## Virtual Box and Ubuntu Installation Instructions

1. Go to this web site and download and install Virtual Box.

## https://www.virtualbox.org/

(hint: click on the big blue button to download)

2. Click the link below to download Ubuntu ISO file. This will take some time as the file is quite large

http://releases.ubuntu.com/12.04/ubuntu-12.04.5-desktop-i386.iso

3. Check the MD5 hash for the downloaded ISO file to verify that it is correct. The correct MD5 values can be found here

## http://releases.ubuntu.com/12.04/MD5SUMS

and can be checked using the following commands from the Windows or Mac terminal command line

Mac: md5 ubuntu-12.04-desktop-i386.iso

Windows: certutil -hashfile "ubuntu-12.04.5-desktop-i386.iso" md5

And compare the output to what is on the Ubuntu web site for the downloaded ubuntu-12.04.5-desktop-i386.iso file

- 3. Launch VirtualBox and click the "New" button
- 4. Click on "Type" and select "Linux". Click on "Version" and select "Ubuntu (32 bit)". Also give your machine a name in the "Name" box. The screen should resemble Figure 1 below.



Figure 1

- 5. Click Continue.
- 6. Set the memory size for your virtual machine. I recommend 2048 MB. Your screen should resemble Figure 2 below.

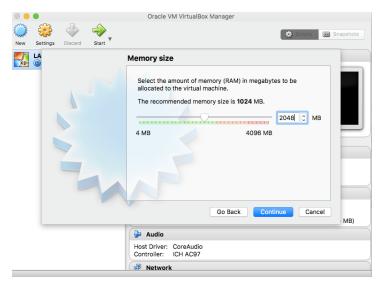


Figure 2

- 7. Click Continue
- 6. Take the default values for disk size and click Create, also, take the defaults for all of the remaining dialogs by clicking Continue or Create at each step.
- 7. You should now see your virtual box in the window as exemplified in Figure 3 below.

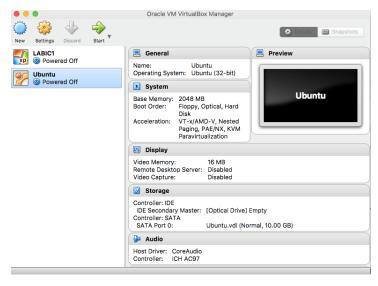


Figure 3

8. Select the virtual machine and click "Start"

9. When the next dialog comes up, click the very tiny icon with the upward green arrow and folder next to the drop down menu with the ISO file name in it. Browse to the Ubuntu ISO file that you downloaded in step 2. Your screen should now resemble figure 4 below.



Figure 4

9. Click Start in the dialog. This will start the installation process for Ubuntu on your virtual box. Note that this takes quite some time so you need to be VERY PATIENT. Eventually, you will get to a screen that looks as Figure 5 below. Click on "Install Ubuntu".

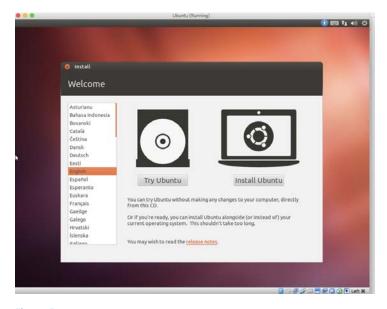


Figure 5

10. You will then get a screen that looks like Figure 6 below. Click Continue

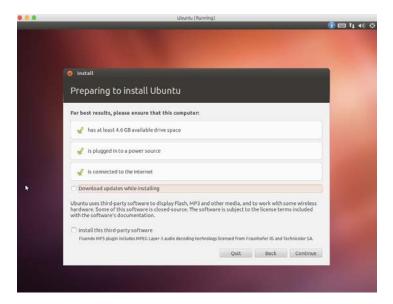


Figure 6

11. This will bring you to a screen warning you about erasing the disk as shown in Figure 7 below. It is referring to the virtual disk used by Virtual Box, so you can ignore this warning and click Continue and then click Install Now. There is a very long wait while the install completes.

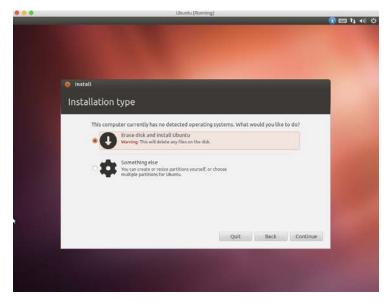


Figure 7

12. You will come to a screen asking about your time zone as seen in Figure 8 below. Change as needed and hit continue. Mine was already defaulted to New York, so I just hit Continue. Same for Keyboard Layout as seen in Figure 9.



Figure 8



Figure 9

13. You will then come to a screen that allows you to create a user on the Linux machine as shown in Figure 10. Fill in the details along with your password and hit Continue. Note that as a best practice, use a strong password and be sure it is one you will remember, as there is generally no recovery mechanism.

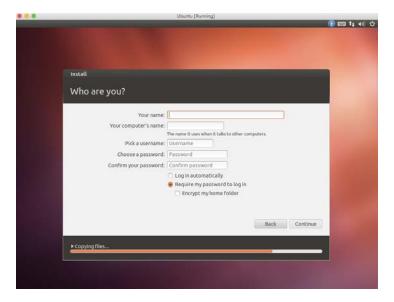


Figure 10

- 14. Be patient, as the installation will still take some time to complete.
- 14. At the end of the installation, you will get a dialog resembling Figure 11 that will allow you to restart your Virtual Box. Click on Restart Now to perform that action. Note that it is restarting your virtual machine (VM) and not your computer (the host). You may need to hit Enter during the reboot process to continue.

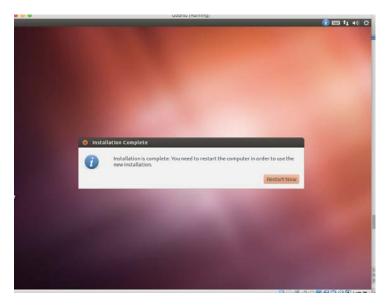


Figure 11

15. After the reboot, you will be prompted for the password that you created during the installation. Enter that on the screen, as seen below in Figure 12 and hit Enter.

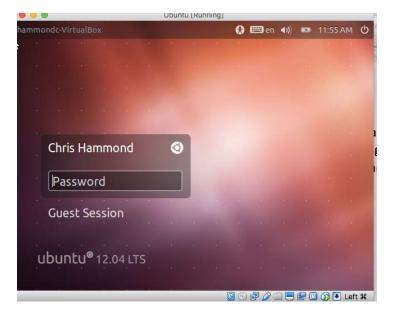


Figure 12

16. Voila, you have a fully functioning Linux VM. You can fire up a console to enter commands by clicking on the top left icon (Dash) and searching for "term" as seen in Figure 13 below. Click on a terminal and you should then see a console as seen in Figure 14.



Figure 13



Figure 14