

IEEE World AI IoT 2021 IoT Workshop

Installing QEMU on MacOS

2020-10-30

Phillip G. Bradford¹

SUMMARY

This document shows how to install the QEMU virtual machine system on MacOS.

This is for <https://worldaiiotcongress.org/>

DETAILS

This is Part 1 **QEMU-Install** of the Preparation for the distributed Raspberry Pi workshop.

Complete all of **Part 1** of the preparation at least a day before the workshop.

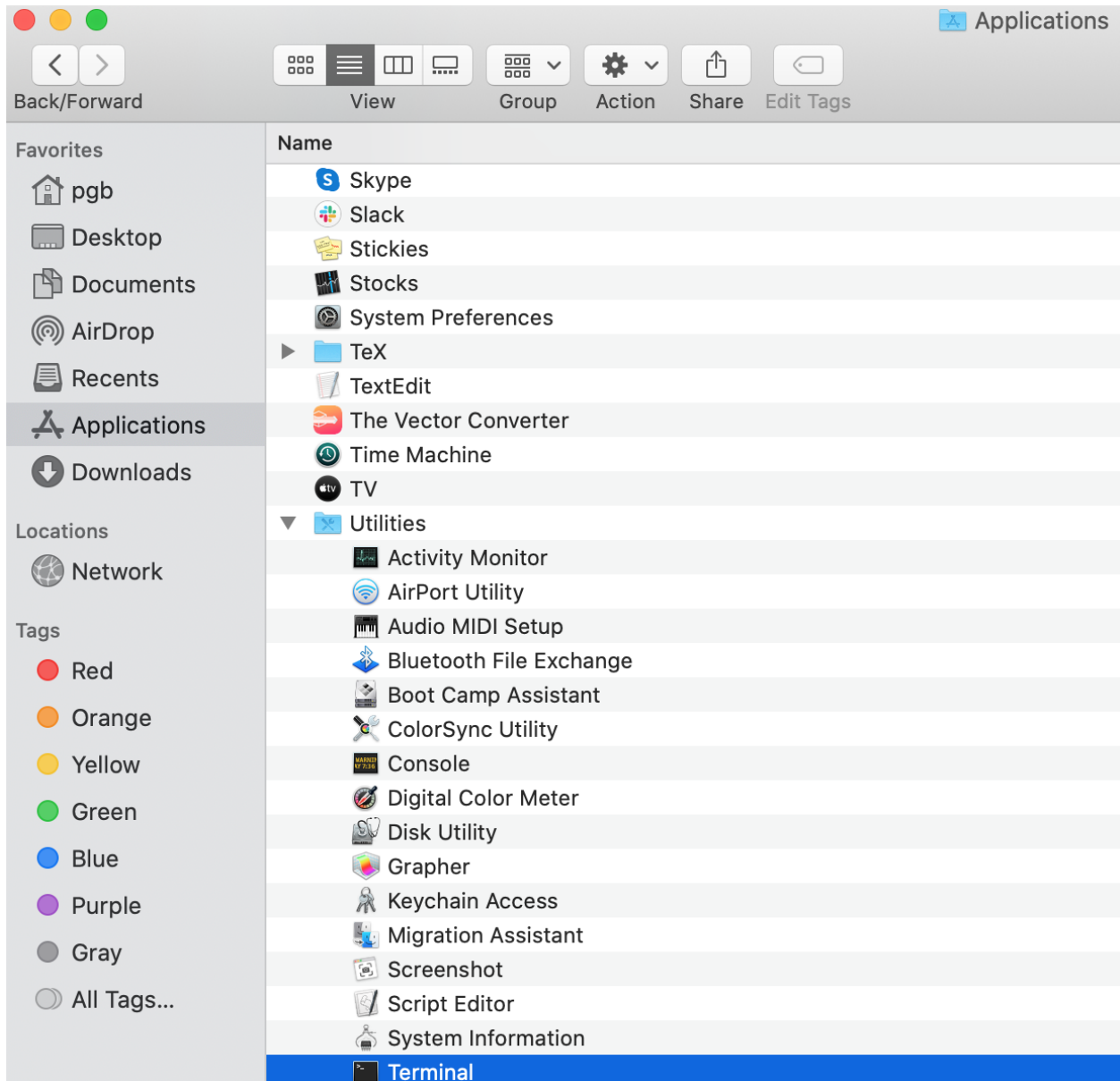
Part 1 has several sub-steps. In most cases with 15MBit internet connections, we expect Part 1 to take several hours. Part 1 may require up to 50GB of storage.

