Blockchain Technical Notes
Installing QEMU on MacOS

Phillip G. Bradford[1]

SUMMARY

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

DETAILS

This is Part **1 QEMU-Install** of the Preparation for the virtualized Raspberry Pi workshop.
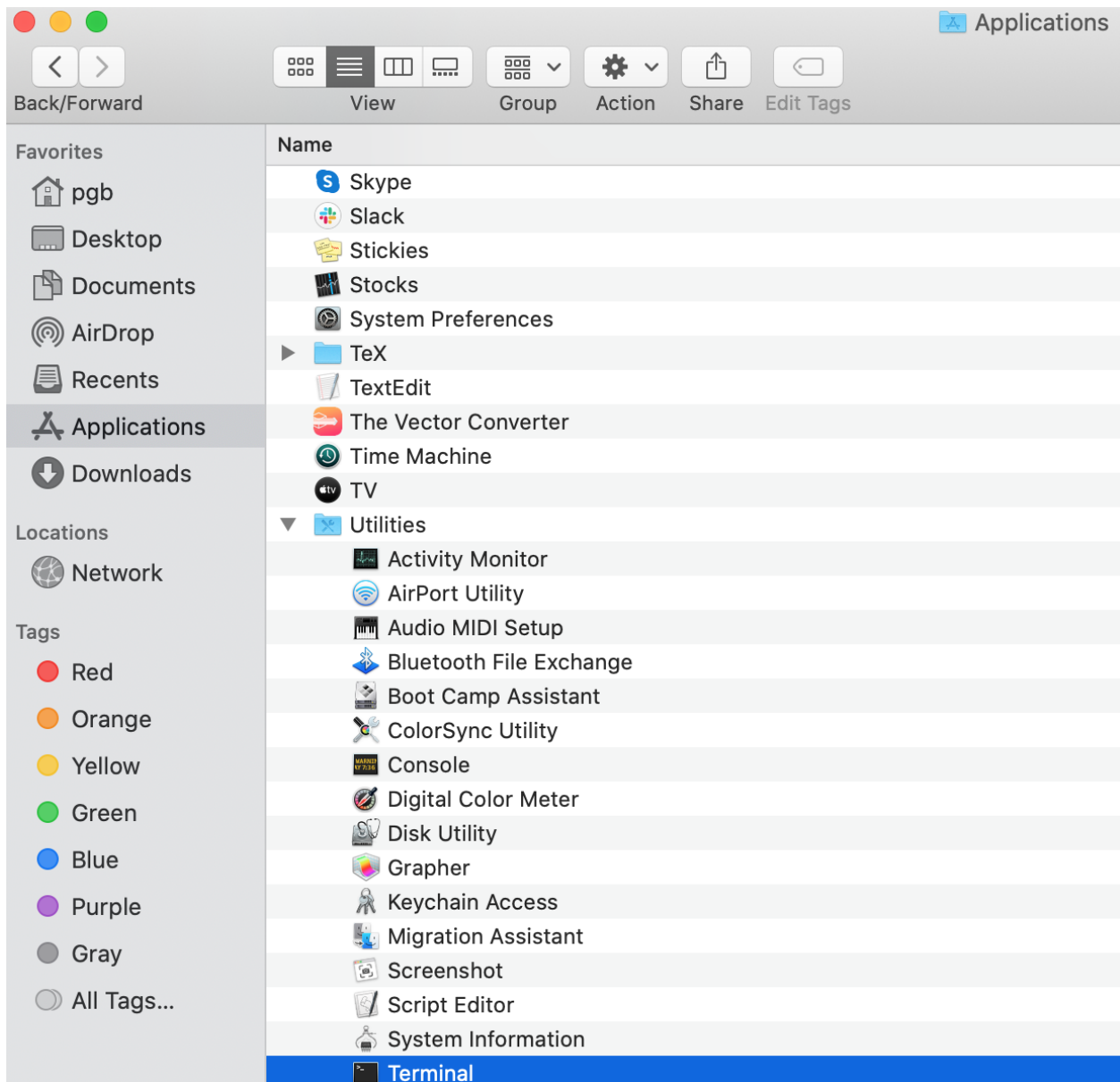
Part 1 has several sub-steps. In most cases with 15MBit internet connections, we expect Part 1 to take several hours. Part 1 may require up to 50GB of storage.

