

Verify and Repair Disk Permissions

What does Disk Utility do?

Disk Utility allows you to verify and repair disk and permissions issues. This document explains one of Disk Utility's features for Mac OS X disks, Repair Disk Permissions. (You do not need to verify/repair permissions on media drives).

How does Disk Utility check file permissions?

Many things you install in Mac OS X are installed from package files (whose filename extension is ".pkg"). Each time something is installed from a package file, a "Bill of Materials" file (whose filename extension is ".bom") is stored in the package's receipt file, which is kept in /Library/Receipts/. If you look in the Receipts folder, for example, you should see all kinds of files that end with .pkg, including some that were created when Mac OS X was installed (for example, BaseSystem.pkg). Don't worry, these files don't take up much disk space and you shouldn't put them in the Trash.

Each of those ".bom" files contains a list of the files installed by that package, and the proper permissions for each file. When you use Disk Utility to verify or repair disk permissions, it reviews each of the .bom files in /Library/Receipts/ and compares its list to the actual permissions on each file listed. If the permissions differ, Disk Utility reports the difference (and corrects them if you use the Repair feature).

Does Disk Utility check permissions on all files?

Files that aren't installed as part of an installer package are not listed in a receipt and therefore are not checked. For example, if you install an application using a non-Apple installer application, or by copying it from a disk image, network volume, or other disk instead of installing it via Installer, a receipt file isn't created. This is normal. Some applications are just designed to be installed like that.

Also, certain files whose permissions can be changed during normal usage without affecting their function are intentionally not checked.

Tip: If you remove receipts from /Library/Receipts/, the files installed by those packages cannot be verified or repaired, which is why you shouldn't delete things from /Library/Receipts/.

Verifying Disk Permissions

1. Open Disk Utility by double-clicking on your main hard drive, and navigating to Applications/Utilities
2. Select the Mac OSX startup disk on the left-hand column
3. Click the First Aid tab
4. Click the Repair Permissions button.

Disk Utility will automatically check your hard drive for incorrect file permissions and attempt to correct them for you.