How to create a bootable macOS Big Sur installer drive
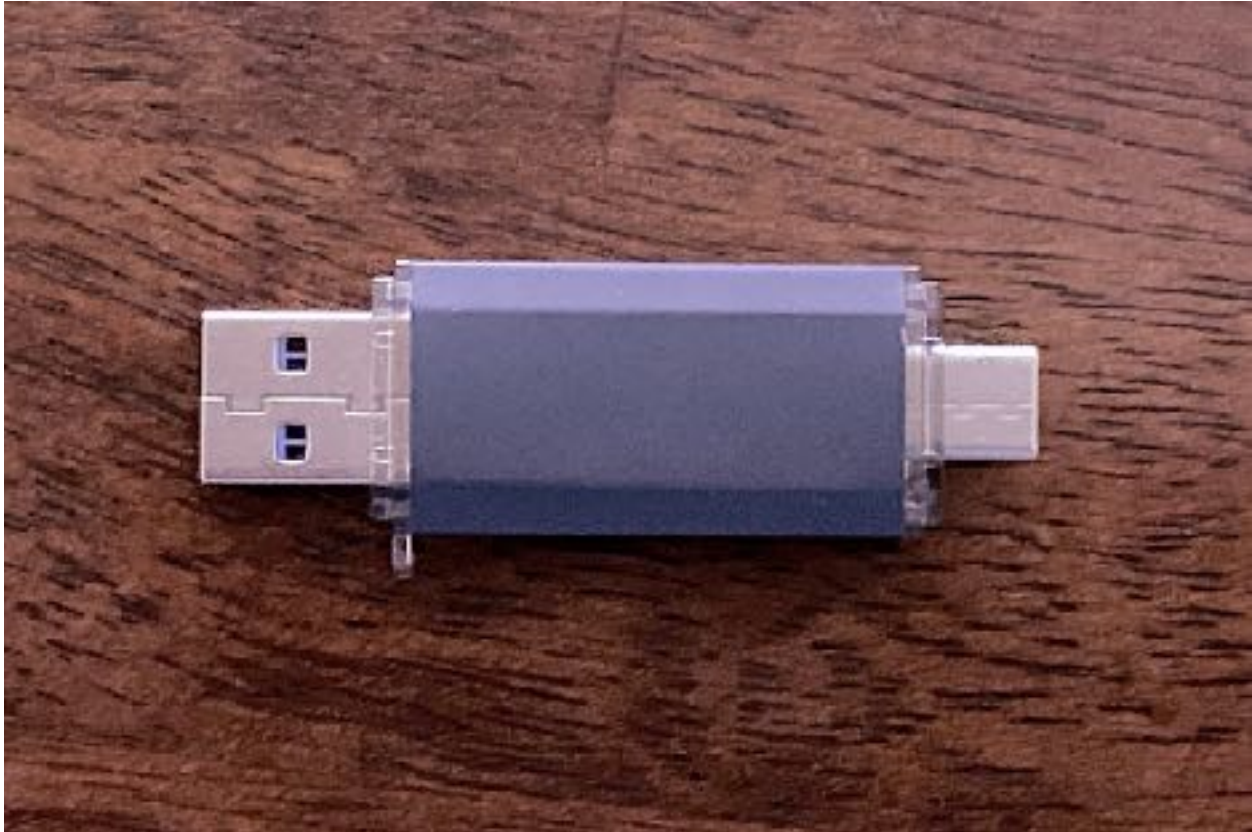
Apple has a new version of macOS. It's called Big Sur, and it's version 11.0. In this article I'll go over how you can create a bootable macOS Big Sur installation drive. But before I give instructions on how to create the drive, I'll go over the items you'll need and how to get them.

These instructions are for the officially released version of macOS Big Sur, not the public/developer beta. It was performed on Macs running macOS Catalina, and again on Big Sur.

