

## Apache Setup

This activity walks you through the process of setting up a web server on your Debian VM, and testing it's connection from your Windows' VM. For this to work, like we did with SSH and PuTTY, we need both VMs working.

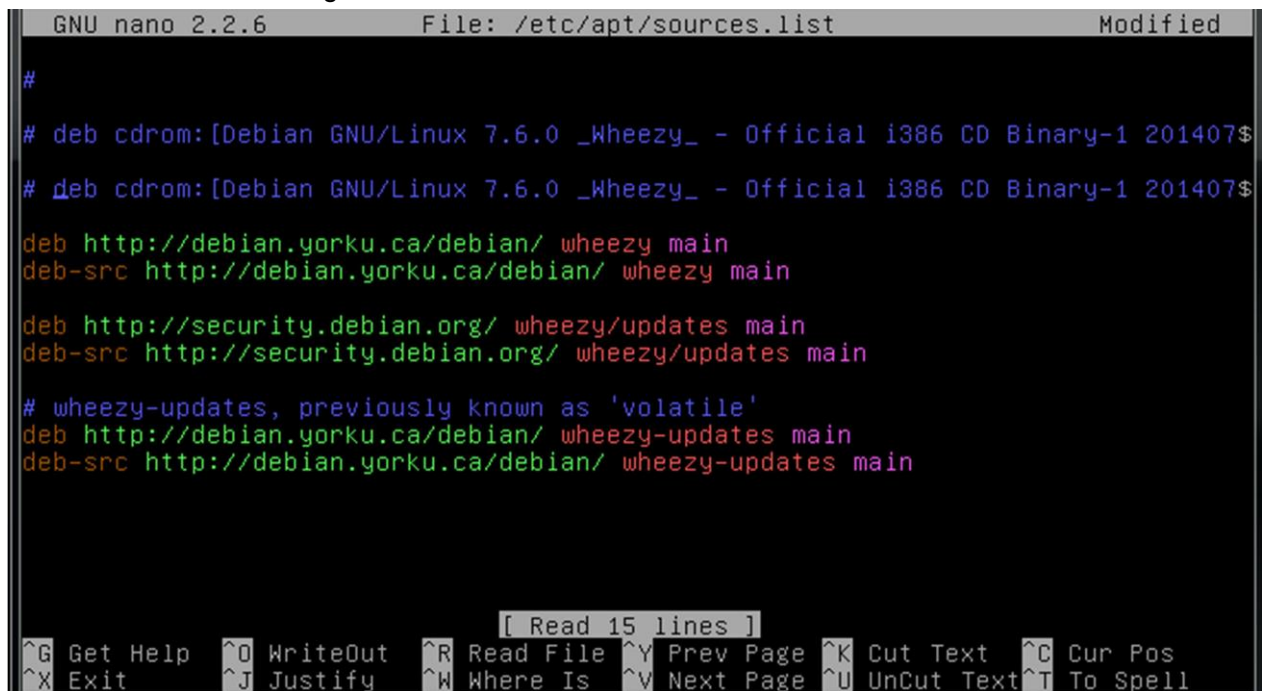
First items first, we want to **verify** our Debian does not use a CD-ROM or DVD image when it tries to update or install software. You should ensure that the Debian VM doesn't have the Debian install ISO image connected to it. You also need to verify that the Debian installation tool "apt-get" does not look for that missing CD or DVD. We do this in the following manner:

