Running the CSE 232 Virtual Machine

1. Get VMWare
As a CSE student you get the product from VMWare for free. Let's download it:
   1. Go to http://msdn.cse.msu.edu
   2. Top of the page, under "Computer Science and Engineering", follow the link VMWare
   3. Top of the page, small print, is a Sign In link. Under Your Account/Orders
      a. Log in with your CSE password. Not your MSU password, your CSE password.
   4. You need to get the right product for your computer.
      a. For Windows: VMWare Workstation 10
      b. For Mac: VMWare Fusion 6
   5. Part of the process should get you an activation key as well. Might be sent to your email, but you can always go back to the top of the page, click on Your Account/Orders, click on View Details of your order and get it.
   6. With your key, install the program

2. Get an Image
There are two images. One is an exact copy of the lab image as you run it in the CSE labs. That’s nice, but the image is huge! 14 Gb, which is hard to download and hard to find a USB stick big enough

There is an alternative that I’ve made that is similar to the lab image. Much smaller, I’ve compressed it down to less than 2 Gb, and it still has netbeans. You choose which you want to go with.

Alternatives:
1. You can get the full lab image off the internet at
   a. http://www.cse.msu.edu/cse-vmware . There is also a compressed version (only 5Gb) there
   b. For some reason the Windows version of VMWare is there but you still need the activation key, might as well get it as indicated above.
   c. If you can, be on a wired (not wireless) connection. It’s faster.
2. You can get the small lab image off the internet at:
3. Both images should be on /scratch in the 232 lab, 3340 EB. Move it to a USB stick.
   a. Insert the USB stick on the front of the lab machine
   b. If a window doesn’t pop up, open the Places location (top left bar), open Computer
   c. Drag the file from /scratch to the USB stick
   d. Right click on the USB stick directory, first Eject then Safely Remove Drive
4. The images are compressed. If you have a Windows machine, you need to download software. Try http://www.7-zip.org/ it will do the trick. Mac users should be able to double click on the download and decompress already.

5. Setup the Image

**BIOS, Windows Only Machines**

It turns out that many Windows computers ship with a vital element turned off in their BIOS (the startup program). If you get a message about "64 bit operation not being possible", you need to fix your BIOS. This varies between manufacturers, but hopefully this is a general guide.

1. Reboot your machine and watch carefully the startup. Some message will appear briefly about holding the F2 key or the Delete key to start the BIOS
2. Once you get the BIOS screen up, you need to find some general machine settings. The one you are looking for is "Intel VT-X". This needs to be turned on so the VM will run
3. Save the BIOS (something like F12), then reboot.

You should be set.

**Startup**

Let’s setup VMWare to run the 232 Virtual Machine, whichever image you got.

Start up VMWare (Fusion or Workstation, whichever you have)

**For Windows follow this:**


a. This is a Linux OS, in particular a 64 bit Debian
b. I would not use more than 1 core for your VM. The amount of memory depends on how much you have, but never more than half. 1GB should be plenty

**For Mac follow this** (couldn't find a canned online version).

1. Pull-down menu Add top right of the Virtual Machine Library
2. Select New from pulldown
3. Click **Continue without Disc**
4. Select second button **Use Existing Disk**
   a. File browser pops up, pick the CSE vmdk
   b. click **Continue**
5. OS should be **Linux**, version should be **Debian 6 64-bit**
6. click **Continue**
7. click **Finish**

**6. Try/Run the Image**

You should be able to double-click the image (whatever you called it ) in the library window and start it up

Password is "Fun4CSE" for both images