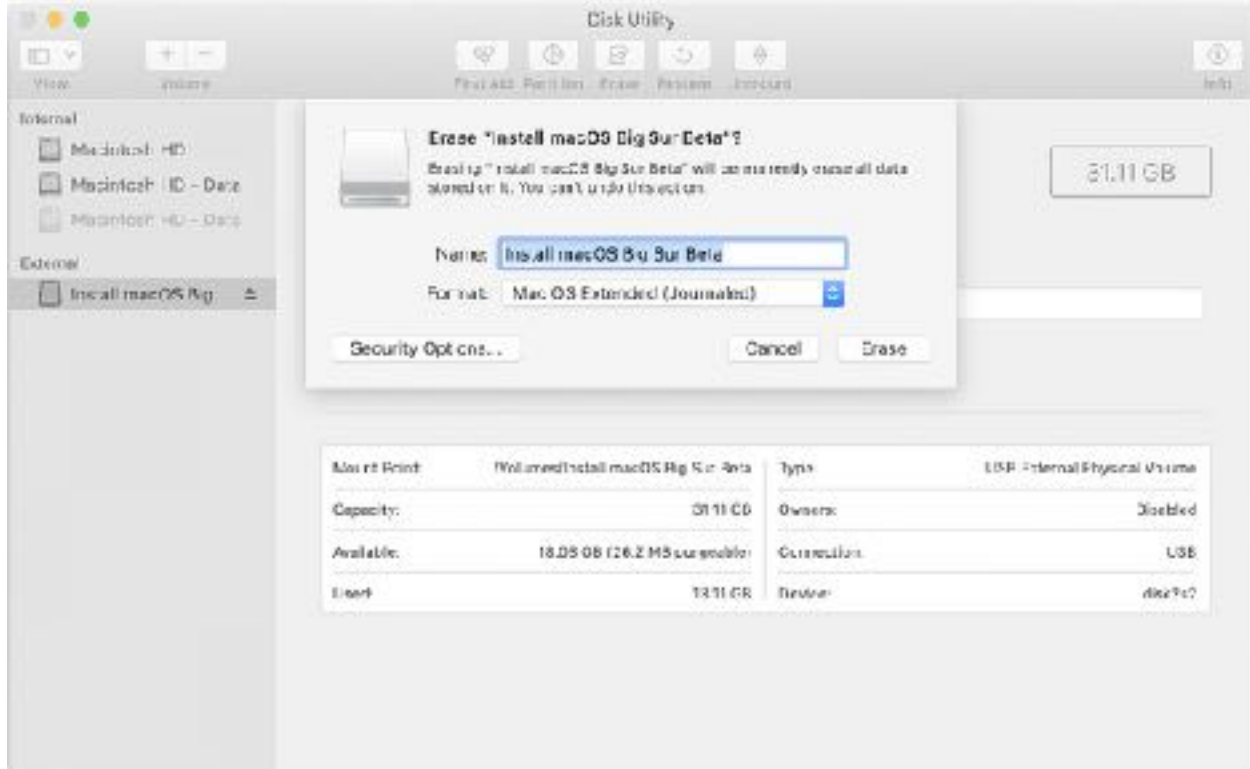## Get an external drive and maybe an adapter

The macOS Big Sur installer software is over 12GB, so you need a USB external drive that can hold that much data. The drive can be a thumb drive, hard drive, or SSD. [NOTE: An SSD is the preferred device.]

I used this thumb drive to create a macOS Big Sur installer. You can use a thumb drive, external hard drive or SSD. The 32GB drive I used has both USB-C and USB-A (USB 2 speed, however, so it's slow) connectors and is available on Amazon for about $5.

