_\_

Here is a drive with both the files and free space fragmented:

AA\_\_BBA\_\_CCCCCB\_\_DDDA\_\_

Here is a drive with no file or free space (disk) fragmentation. All of the files are contiguous, and all of the free space is contiguous:

AAAAABBBCCCCCDDDD\_\_\_\_\_

# CLEAR YOUR DESKTOP

Reducing the number of items on your desktop can noticeably increase the performance of certain activities in OS X. This is easy to do. You can even create one folder on your desktop and put everything on your desktop in it. That will do the trick. **Nested items within folders on the Desktop don't count.** It is only the total number of items directly on your desktop that matter.

Every icon on your Desktop is a little window, and as such, has a corresponding backing store allocation in the window server. Lots of these little windows apparently can put a strain on the window server, especially when you've got lots of other (normal) windows open as well.

Another way to go is to put alias' of all of the items that you want to be able to access quickly in a folder; park that folder somewhere other than on your desktop, and then drag that folder to your Dock so that it is always available from the Dock. Whenever you click and hold (or Control-click, or right-click on a two button mouse) on that folder in the Dock, you will be presented with a menu of everything in that folder to choose from.

Apparently the things represented on your desktop use a good chunk of cached memory. It also seems that it is CPU intensive to draw the icons for the things that reside on your desktop. So, moving things to somewhere other than on your desktop is an easy and free way to pick up better performance.

# RESET SAFARI

Lots of folks have problems with Safari bogging down and/or exhibiting the spinning beachball. When this starts to be a problem, there are several things that you can do to fix this.

I found two things that seemed to help:

1. Delete all your autofill entries from time to time. do this by going to Safari preferences, Autofill button, and then click the "Edit..." button for the "Other forms" box. In the next window that appears, just click Remove All.
2. Turn off all the languages you don't need. In the Finder, select the Safari application and do a Get Info (Command-I), click "Languages," and uncheck all the languages you don't need.

A rather extreme, but simple and usually quite effective thing to do to restore Safari to like-new performance is to reset Safari, which will clear Safari's cache. **Note.** Resetting Safari clears the history, empties the cache, clears the Downloads window, and removes all cookies. It also removes any saved user names and passwords or other AutoFill data and clears Google search entries. I'm also told that resetting Safari alters your keychain and bookmarks.

## REBUILD SPOTLIGHT'S DATABASE

Sometimes, under OS X 10.4, your Macintosh will slow to a crawl, and you can hear that there is a lot of hard drive activity, even though you aren't doing anything disk-intensive with your Mac. To determine what's running in the background, start up **Activity Monitor** ([show](#)) (in Applications/Utilities folder), set it to show "All Processes" and sort by down-arrow "% CPU". That'll show which processes are running, and which, if any, are hogging CPU cycles to the point of drastically slowing down your Macintosh. Look for Dashboard widgets that are hogging CPU cycles. Poorly coded widgets have been known to hog CPU cycles even when you would expect them to be inactive. Uninstall any CPU hogging widgets.

If the culprit is something named "mds" or "mdimport" (the processes that handle Spotlight data), it could signal corruption of your Spotlight database. ([show](#))

You could highlight the hard drive icon in the Privacy window and hit the delete key. This will cause the Spotlight database to be deleted and automatically rebuilt. (You won't be able to use Spotlight while its database is being rebuilt.).

After doing this, leave your Mac on for 24 hours and allow Spotlight to index your entire drive uninterrupted.

Some have suggested that it might be a good idea to rebuild your Spotlight database after every time that you update to a new version of OS X (a full "point" release, e.g. 10.3 to 10.4) . ([Do when we install Leopard??](#))

# FREE UTILITIES:

PREFERENTIAL TREATMENT

<http://homepage.mac.com/jonn8/as/>

"DO I NEED MORE MEMORY?"

<http://www.hillmanminx.net/dinmm/index.html>

'BACK UP USER PREFS'

<http://www.m-t-software.com/software-backup.html>

CACHE OUT X

<http://www.nonamescriptware.com/forums/index.php?&act=Downloads&CODE=02&id=29>

MACJANITOR

[http://personalpages.tds.net/~brian\\_hill/macjanitor.html](http://personalpages.tds.net/~brian_hill/macjanitor.html)

ANACRON for Tiger (OS X 10.4)

<http://members.cox.net/18james/anacron-tiger.html>

ANACRON for OS X 10.2 and 10.3

<http://www.alastairs-place.net/anacron.html>

SHOWVOLUMEFRAGMENTATION

<http://people.freenet.de/amichalak/page1/page1.html>

SMARTER

<http://www.euronet.nl/~tekelenb/software/index.html>

SMARTREPORTER

<http://homepage.mac.com/julianmayer/>

UNLOCKUPD

<http://www.dshadow.com/software/unlockupd/>

## Free multi-function utilities:

YASU (Runs cron jobs, clears caches, repairs permissions, updates prebinding, and more.)

<http://jimmitchell.org/projects/yasu/>

Yasu can take the place of several of the above recommend utilities. I recommend Yasu because it won't get ordinary users in trouble, it is free, and it is quick and easy to use. On the negative side, it doesn't give an estimate for the time it will take to complete a task, and it doesn't give you a log of errors found and repairs done.

MAIN MENU (Provides a menu bar menu for running system tasks, including repairing disk permissions, running maintenance scripts, updating prebinding, cleaning caches, flushing the lookupd cache, rebuild Spotlight indexes, verification and removal of .plist preference files, and more.)

<http://mainmenu.xmgfree.com/products.html>

## Shareware utilities:

MACARONI (\$9) (runs maintenance tasks automatically on a regular schedule; not necessary if

you have Anacron, or OS X 10.4.3 or later)  
<http://www.atomicbird.com/>

TIGER CACHE CLEANER (\$9)  
<http://www.northernsoftworks.com/tigercachecleaner.html>

**Commercial software:**

DISK WARRIOR  
<http://www.alsoft.com/DiskWarrior/index.html>

TECHTOOL PRO  
[http://www.micromat.com/tt\\_pro\\_4/tt\\_pro\\_4.html](http://www.micromat.com/tt_pro_4/tt_pro_4.html)

INTECH SPEED TOOLS  
<http://www.intechusa.com/>

iDEFRAG  
<http://www.coriolis-systems.com/iDefrag.php>

SUPERDUPER  
<http://www.shirt-pocket.com/SuperDuper/SuperDuperDescription.html>