



Using Linux at Cabrillo (119)

There are several different ways for students to run Linux at Cabrillo College.

## Locations to work on lab assignments:

- CIS Lab (Main campus, room 2504)
  - Putty access to Opus on all PC's (Windows)
  - PC's with Linux preloaded (button II)
  - o CIS-Lab-XX PC's with VMware Server and multiple Linux VMs
  - o <u>http://webhawks.org/~cislab/</u>
- CTC (Main campus, building 1400)
  - Putty access to Opus on all PC's (Windows)
  - o CIS-Lab-XX PC's with VMware Server and multiple Linux VMs
  - o <u>http://www.cabrillo.edu/services/ctc/hours.html</u>

#### Classrooms:

- Room 2501 classroom (Main campus)
  - PC's with VMware Server and multiple Linux VMs
  - Putty access to Opus on all PC's (Windows)
- Room 2 classroom (Scotts Valley Center)
  - Notebooks with VMware Player for local Linux
  - Putty access to Opus on all PC's (Windows)

## Putty access to Opus on all PC's (Windows)

Opus is a Red Hat Enterprise Linux server on campus that is accessible via SSH (Secure Shell). Putty is a program that provides SSH on a Windows PC.

The Windows PC's in the CIS Lab and the CTC have putty installed. For use on your home systems see the <u>Howto on installing Putty</u> for more information.

From the Windows PC, run the PuTTY program. Double-click the desktop icon and specify the host name of the remote system (opus.cabrillo.edu), and SSH as the connection type.



| itegory.   |  |                                     |  |
|--|--|-------------------------------------|--|
| <ul> <li>Session</li> <li>Logging</li> <li>Terminal</li> <li>Keyboard</li> </ul>   | Basic options for your PuTTY session                                     |                                     |  |
|  | Specify the destination you want to<br>Host <u>N</u> ame (or IP address) | o connect to <u>P</u> ort           |  |
| Bell   | opus.cabnlio.edu   | 22                                  |  |
| Features     Window     Appearance     Behaviour     Translation     Selection     Colours     Ontection     Data     Proxy     Telnet     Rlogin     SSH     Serial | Connection type:   |                                     |  |
|  | Load, save or delete a stored session<br>Sav <u>e</u> d Sessions         |                                     |  |
|  | Default Settings   | ▲ Load<br>E Sa <u>v</u> e<br>Delete |  |
|  | Close <u>wi</u> ndow on exit:<br>Always Never Only on clean exit         |                                     |  |

Note: when attempting to connect to Opus for the first time from a given machine, you may get an alert and asked to confirm the identity of Opus, (17:9a:6b:17 ...), click "Yes" to continue.

| PuTTY Security Alert |   |  |  |  |
|----------------------|---|--|--|--|
| 1                    | The server's host key is not cached in the registry. You have no guarantee that the server is the computer you think it is. The server's rsa2 key fingerprint is: ssh-rsa 2048 17:9a:6b:17:0b:34:95:d4:77:06:bc:dc:1b:cd:a1:e3 If you trust this host, hit Yes to add the key to PuTTY's cache and carry on connecting. If you want to carry on connecting just once, without adding the key to the cache, hit No. If you do not trust this host, hit Cancel to abandon the connection. Yes No Cancel |  |  |  |

Next you will be prompted for a username.



Enter your username and password to login.



#### CIS-Lab-XX PC's with VMware Server and multiple Linux VMs

There are a number of CIS-Lab-XX systems in the CIS Lab (room 2504) and the CTC. These systems are Windows PC's with VMware Server installed. There are a variety of Linux VMs (Virtual Machines) on each station. A VM behaves exactly like a real physical system.

Start up VMware Server using the desktop icon.



When you get the host prompt, choose Local host and click OK



Next review the various VM's in the left Inventory panel. If the Inventory is not showing, the F9 key can be used to toggle it on and off.

For this example we will use the Frodo VM which shows up as **192-Frodo** on the Inventory list. These 192- VMs were designed for the CIS 192 course however they can be used by anyone. Just to make sure we have a pristine version of the Frodo VM, right click on **192-frodo** in the Inventory panel and select **Revert to Snapshot**. This restores the entire Linux system back to the original installation and configuration.

| Red Hat Linux os 172<br>Windows Vata os 194<br>Windows Vata os 194<br>WMSServer os 196<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor<br>192-bor | I I I I I I I I I I I I I I I I I I I | ines[192-frods[Ubuntu.vmx<br>or Wiwere Server 1.0.8<br>■ Memory<br>■ Hard Dek (CSI 0.0)<br>● Good Cool (DE 1:0)<br>■ Forcessors<br>■ Processors | 512 MB<br>Auto detect<br>Using drive A:<br>Bridged<br>1 |
|--|---------------------------------------|---|---|

To start up Frodo click on the blue link "Start this virtual machine"

After the VM has booted up, note the graphical interface and the text box prompting you to enter your login name.

Click inside the VM window. The VM will capture your mouse and it will be "stuck" inside the VM. If you need to release the mouse again, hit press the left Ctrl and Alt keys at the same time. Login into the graphical system using **cis192** and password you were given in class.



What did you notice to be different Frodo's graphical login compared to the non-graphical Opus login? Were you asked for a terminal type?

After logging in you will see the Ubuntu desktop.



# PC's with Linux preloaded (Trios button II)





There are some older PC's in room 2504 with Trios switches. The Trios switch allows selecting one of three hard drives. The second hard drive has Linux installed. While the computer is off press the second Trios button in. The PC will power up and run Linux.



Using VMware Player for local Linux