If you have a 2015 or newer Mac laptop that has USB-C/Thunderbolt 3 ports, you may need Apple's $19 USB to USB-C adapter. This will allow you to connect a storage device that uses a USB type-A connector. If you don't have an external drive and you have a USB-C Mac laptop, you could buy the SanDisk Ultra USB Type-C Flash Drive, which has a USB-C connector. You can get model number SDCZ450-016G-G46.
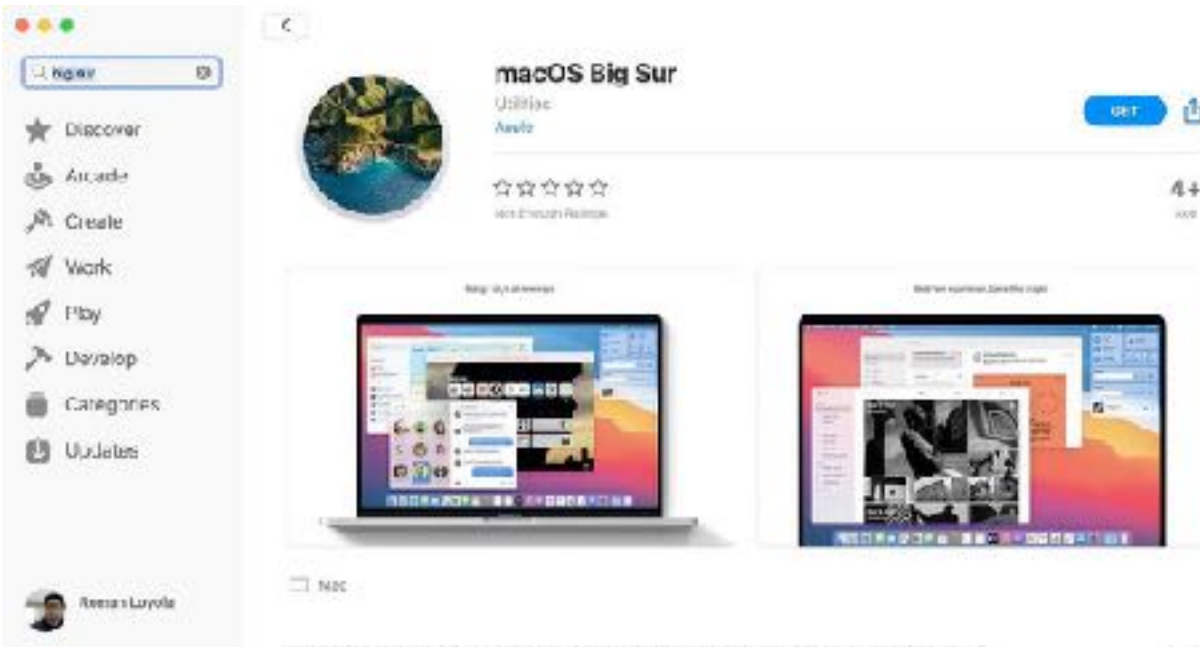
You need to erase the drive and format it to Mac OS Extended (Journaled). You can do this in the Mac's Disk Utility app, which is in the Applications/Utilities folder.

Format your boot drive using Mac OS Extended (Journaled). My drive was initially formatted as APFS, and an alert appeared saying that the drive could not be used as formatted.

Get the macOS Big Sur installer software

Big Sur is available through the Apple's App Store. Click on the *Get* button on the upper right, and the Software Update system preference will open. Click the *Download* button. The download may take a while.

But after the download is complete and the installer launches, do *not* click the *Continue* button. Quit the installer by pressing Command-Q. Then go to your Applications folder and you should find an "Install macOS Big Sur" app. You need to have the app there to make the bootable drive.
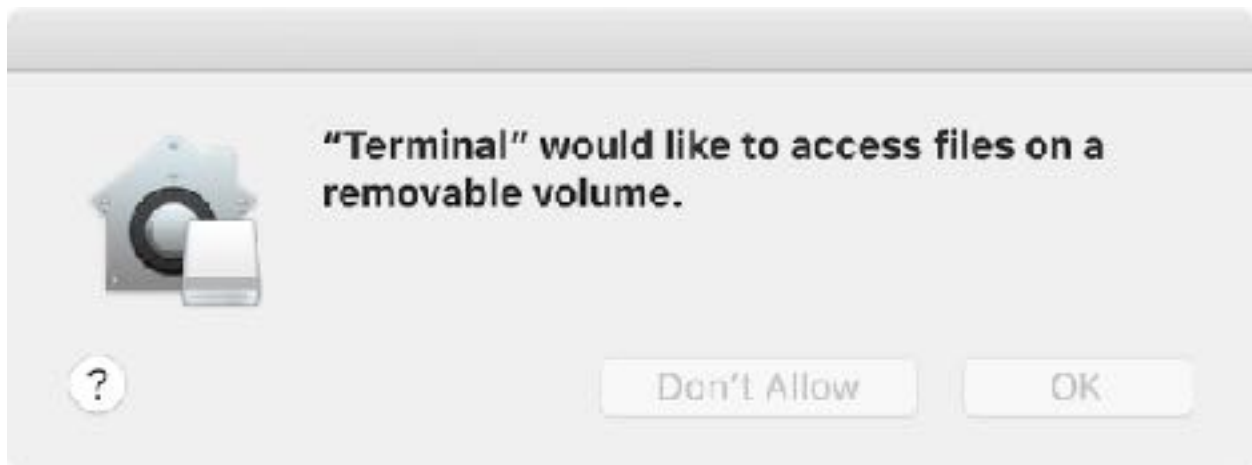
Use the Terminal to make a bootable macOS Big Sur installer drive

You're going to use the Terminal to make your external drive a bootable macOS Big Sur installer. Don't worry if you've never used Terminal before, it's easy. Here are the instructions.

