

KeychainCheck 2.0a4 for macOS Sierra, High Sierra and Mojave

Manual

Howard Oakley <https://eclecticlight.co>

Keychain problems – such as when you are repeatedly prompted to enter your password to unlock your keychain – seem to have become surprisingly common in macOS Sierra.

KeychainCheck 2 works with both local and iCloud keychains, in Sierra, High Sierra and Mojave. It tells you where your default keychain is located, basic information about it including whether it is locked or not, lists all the keychains which are currently ‘active’, and those which have been opened over the last hour (not in High Sierra or Mojave, yet). It also provides more extensive information about the contents of each of your keychain folders, including that used by iCloud Keychain. It lets you unlock and lock your default keychain without having to open Keychain Access.

This version of KeychainCheck 2 is the third alpha release. Although it has been tested on Sierra, High Sierra and Mojave systems, with both local and iCloud keychains, it may still contain bugs which could lead it to crash. In doing so, it should not damage your keychains, as the only command which it uses which can modify them is to lock your default keychain. However, if you have any doubts over whether you should be running this test release, please don't.

What you need

- A Mac running macOS Sierra, High Sierra or Mojave. KeychainCheck 2 is compatible with Mojave, including Dark Mode, but not with El Capitan.
- A copy of the latest version of KeychainCheck 2 from <https://eclecticlight.co/downloads/>
(This is delivered by secure HTTPS download.)

Getting started

KeychainCheck comes compressed as a Zip file, which you should decompress, and move the app to your preferred folder, such as /Applications. It is not fussy where it is run from, though.

KeychainCheck is properly signed, so should run normally first time after installation. If you see an alert informing you that its signature is *not correct* or the *app has been damaged*, please let me know.

To run the app, simply double-click it, or open it in any of the other normal ways. When it is running, it may open a window automatically for you. If it doesn't, open a fresh window using the **New** command in the **File** menu.

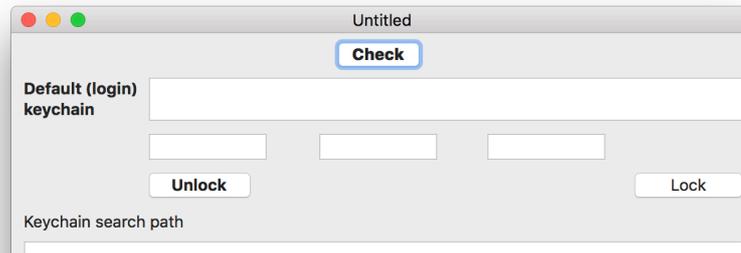
When you're done with using it, simply quit the app as normal.

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Controls

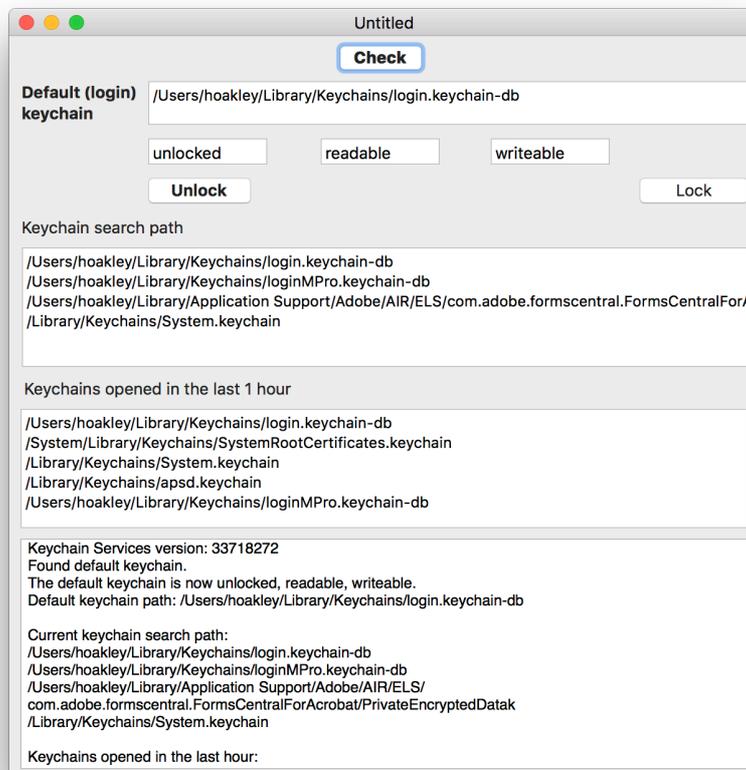


KeychainCheck 2 has three simple button controls:

- **Check**, which runs its checks and puts information in the text boxes;
- **Unlock**, which unlocks your default (login) keychain;
- **Lock**, which locks your default (login) keychain.

