Inetsim/Virtual Lab installation and configuration guide:

Files needed for virtual lab setup:

Download VirtualBox for your respective operating system: https://www.virtualbox.org/wiki/Downloads

Get the ISO for Ubuntu 11.04: <u>http://releases.ubuntu.com/natty/</u>

From MSDN/Dreamspark Premium: Download the ISO for Windows XP Professional SP3

Ubuntu Virtual Machine Setup:

1.) First create a new virtual machine in Virtual Box:

Create New Virtual Machine VM Name and OS Type Enter a name for the new virtual machine and select the type of the guest operating system you plan to install onto the virtual machine.
VM Name and OS Type Enter a name for the new virtual machine and select the type of the guest operating system you plan to install onto the virtual machine.
Enter a name for the new virtual machine and select the type of the guest operating system you plan to install onto the virtual machine.
The name of the virtual machine usually indicates its software and hardware configuration. It will be used by all
Name
Ubuntu For Testing
OS Type
Operating System: Linux
Version: Ubuntu
Next Cancel

- 2.) Choose the VMDK Virtual Machine Disk Image, and create you're virtual machines harddrive. I personally split the files, but perhaps one individual file would run a little faster. This is all preference.
- 3.) Create a virtual machine with approximately 10 Gb's of space on it.

Create New Virtual Disk	-	1.1	-	? x
Virtual disk file location and size Please type the name of the new virtual disk file into the create the file in. Clocation	the box below or d	lick on the folder	icon to select a diffe	erent folder to
Ubuntu For Testing Select the size of the virtual disk in megabytes. This s disk.	ize will be reported	I to the Guest O	S as the maximum si:	ze of this virtual
4.00 MB		1 1 1	2.00 TB	10 GB
			Next	Cancel

4.) Now we're going to do the first installation of the Ubuntu machine that will act as our network controller. Upon initial installation VirtualBox will prompt the user to specify the ISO/Install Disk, brose to find your copy of Ubuntu 11.04.



Now we will follow the Ubuntu installer.

Wounty For Testing [Running] - Oracle VM VirtualBox		_ _ X
Machine View Devices Help		î, 4))k ()
🙆 Install		
WelcomeAsturianuBahasa IndonesiaBosanskiCatalàČeštinaDanskDeutschEestiEnglishEspañolEsperantoEuskaraFrançaisGaeilgeGalegoHrvatskiÍslenskaItalianoKurdi	Image: Non-State State Sta	
	S 🖸 🖉 🗗) 🛄 🛛 🔇 💽 Right Ctrl 👾

Click the install Ubuntu option, and choose to not download updates as the installation process proceeds.

🤧 Ubuntu For Testing (Running) - Oracle VM VirtualBox	_ • ×
Machine View Devices Help	1 a)) ()
😕 Install	
Allocate drive space	
This computer currently has no detected operating systems. What would you like to do?	
Erase disk and install Ubuntu Warning: This will delete any files on the disk.	
Something else You can create or resize partitions yourself, or choose multiple partitions for Ubuntu.	
Quit Back Forwark	
	🕜 🖲 Right Ctrl

We want to commit the entire virtual disk to our Ubuntu installation.

There will be a few installation options that individuals should choose for themselves. Options like timezone, keyboard layout, and username and password.

🐕 Ubuntu For Testing [Runnir	ng] - Oracle VM VirtualBox				_ = X
Machine View Devices	Help				
					τ ι 4)) Ο
	nstall				
۱	Who are you?				
	Your name: Your computer's name:	testbox-VirtualBox	✓] 🗸	
	Pick a username:	testbox			
	Choose a password:		Weak password		
	Confirm your password:] 🛛		
		 Require my password 	to log in		
		Encrypt my home f	older		
			Back	Forward	
Þ	Ready when you are				
				N	
				9 💿 🖉 🗗 🗐 1	🔟 и 🚯 💽 Right Ctrl 🕌

Generic options and weak passwords are acceptable as these virtual machines are to assist you with testing on a closed network. This should conclude the installation process, and you should now have Ubuntu installed on your virtual machine.

Installation of INETSIM on Ubuntu VM:

We will install inetsim using the apt-get package manager.

- 1.) First we need to add the debian repository "deb http://www.inetsim.org/debian/ binary/" to the /etc/apt/sources.list file.
- 2.) To enable the use of this debian repository we must add the InetSim key to our apt keyring. To add this we must first download the signing key. This may be downloaded using the command "wget http://www.inetsim.org/debian/binary/inetsim-archive-keyring_2008.10.12_all.deb."
- 3.) Once you have downloaded the .deb key use the command "sudo dpkg -i inetsim-archive-keyring_2008.10.12_all.deb" to add that key to your apt keyring.
- 4.) After you have added the keyring you must update your repository list using the command

"sudo apt-get update"

- 5.) After your Ubuntu VM has updated its repositories you may use the command "sudo apt-get install inetsim" to install inetsim.
- 6.) After this succeeds you should have INetSim installed on your computer. The way to test this is to run the command "sudo inetsim" and see if your Ubuntu machine enumerates and tells you whether or not the protocols that it is spoofing have successfully been started.