1. Connect the external drive to your Mac. In these instructions, I use Untitled as the name of the external drive. If your drive is named something else, you need to change Untitled to the name of your drive.

2. Launch Terminal (/Applications/Utilities/Terminal.app).

3. Select and copy the following:

sudo /Applications/Install macOS Big Sur.app/Contents/Resources/createinstallmedia --volume /Volumes/Untitled -- /Applications/Install macOS Big Sur.app

4. Go back to Terminal and paste the copied code at the prompt. Remember to change Untitled to the name of your drive. Press Return.

5. Terminal may ask for your password. Enter it and press Return.
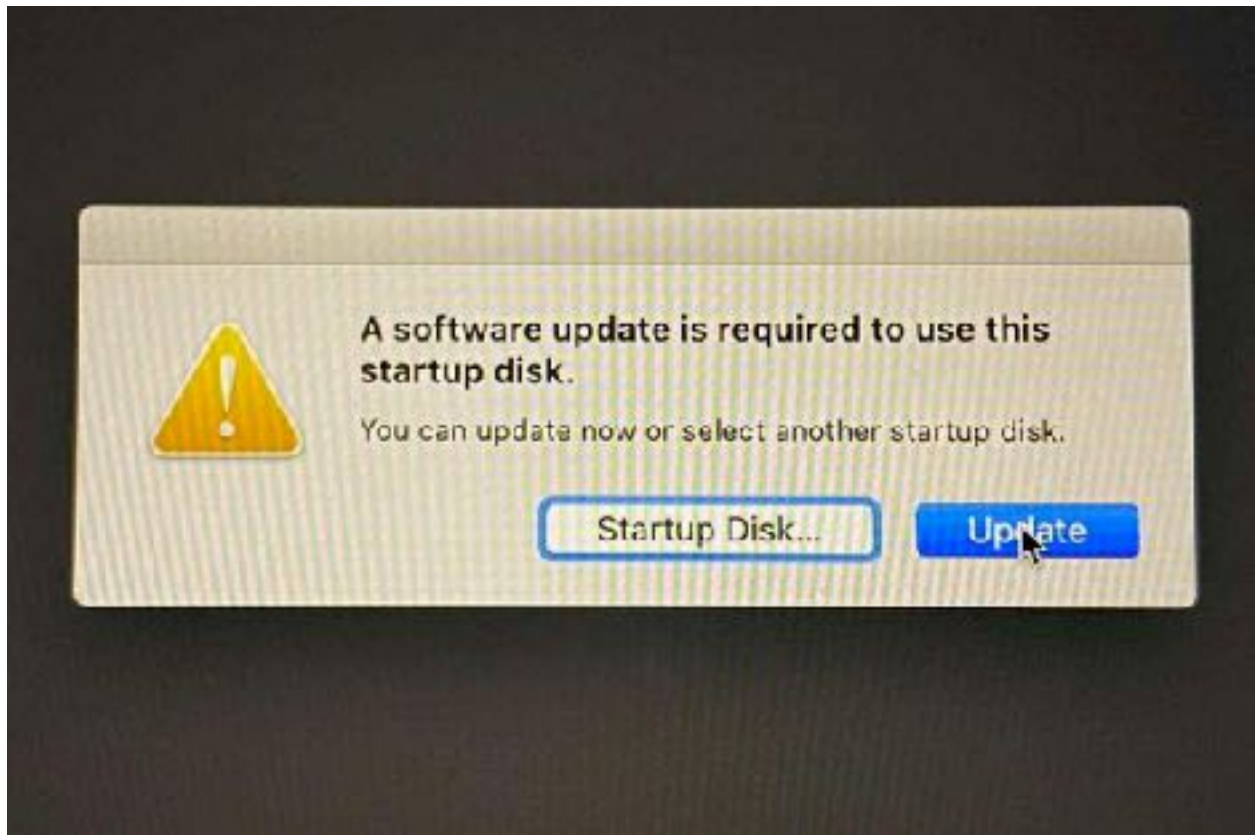
```
Last login: Thu Nov 12 19:22:26 on ttys000
macworld@Macworlds-MacBook-Pro ~ % sudo /Applications/Install\ macOS\ Big\ Sur.a
pp/Contents/Resources/createinstallmedia --volume /Volumes/Untitled -- /Applicat
ions/Install\ macOS\ Big\ Sur.app
Password:
```

6. Terminal will warn you that your external drive needs to be erased. To proceed, type Y at the prompt and press Return.

