How to make a bootable macOS installer on an external drive

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02 Jul 18

sudo /Applications/Install\ macOS\ High\ Sierra.app/Contents/Resources/createinstallmedia --volume /Volumes/MyVolume --applicationpath /Applications/Install\ macOS\ High\ Sierra.appIn this article we'll run through the steps necessary to create a bootable installer of the Mac operating system, whether it's so you can install the latest version of the macOS on multiple Macs; perform a clean install of the macOS; or just to be prepared with an emergency disk if your Mac experiences problems and you don't want to connect to the internet or can't access Recovery mode.

If you want to find out how to make a bootable install of macOS High Sierra, or a beta version of macOS Mojave, or an older version of Mac OS X or macOS, you've come to the right place.

You can also use your bootable installer to install the MacOS on a separate partition of your hard drive, it's also a hassle-free way to [go back to an older version of MacOS X or MacOS](#).

Luckily, making a bootable installation of the Mac operating system became a whole lot easier when Apple launched OS X Mavericks back in 2013. With that version of Mac OS X, and all versions since, it's been possible to use the Terminal command *createinstallmedia* to create a bootable installer of the macOS, in this article we'll show you how.

What you need to make a bootable install drive

There are two main things you'll need to make your bootable install. The whole process shouldn't actually take very long.

A 12GB Flash Drive (at least!)

The installation file size for High Sierra is almost 5GB (4.80GB) and the beta of Mojave is 5.67GB, but you'll need a drive with at least 12GB storage available (it used to be 8GB, but Apple now recommends 12GB.)

We recommend a Flash memory stick if you are planning to boot from the drive as it will be quicker. You'll also benefit from USB 3, or USB Type C, or Firewire.

If you have data on the drive that you plan to use you will need to transfer it to another drive, or get a new drive, as it will be completely formatted and erased.

MacOS installation files

iBooks

Image Capture

iMovie

Install macOS High Sierra

Install macOS Sierra

iPhoto

You will need to get the installation files from the Mac App Store.We'll show you how to get the installation files next.

If you already have the software installed on your Mac you will find it in the Mac App Store under your Purchased tab.

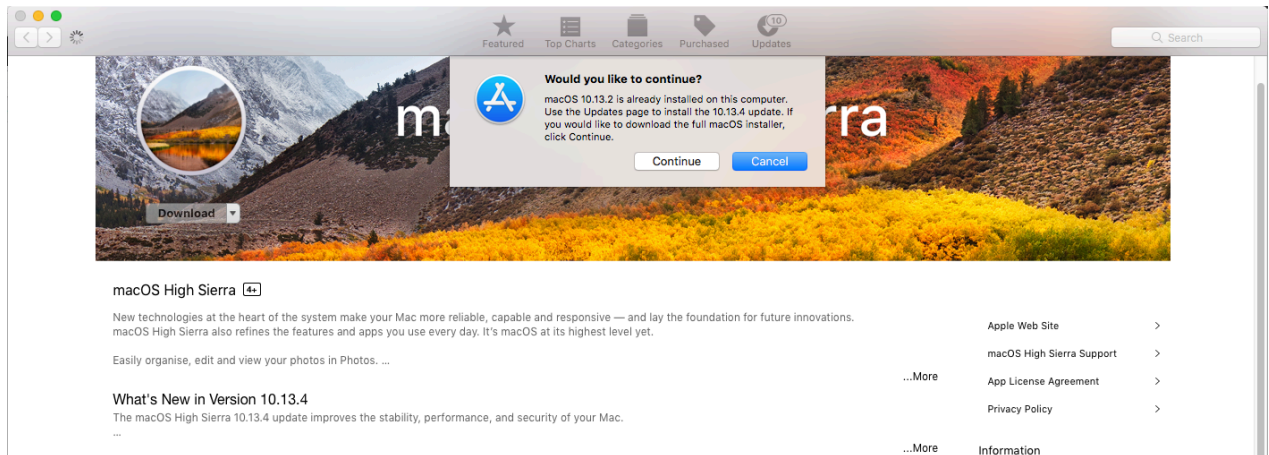It goes without saying that you will need an internet connection to download the software.

How to get MacOS installation files

Here's how to get the MacOS High Sierra installation files (the same process applies if you are getting an older version of the MacOS, but you may need to look under your Purchased tab):

1. Launch the Mac App Store on your Mac.
2. Look for macOS High Sierra in the store (if you have previously

downloaded High Sierra you could search under your Purchased tab).

3. Click on the Download button. You will see a message warning that macOS 10.13 is already installed on this computer. Click on Continue to confirm that you want to download the full installer.

4. Your Mac will download the installer to your Applications folder. This process may take some time depending on the speed of your connection and whether you are using a wireless network. It took us about 10 minutes over ethernet.

5. If it automatically launches after download, quit - you don't want to start the process of installing it on your Mac because doing so will delete the installers - and it's the installers you need. If it opens, close the installer.

6. You will find the installation files in your Applications folder. Access it via the Finder or by typing High Sierra into Spotlight.

How to get Mojave beta installation files

We go into more details about getting the Mojave beta here.

1. You'll need to sign up either as a developer, or for the Public Beta Program.

2. You will then need to download the macOS Mojave Beta Access Utility as this will give you access to the beta on the Mac App Store.

3. Download the Mojave installer - but don't start to install it on your

Mac. The installer files should be in your Applications folder.

How to make a bootable macOS installer

Note, the createinstallmedia method described here doesn't work under OS X 10.6 Snow Leopard or earlier - it requires OS X 10.7 Lion or later. Also, the processes have changed slightly since Mavericks so if your looking to create an installation of one of the 'Cat' versions of Mac OS X you should [read this older article instead](#).