Installation of XP VM:

Create a new Virtual Machine:

Create New Virtua	I Machine	? ×
VM Name and Enter a name for the the virtual machine.	DS Type new virtual machine and select the type of the guest (operating system you plan to install onto
The name of the virtu VirtualBox component Name Widnows XP Testbe	al machine usually indicates its software and hardware s to identify your virtual machine.	e configuration. It will be used by all
OS Type Operating System: Version:	Microsoft Windows Windows XP	▼
		Next Cancel

Set the ram to 256MB or 512MB of ram

Create a new virtual disk of type VMDK, and split that into files of less than 2 GB.

Make that disk approximately 15GBs, and create the virtual disk.

You should now see the virtual machine in the Virtual Box main screen.



Turn on that VM, and the first run wizard should start up. We want to choose the pre downloaded Windows XP w/ SP3 ISO (downloaded from dreamspark premium). And then start the machine.

Now proceed to install windows, using the entire virtual drive as the primary partition. Format with the NTFS file system. Much of the rest of this processes boils down to clicking next. Choose a user name, choose a password, enter your license key, and click through to finish installing Windows Xp.

After you've installed and activated Windows XP. Be sure to take a snapshot of your base VM.

Install Virtualbox Additions for Windows XP

Now we should before we go much longer set up a method of moving files onto and off of the VM you've set up from your host computer.

On your XP machine make sure to install "Virtualbox Guest Additions"

Then go to "Devices" and press "Shared Folders"

Press "Add Share", choose a folder path and name the folder.

Click the auto-mount and read-only items.

Restarting the computer will automate the drive mapping process, otherwise you can directly map the

drive from windows explorer.

How to configure the network of VM's for inetsim:

On the "Oracle VM VirtualBox Manager" choose the VM you want to configure. Then press the yellow settings button. This opens a window that lets you specify the machine configurations. Then choose "network" from the panel on the left of the window. Now you see multiple virtual adapters, you'll only use adapter 1. Change the "attached to" field from "NAT" to "Internal Network." You may then name your network something different from intnet if you choose. Be sure to do this for both VM's, and to connect them to the same network. The network is specified in the "name" parameter under the "attached to" field.

Next you will need to choose an IP Address for each machine, below are what was used in the demo.

Ubuntu machine: 192.168.0.1 Windows XP machine: 192.168.0.2

Windows XP Network Configuration:

Press start, control panel, network & internet connections, network connections.

On the network interface installed right click and click properties.

Double click the TCP/IP item.

Click the dialog box of use the following IP address.

Set both the dns server of the windows machine and the gateway at the ubuntu machine.

Below is an image of the correct network configurations based on the ip addressing scheme mentioned above.

Internet Protocol (TCP/IP) Properties				
General				
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.				
Obtain an IP address automatically				
Use the following IP address: —				
IP address:	192.168.0.2			
Subnet mask:	255.255.255.0			
Default gateway:	192.168.0.1			
Obtain DNS server address automatically				
Ouse the following DNS server add	resses:			
Preferred DNS server:	192.168.0.1			
Alternate DNS server:	· · ·			
Advanced				
OK Cancel				

Ubuntu Network Configuration:

On the Ubuntu PC, click system/preferences/networkconnections. This should pull up a window that controls the network connections within the Ubuntu machine.

Then double click on the "auto eth0" option and IPV4 settings

Change the method to "Manual."

Enter the address decided upon, the netmask, and the computers own ip for the gateway.

Below is an image of the proper configurations.

😣 Editing Auto eth0				
Connection name: Auto eth0				
Sconnect automatically				
Wired 802.1x Se	Wired 802.1x Security IPv4 Settings IPv6 Settings			
Method: Man	Method: Manual ‡			
Addresses				
Address	Netmask	Gateway	Add	
192.168.0.1 255.255.0 192.168.0.1 Delete				
DNS servers: 192.168.0.1				
Search domair	Search domains:			
DHCP client ID:				
Require IPv4 addressing for this connection to complete				
Routes				
Available to all users Cancel Save				

Configure INetSim:

In your Ubuntu 11.04 VM, use a text editor to open /etc/inetsim/inetsim.conf

Change the "service bind address" to 192.168.0.1

Then change the "dns_default_ip" 192.168.0.1

You should now be able to call out to any http page and get back the inetsim default page.

Reconfigure Network Connection for Normal Operations:

To allow contact with the internet again, do essentially the opposite of what your custom network configurations have been. Make the adapter connected to NAT again and set all your TCP/IP settings to auto/dhcp.