7. An alert may appear asking for permission for Terminal to access a removable drive. Click *OK*.

"Terminal" would like to access files on a removable volume.

?   Don't Allow   OK

8. You'll see that Terminal erases your drive and then copies the installer file to your drive. This will take a few minutes.

7. After copying, Terminal is done. You should see Terminal display a message saying your drive is ready for use.

Update the installer drive
1. Plug your external drive into your Mac.
2. Power up (or restart) your Mac. Press down on the Option key while the Mac boots.
3. After a few moments, your Mac should display the Startup Manager, which will show you the available boot drives. Click on the external drive and press Return.

MacBook Pro   Install macOS Big Sur

4. An alert appears that says, "A software update is required to use this startup disk". Click the *Update* button. You will need an internet connection (click the Wi-Fi icon in the menu bar and select a connection), and the update process takes several minutes. (Note: The first time I tried this, after clicking Update, I saw an alert saying the update could not be installed. I repeated the process again from step 1, and the second time, the update process ran successfully. Another time, an alert appeared stating that the update failed, but you are asked to "Try Again".)

After the updater runs, the Mac will restart. You still have another thing to do before you can boot off the external drive.
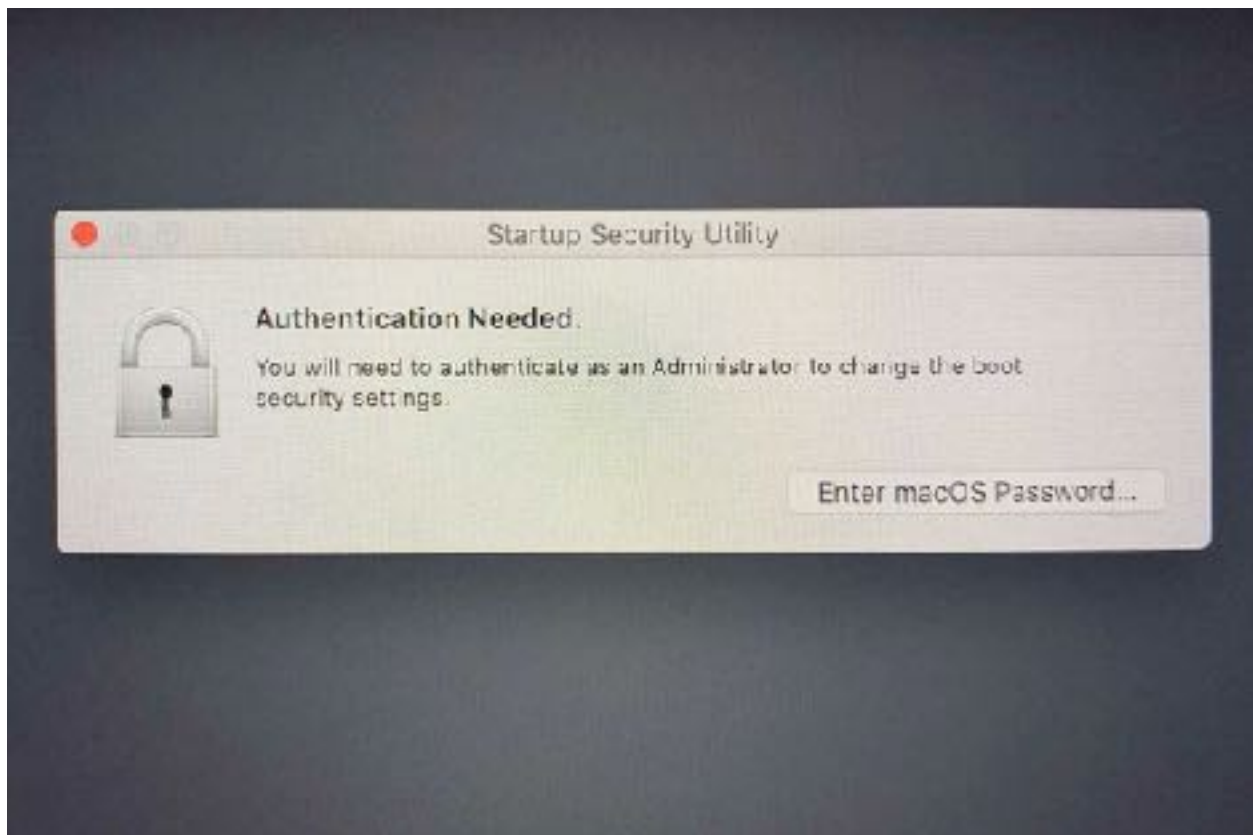
Wait for the updater to do its thing.