Since Mavericks, creating a bootable installation of MacOS requires a single command in Terminal. The createinstallmedia command makes it possible to create a bootable copy of an installer on any drive that's connected to your Mac.

Note that the createinstallmedia command erases anything on your external disk though, so make sure there's nothing on it that you need.

These are the instructions to follow if it's the macOS High Sierra installer you require, although if you wanted a different version of a post-Mavericks OS, or the Mojave beta, the instructions will be similar.
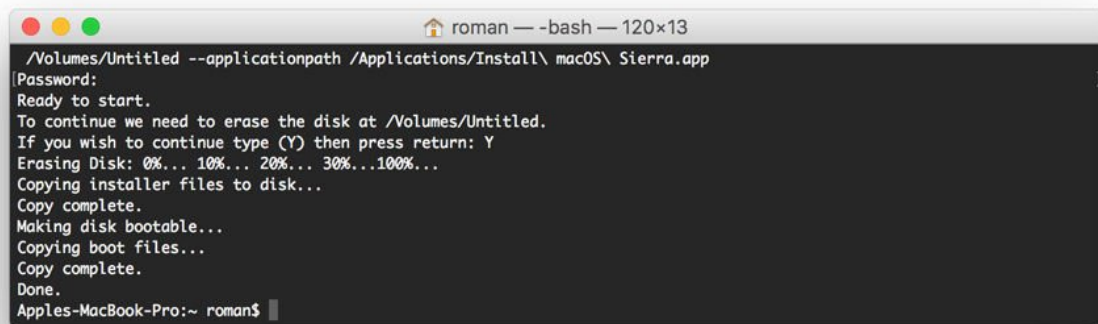
1. Plug in an external drive with at least 8GB space (preferably 12GB) as that's how much the installer will require.

2. Launch Disk Utility (press Cmd + spacebar and start to type Disk Utility).
3. Before this next step - if you are running High Sierra you will need to click on the View drop down below the close minimise buttons. Choose Show All Devices from the options. Now you will see the external root drive in addition to the volume below it.
4. Select the root drive in the sidebar (the next step won't with if you only select the volume).
5. Click on Erase.

6. Choose Mac OS Extended (Journaled) as the Format.

7. Choose GUID Partition Map as the Scheme.

8. Your drive will be called Untitled by default, you could give your drive a name such as "macOS" or "USB". (Note you just need to replace the term USB in the Terminal command with the name of your drive).

9. Click on Erase.

10. Wait while Disk Uitlity creates the partition and sets up the drive (this can take a few minutes).

11. Then click Done.

12. Open Terminal (the easiest way is to press cmd+space bar and then start typing Terminal).

13. Copy the following text into Terminal for High Sierra:
    sudo /Applications/Install\ macOS\ High\ Sierra.app/Contents/Resources/createinstallmedia --volume /Volumes/MyVolume --applicationpath /Applications/Install\ macOS\ High\ Sierra.app

14. Copy this text into Terminal for Mojave:
    sudo /Applications/Install\ macOS\ Mojave\ Beta.app/Contents/Resources/createinstallmedia --volume /Volumes/USB --nointeraction --downloadassets
    For other versions of MacOS the text is below...

15. Click Enter.

16. Terminal will ask for a password. This is your user password. Note you won't see characters appear as you type it in, that's fine. After typing in your password, press Enter.

17. Terminal will warn that it is about to erase the drive (so make sure there wasn't anything important on it!). If you want tocontinue press Y and then Return. The process can take a while, you'll see "Erasing Disk: 0%... 10%... 20%... 30%...100%...

18. Now Terminal will spend a few minutes copying the installer file to your drive. "Copying installer files to disk... Copy complete" and so on will appear in the Terminal window.

19. When Terminal has finished copying the installer you will see the words Copy complete and Done appear.

20. Now you have the installer on the external drive you can use that to install multiple copies of macOS. Plug the external drive into the Mac that you want to install the macOS on.

21. Start up the Mac, holding down the Option/Alt key while it is booting up.

22. Your Mac will display the Startup Manager, click on your external drive and select Install macOS.

You can also run the Mac operating system directly from an external drive rather than your built-in startup disk, this is handy if you are testing new versions of the Mac OS. The process is different to the one described above though, and we cover it here: Read about How to run macOS on an external hard drive here.

Note that older versions of macOS used "applicationpath" - if you do so you will get an error (we have the code for the other versions below).

createinstallmedia commands for other versions of macOS

The createinstallmedia command will be slightly different depending on which version of macOS you are wanting to use.

Sierra

sudo /Applications/Install\ macOS\ Sierra.app/Contents/Resources/createinstallmedia --volume /Volumes/MyVolume --applicationpath /Applications/Install\ macOS\ Sierra.app

El Capitan

sudo /Applications/Install\ OS\ X\ El\ Capitan.app/Contents/Resources/createinstallmedia --volume /Volumes/MyVolume --applicationpath /Applications/Install\ OS\ X\ El\ Capitan.app

Yosemite

sudo /Applications/Install\ OS\ X\ Yosemite.app/Contents/Resources/createinstallmedia --volume /Volumes/MyVolume --applicationpath /Applications/Install\ OS\ X\ Yosemite.app

Mavericks

sudo /Applications/Install\ OS\ X\ Mavericks.app/Contents/Resources/createinstallmedia --volume /Volumes/MyVolume --applicationpath /Applications/Install\ OS\ X\ Mavericks.app