¹ University of Connecticut, Stamford, CT USA, phillip.bradford@uconn.edu, phillip.g.bradford@gmail.com

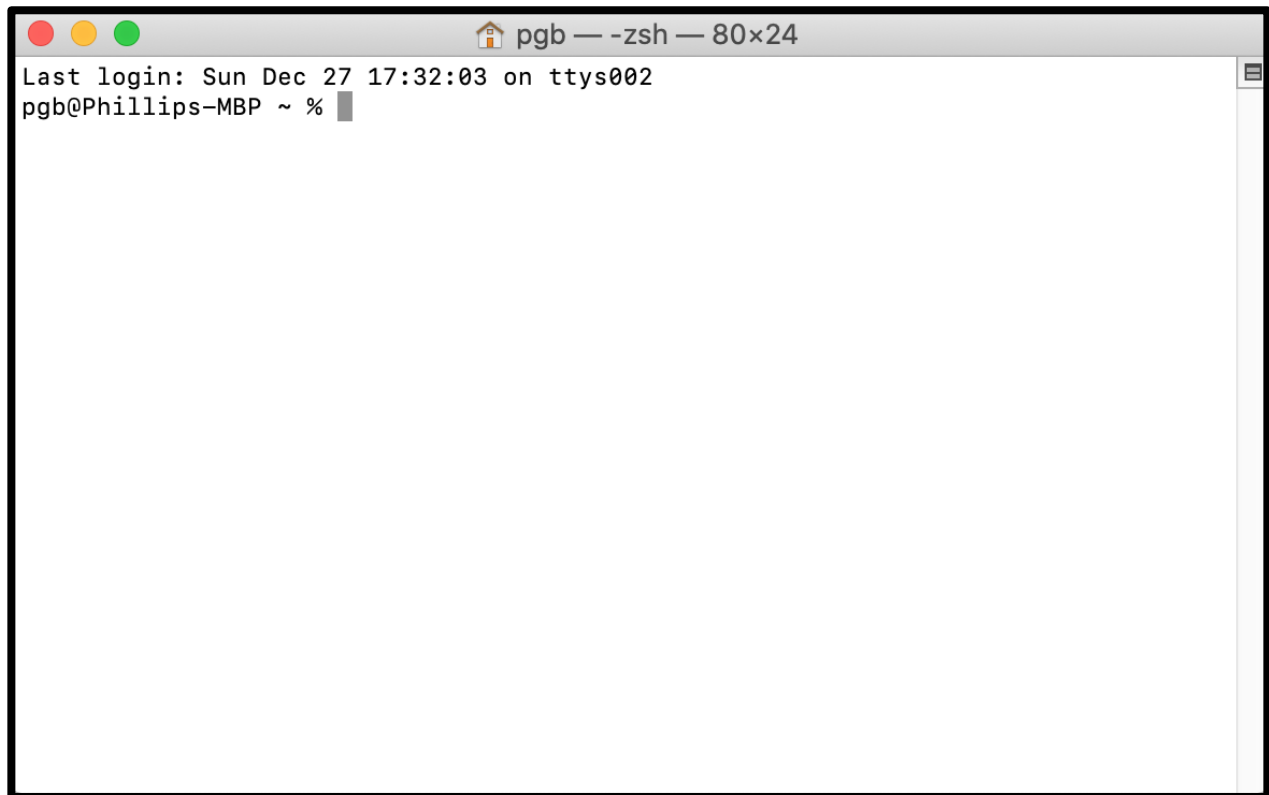
STEPS

STEP 1: OPEN A TERMINAL ON YOUR MAC

Finder > Applications > Utilities > Terminal



Selecting Terminal gives,



Please right-click the Terminal on the Dock (at the bottom of the screen) to keep the Terminal in the system Dock.