Change security settings

The Mac may be set up to not allow you to use an external startup disk. You'll need to change this. Here's how.
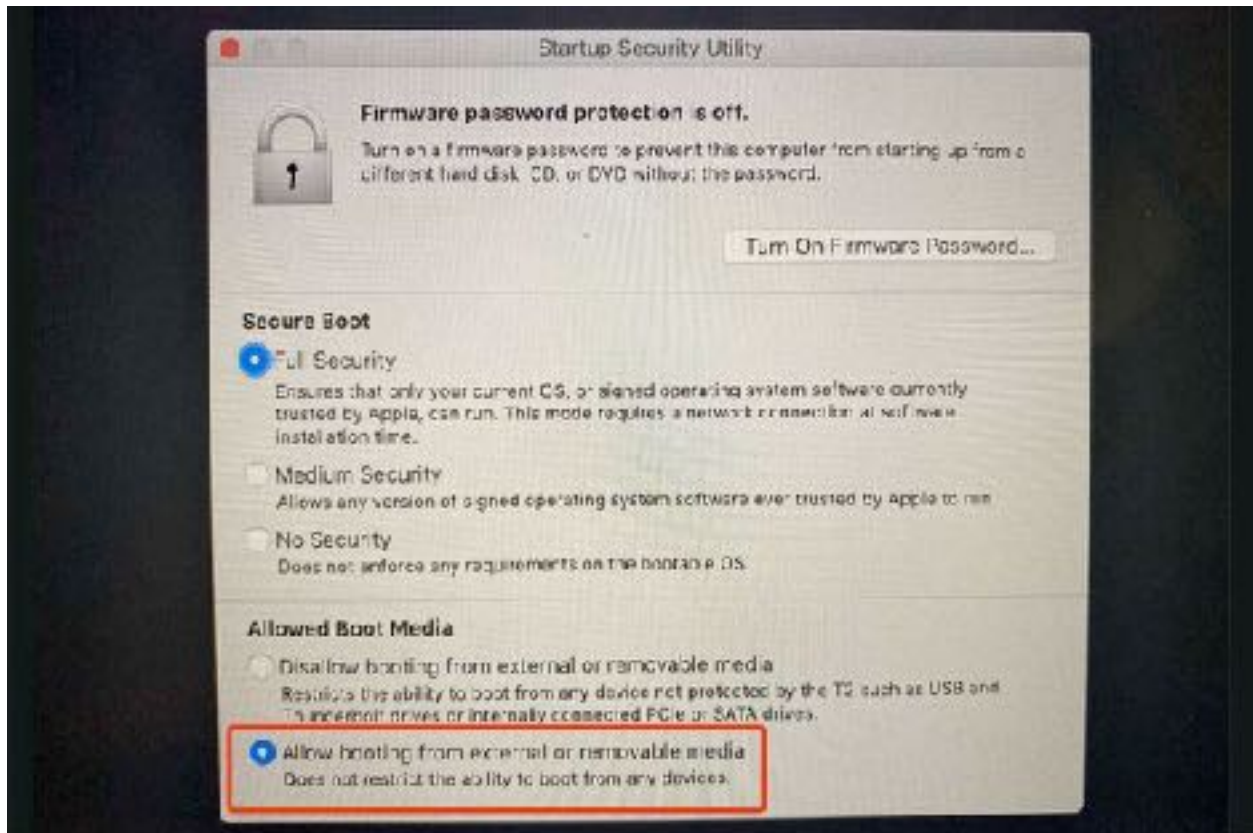
1. Restart you Mac and hold down Command-R during the boot process. This puts the Mac into Recovery Mode.

2. The Mac should boot with a "macOS Utilities" window. Click on the Utilities menu and select *Startup Security Utility*.

3. An "Authentication Needed" window appears. You need to authenticate as an administrator. This means you need the user name and password of an account on the Mac that is designated as an administrator. When you have that info, click on *Enter macOS Password* and then enter the user name and password.