---

[1] University of Connecticut, Stamford, CT USA, phillip.bradford@uconn.edu, phillip.g.bradford@gmail.com
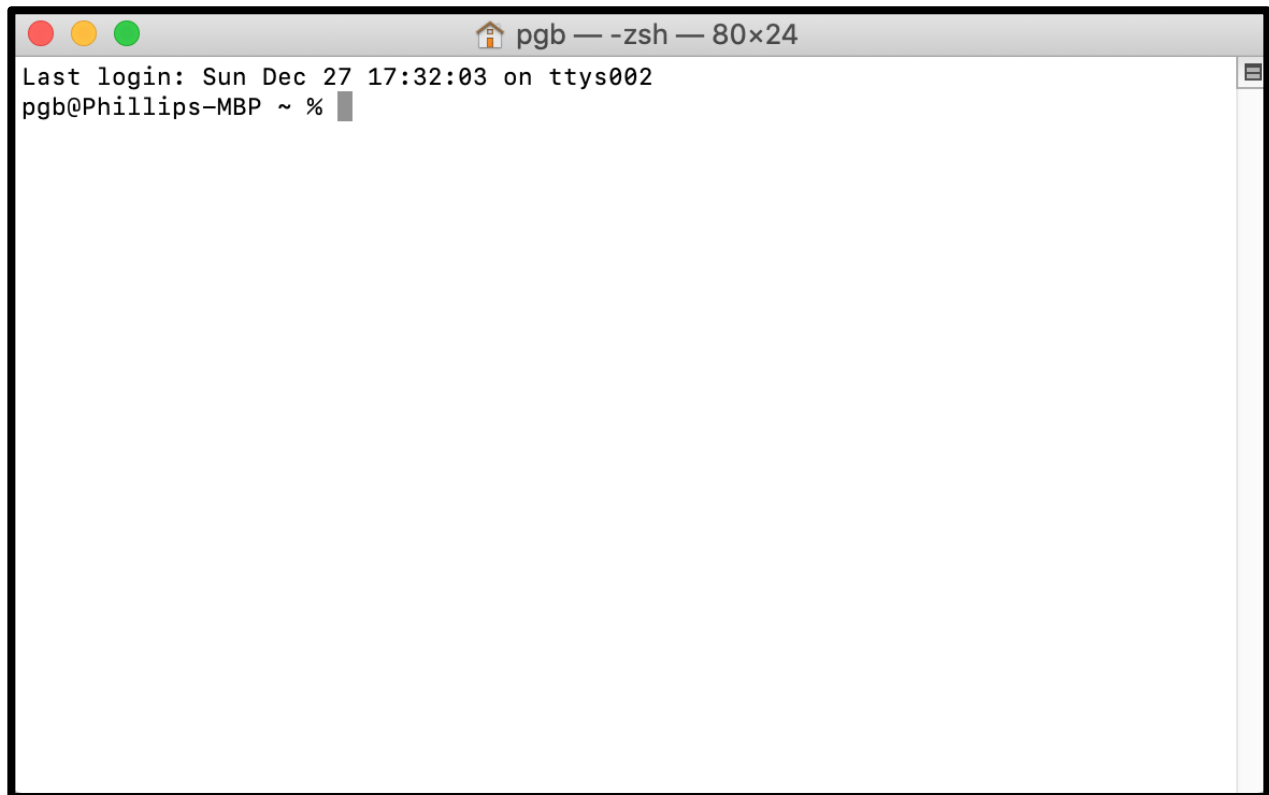
STEP 1: OPEN A TERMINAL ON YOUR MAC

Finder > Applications > Utilities > Terminal

Selecting Terminal gives,

```
● ● ●                    🏠 pgb — -zsh — 80×24
Last login: Sun Dec 27 17:32:03 on ttys002
pgb@Phillips-MBP ~ % █
```

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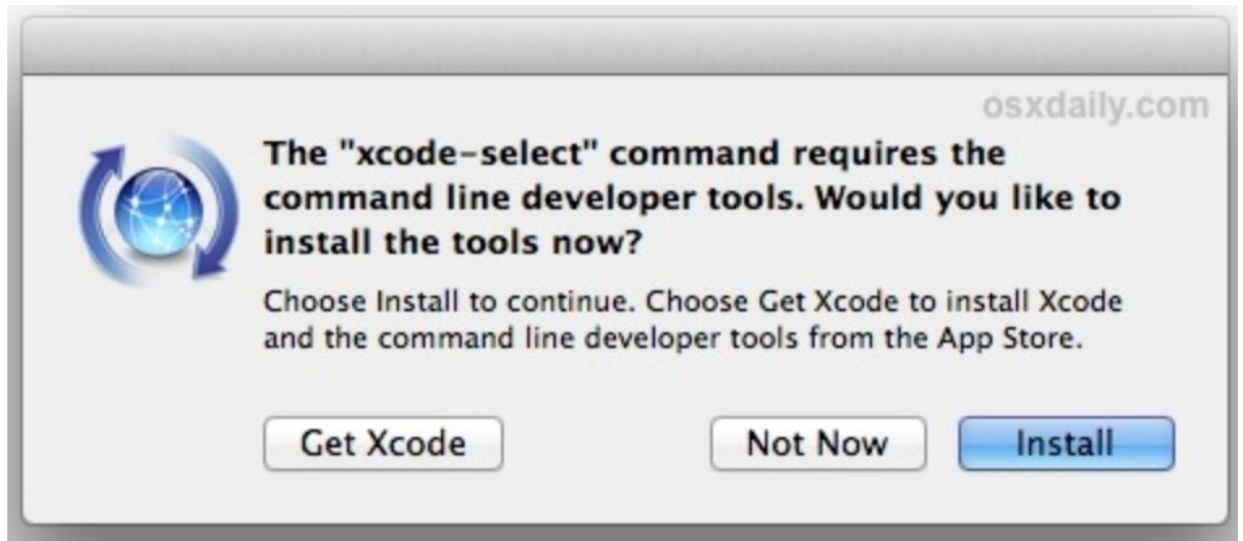

STEP 2: **BREW** INSTALL

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

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

<u>Either</u> 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.