

# CS 310 Raspberry Pi OS Install

## Spring 2021

January 26, 2021

1. Download the **64-bit** version of Raspberry Pi OS from the link below and unpack it.

<https://www.raspberrypi.org/forums/viewtopic.php?t=275370>

2. Insert your SD card in your SD card reader.

3. On Windows: instructions here:

<https://www.raspberrypi.org/documentation/installation/installing-images/windows.md>

4. On Mac:

- (a) Open a terminal and type mount:

```
neil@Neils-MacBook-Pro ~ $ mount
/dev/disk1s5s1 on / (apfs, sealed, local, read-only, journaled)
devfs on /dev (devfs, local, nobrowse)
/dev/disk1s4 on /System/Volumes/VM (apfs, local, noexec, journaled, noatime, nobrowse)
/dev/disk1s2 on /System/Volumes/Preboot (apfs, local, journaled, nobrowse)
/dev/disk1s6 on /System/Volumes/Update (apfs, local, journaled, nobrowse)
/dev/disk1s1 on /System/Volumes/Data (apfs, local, journaled, nobrowse)
map auto_home on /System/Volumes/Data/home (autofs, automounted, nobrowse)
/dev/disk2s2 on /Volumes/Backup (exfat, local, nodev, nosuid, noowners)
/dev/disk3s1 on /Volumes/boot (msdos, local, nodev, nosuid, noowners)
```

My SD card is called /dev/disk3. It has only one mounted partition(/dev/disk3s1 in the output of mount above).

- (b) Use `diskutil` to unmount your SD card's partitions in the terminal. Make sure you have the right disk name. If your SD card has multiple partitions, you will have to run the `umount` command once for each partition.

```
neil@Neils-MacBook-Pro ~ $ diskutil unmount /dev/disk3s1
```

- (c) Use `dd` to write your image to the SD card. Make sure you set the `if=` parameter to the path where your disk image is stored. This command will take a while to complete.

```
neil@Neils-MacBook-Pro ~ $ dd if=/Volumes/Backup/2020-05-27-raspios-buster-arm64.img of=/dev/disk3 ;
```

5. Once you've written your image to the disk, you will need to create a couple of files in the boot partition

```
neil@Neils-MacBook-Pro ~ $ vim /Volumes/system-boot/wpa_supplicant.conf
```

```
ctrl_interface=DIR=/var/run/wpa_supplicant GROUP=netdev
update_config=1
country=US
```

```
network={
    ssid="Your network name/SSID"
```

```
    psk="Your WPA/WPA2 security key"  
    key_mgmt=WPA-PSK  
}
```

You just need to edit the `psk` and `ssid` fields. You will also need to create an empty file in the boot partition called `ssh`.

6. Eject your SD card and stick it in your Pi's SD slot.