Results

When you click on the **Check** button, KeychainCheck 2 runs its full battery of tests, and completes the text boxes as shown below. Tests take a few seconds, as they include careful examination of your Mac's log for the last hour to determine which keychains have been opened over that period. You may see the spinning beachball cursor for those few seconds, which doesn't mean that the app has hung or crashed.



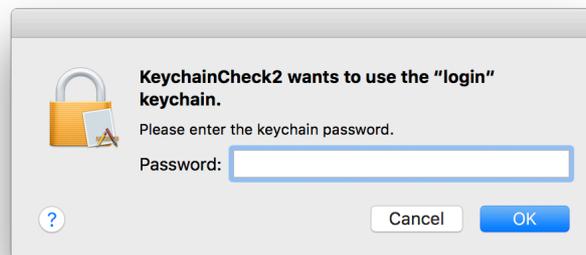
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Displayed in the **Default (login) keychain** box is the full path to the keychain which macOS is using as your main user keychain at present. Even if you are using iCloud Keychain, this should be a path to the file named **login.keychain-db** in the Library/Keychains folder of your Home folder. If it isn't, then you will need to establish why.

Below that box are three smaller boxes, which tell you whether that default keychain is **locked**, **readable**, and **writable**. You can change two of those by clicking on the **Unlock** or **Lock** buttons nearby. When you click on **Unlock**, a dialog will appear requiring you to enter the password for your default keychain (which should be the same as your normal user login password) in order to unlock that keychain.



Further down is a list of keychains which are in the current **search path**. These normally include your default keychain, and the System keychain. You may well see others which you didn't know existed.

Below that is a list of the keychains which your Mac has **opened in the last hour**, taken from your Mac's log. Unfortunately, because of changes which Apple has made in High Sierra and Mojave, you are unlikely to see any keychains listed here when KeychainCheck 2 is run on them. On Sierra, though, you are likely to see additional keychains, such as the System Root Certificates, and possibly Apple Push Services apsd.

The bottom scrolling box contains the hardware UUID number of your Mac, its version number of Keychain Services, all the information from the other boxes, and a lot more too. This is detailed below.

You can save that to a text file using the **Save...** command in the **File** menu. You can also select, copy and paste any of the text, but cannot modify it within this app.

Diagnosis using the full output

Mac UUID: this should correspond with the Hardware UUID given in System Information.

Keychain Services version: this may change with macOS release. For Sierra 10.12.6 and High Sierra 10.13.5, this should be 33718272.

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Default keychain path: should be `/Users/[username]/Library/Keychains/login.keychain-db` where `[username]` is the short user name of the current user.

Current keychain search path: should include the default keychain and `/Library/Keychains/System.keychain`.

Keychain system search path: should include `/Library/Keychains/System.keychain`.

Keychain common search path: should include `/Library/Keychains/System.keychain`.

Keychain dynamic search path: most probably empty.

Keychain user search path: should include the default keychain.

Keychains opened in the last hour: normally includes the default keychain and `/Library/Keychains/System.keychain`. In High Sierra, likely to be empty.

Contents of `~/Library/Keychains`: should include `login.keychain-db`, and is likely to include `metadata.keychain-db` too. For each file found, the date and time of last modification is given first, then that of the file's creation, then the size in bytes. The default keychain should not be empty.

Contents of `~/Library/Keychains/[UUID]`: this is the folder used for iCloud Keychain, or for the Local Items listed in Keychain Access. It may not exist, but if it does it should include `keychain-2.db` at least, and sometimes much more.

Contents of `/Library/Keychains`: should include `System.keychain`, and may well also include the Apple Push Services keychain `apsd.keychain`

Contents of `/System/Library/Keychains`: should include `SystemRootCertificates.keychain` and is likely to contain `EVRoots.plist`, `X509Anchors`, and `SystemTrustSettings.plist`.

Checking for updates

KeychainCheck now has a convenient command **Browse updates** in the **Help** menu. This opens in your default browser a special page on the Eclectic Light Company blog which lists current versions of apps, and lets you download them from there.

Technical Note

Unlike the first version of KeychainCheck, version 2 performs all its checks directly, without the use of shell commands, although it does rely on the `log show` command to obtain a log extract for analysis.

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Change List

2.0a4:

- added Browse updates command to Help menu
- built using Xcode 10β2
- fixed Dark Mode.

2.0a3:

- Xcode 9.2
- restructured code
- added hardware UUID info
- added user search path info
- added Keychains folder contents
- custom app icon.

2.0a2:

- first release.

2.0a1:

- initial development, ported to Swift 4.0 and Xcode 9.1.

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