4. Several options will appear. For our purposes here, look in the Allowed Boot Media section, and check the button for "Allow booting from external or removable media". Then close the window.
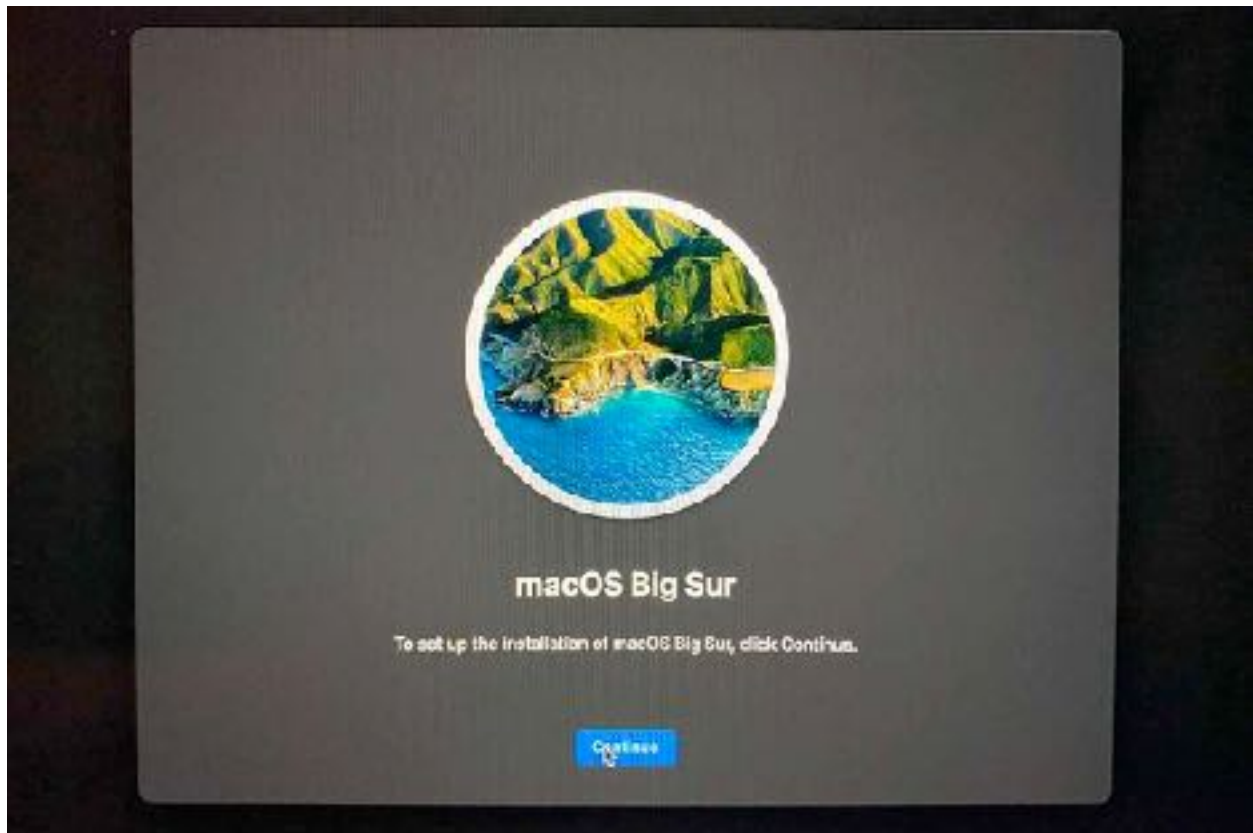
We're almost there! Now it's time to finally boot from the external drive.

How to boot from the installer drive

1. With the external drive plugged in, boot/restart the Mac and hold down the Option key.
2. The Startup Manager should appear. Select your external drive.
3. The Mac will boot into Recovery mode. You should see a window with four options. If you want to install Big Sur and leave the data intact, select *Install macOS Big Sur*. If you want to start over and wipe out the data, you need to go into Disk Utility to reformat the internal drive first, and then install macOS Big Sur. Make your selection and click *Continue*.

The Big Sur installer will run if you selected Install macOS Big Sur. If you are in Disk Utility, format your drive, then quit the app. You'll go back to the Recovery mode window when you can do the OS installation.

Make a bootable installer drive: Other ways

With past versions of macOS, I used a free app called Install Disk Creator to make the installation drive. It has now been updated to support Big Sur, and the developer has a blog post on how to create a bootable installer drive with the app. I have also used DiskMaker X, but the developer announced that he is not updating it.