Log into Debian as normal, and become root via the `su -` command

Type in the following exactly as below:

```
nano /etc/apt/sources.list
```

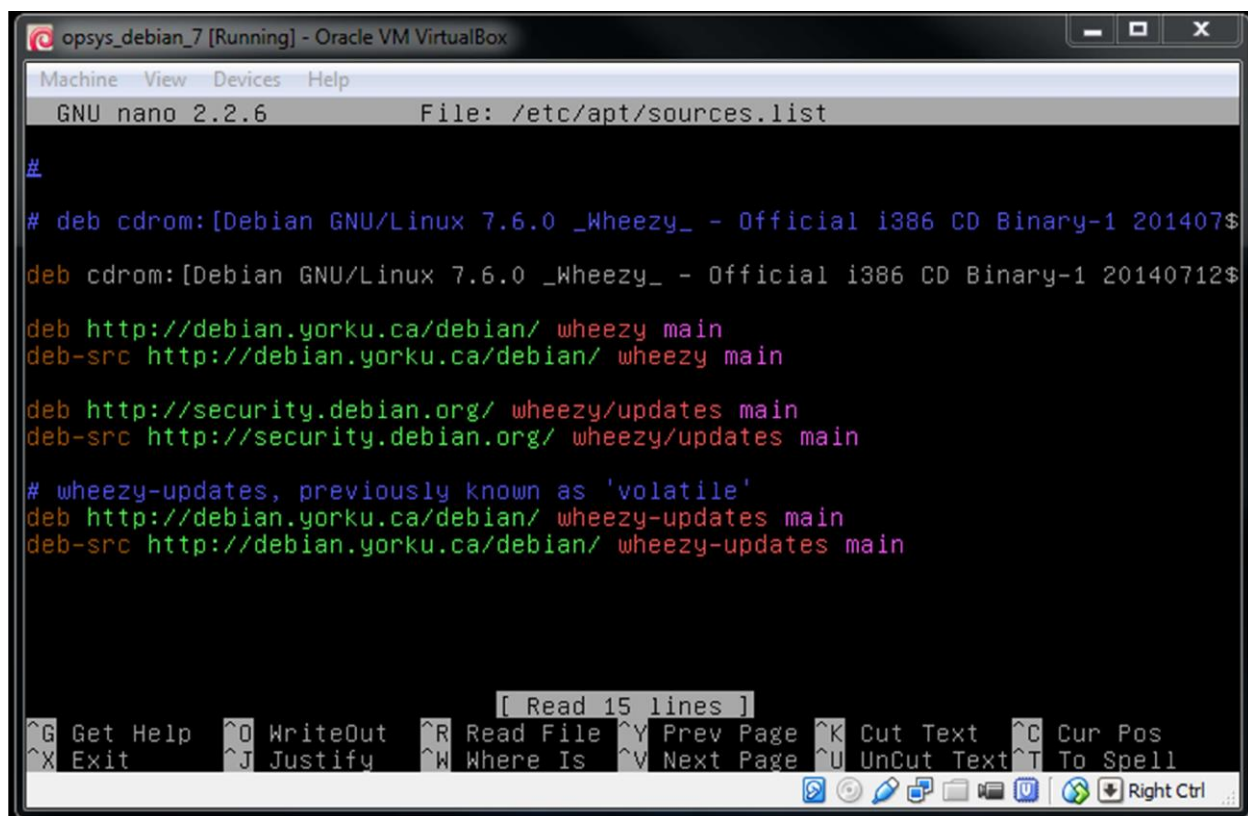
You should see something like this:



```
GNU nano 2.2.6      File: /etc/apt/sources.list      Modified
#
# deb cdrom:[Debian GNU/Linux 7.6.0 _Wheezy_ - Official i386 CD Binary-1 201407$
# deb cdrom:[Debian GNU/Linux 7.6.0 _Wheezy_ - Official i386 CD Binary-1 201407$
deb http://debian.yorku.ca/debian/ wheezy main
deb-src http://debian.yorku.ca/debian/ wheezy main
deb http://security.debian.org/ wheezy/updates main
deb-src http://security.debian.org/ wheezy/updates main
# wheezy-updates, previously known as 'volatile'
deb http://debian.yorku.ca/debian/ wheezy-updates main
deb-src http://debian.yorku.ca/debian/ wheezy-updates main

[ Read 15 lines ]
^G Get Help  ^O WriteOut  ^R Read File ^Y Prev Page ^K Cut Text  ^C Cur Pos
^X Exit      ^J Justify   ^W Where Is  ^V Next Page ^U UnCut Text ^T To Spell
```

The second line `deb cdrom:...` is the one we wish to verify is commented out (hash symbol at beginning of the line). If your instance of Debian looks like the following, in that the line is uncommented, it must be commented out:

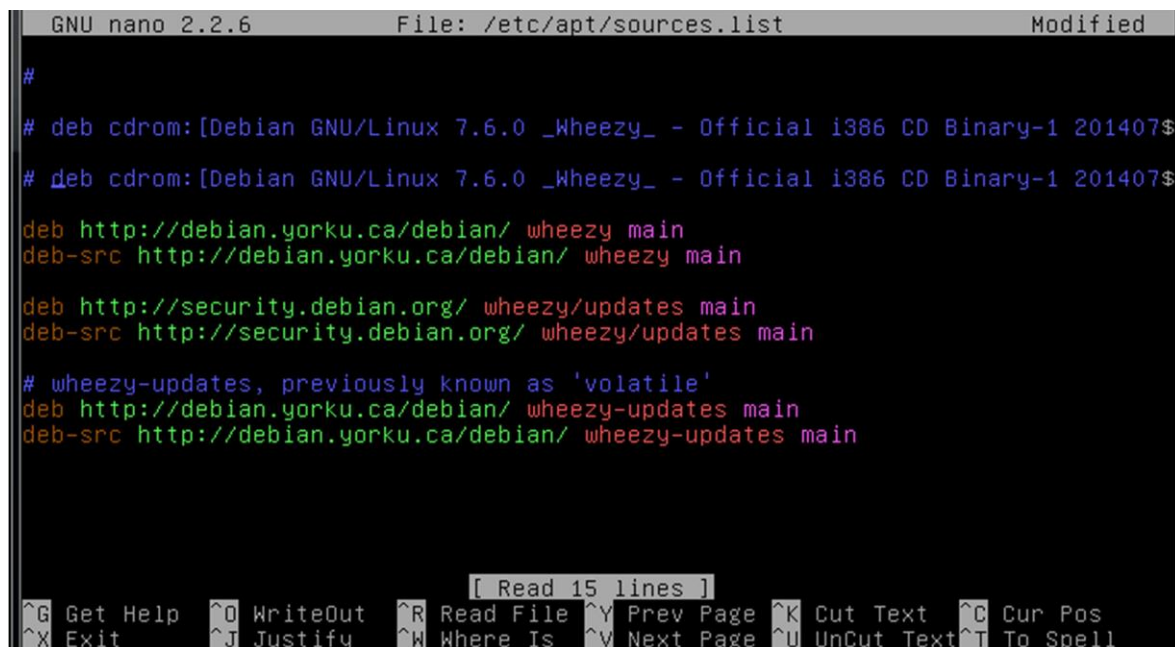


```
opsys_debian_7 [Running] - Oracle VM VirtualBox
Machine View Devices Help
GNU nano 2.2.6 File: /etc/apt/sources.list

#
# deb cdrom:[Debian GNU/Linux 7.6.0 _Wheezy_ - Official i386 CD Binary-1 201407$
deb cdrom:[Debian GNU/Linux 7.6.0 _Wheezy_ - Official i386 CD Binary-1 20140712$
deb http://debian.yorku.ca/debian/ wheezy main
deb-src http://debian.yorku.ca/debian/ wheezy main
deb http://security.debian.org/ wheezy/updates main
deb-src http://security.debian.org/ wheezy/updates main
# wheezy-updates, previously known as 'volatile'
deb http://debian.yorku.ca/debian/ wheezy-updates main
deb-src http://debian.yorku.ca/debian/ wheezy-updates main

[ Read 15 lines ]
^G Get Help ^O WriteOut ^R Read File ^Y Prev Page ^K Cut Text ^C Cur Pos
^X Exit ^J Justify ^W Where Is ^V Next Page ^U UnCut Text ^T To Spell
Right Ctrl
```

Using cursor keys, move down until you are on the line that says “deb cdrom:[Debian .....” and comment it out by placing a # symbol at the front of the line, as shown in the image above. This tells the following utility to not use a cdrom when installing or updating software. It should look like this:



```
GNU nano 2.2.6 File: /etc/apt/sources.list Modified

#
# deb cdrom:[Debian GNU/Linux 7.6.0 _Wheezy_ - Official i386 CD Binary-1 201407$
# deb cdrom:[Debian GNU/Linux 7.6.0 _Wheezy_ - Official i386 CD Binary-1 201407$
deb http://debian.yorku.ca/debian/ wheezy main
deb-src http://debian.yorku.ca/debian/ wheezy main
deb http://security.debian.org/ wheezy/updates main
deb-src http://security.debian.org/ wheezy/updates main
# wheezy-updates, previously known as 'volatile'
deb http://debian.yorku.ca/debian/ wheezy-updates main
deb-src http://debian.yorku.ca/debian/ wheezy-updates main

[ Read 15 lines ]
^G Get Help ^O WriteOut ^R Read File ^Y Prev Page ^K Cut Text ^C Cur Pos
^X Exit ^J Justify ^W Where Is ^V Next Page ^U UnCut Text ^T To Spell
```

Hit Ctrl + o (write out) to save, keep the same file name, and hit Ctrl + x to exit.

1) Update your Debian VM. First we need to ensure we have the most up to date software on our Debian VM. This is done in two parts. As it is an Administrative level activity, ensure you execute these commands as **root**

```
apt-get update  
apt-get upgrade
```

This will ensure you have the most recent versions of your software installed. **You may be required to answer some questions, and read a notification on the utility wget, (hit space to scroll down, q to quit) but it should be straightforward.**

2) Install Apache2 Web Server. Now that our software is up to date, we are going to install a web server. Web servers are applications that run on machines that allow a website pages to be shared/presented. One of the most common (if not the most common) web server is the Apache Web Server ([www.apache.org](http://www.apache.org)) We will be installing Apache2 with the following command:

```
apt-get install apache2
```

3) Test. You can now go to your Windows box, and browse to your Debian server. This will require you to determine the IP address of your Debian server, which you should now know how to do.

4) Install WinSCP. In your Windows machine, download and install WinSCP. A simple google search should turn it up. You can then test this as you tested your PuTTY connection; you may read the notes from "Creating a network between virtual machines in VirtualBox" document in Learn Content under Networks.