STEP 2: BREW INSTALL

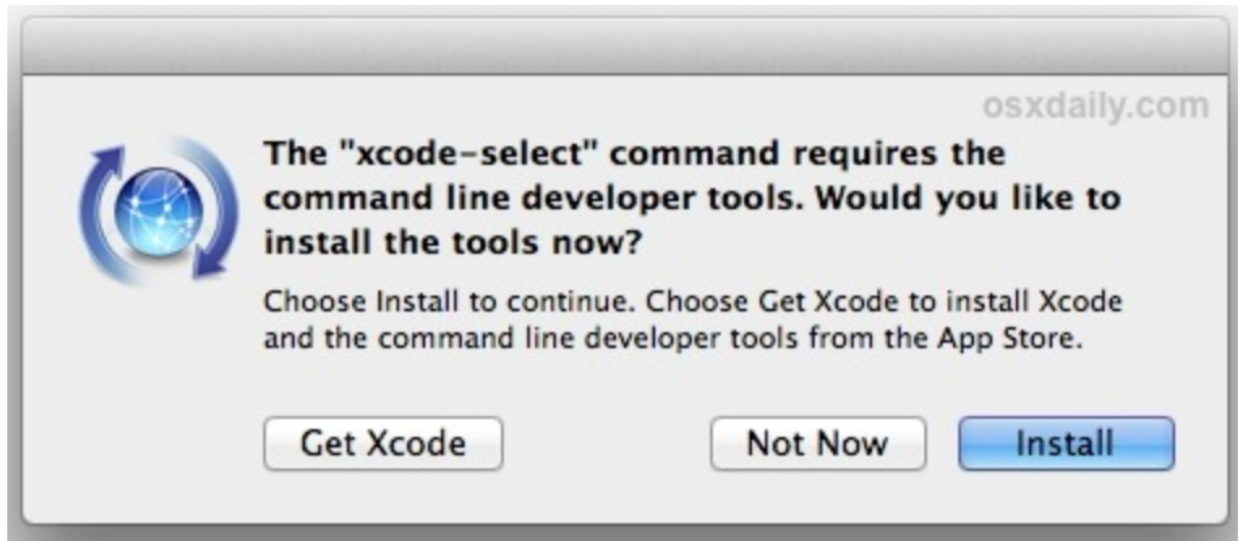
The installer Homebrew (MacOS: **brew**) installs the qemu virtual machine system <https://docs.brew.sh/Installation>

To install brew, you will need either to install Xcode or at least the xcode-command-line tools:

Either install xcode-command-line tools:

```
MacOS> xcode-select --install // about 130MB
```

Select Install when prompted:



```
MacOS> ls /Library/Developer/CommandLineTools/usr/bin/ | wc
122      122      1125
```

Or install Xcode by going to the Apple Mac Store and installing it: give this at least an hour to download and install. Xcode requires about 12GB, but with its associated systems assume the entire system requires about 30GB.



STEP 3: INSTALL QEMU

Once brew has been installed in Step 1, then we install the qemu systems.

<https://www.qemu.org/>

<https://www.qemu.org/download/#macos>

```
MacOS> brew install qemu
```

STEP 4 SANITY CHECK QEMU INSTALL

Open a new Terminal and verify the version of qemu-system-arm is 5.1.0:

```
MacOS> qemu-system-arm -version
```

QEMU emulator version 5.1.0

Copyright (c) 2003-2020 Fabrice Bellard and the QEMU Project developers

NOTES

If you already have homebrew (MacOS: brew) installed you may want to update/upgrade it:

```
MacOS> brew update && brew upgrade
```

This update and upgrade may take one hour or more depending on your connectivity and the load on your machine.