INSTALL UBUNTU ON RB-100/RB-110

(METHOD 2: USING VIRTUALBOX)

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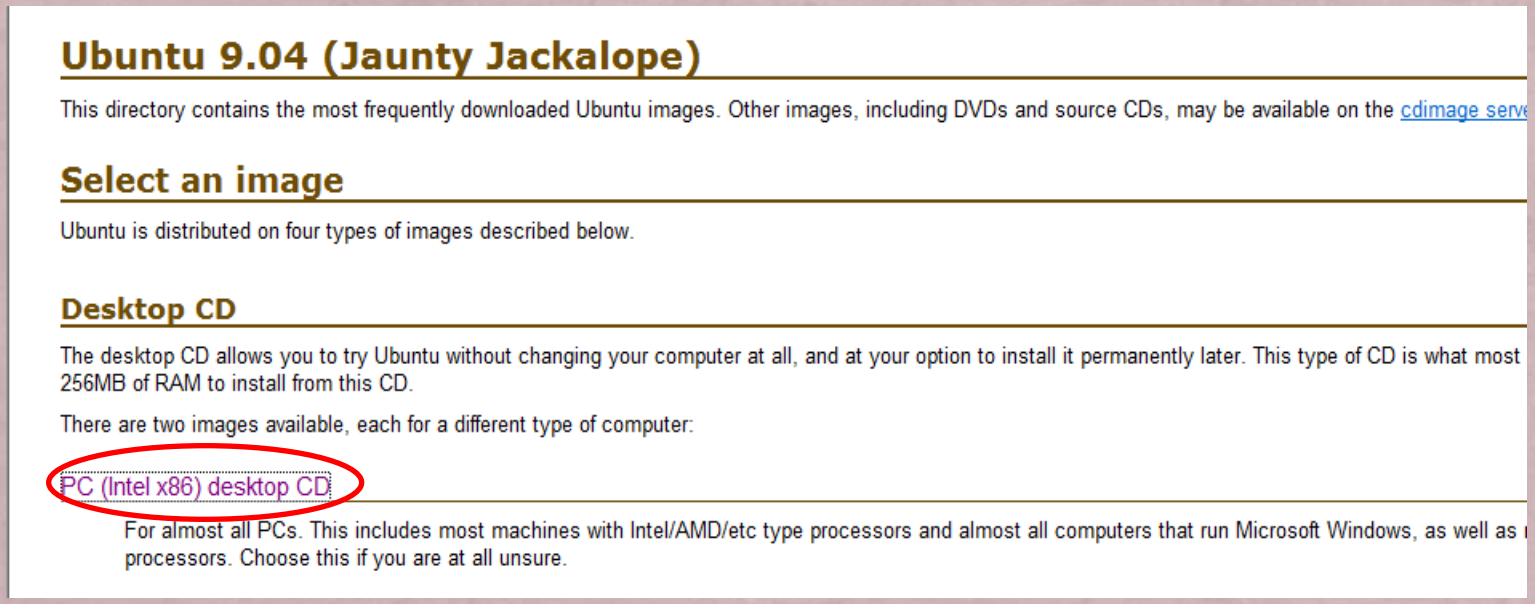
REQUIREMENTS

- Ubuntu ISO file
  - Here, we use Ubuntu 9.04 for example
- Sun VirtualBox
- RoBoard RB-100/RB-110
- 8GB MicroSD card
- MicroSD CardReader

STEP1.

+ Download Ubuntu-9.04-DESKTOP-I386.ISO file

  download web: http://releases.ubuntu.com/9.04/



Ubuntu 9.04 (Jaunty Jackalope)

This directory contains the most frequently downloaded Ubuntu images. Other images, including DVDs and source CDs, may be available on the cdimage serv

Select an image

Ubuntu is distributed on four types of images described below.

Desktop CD

The desktop CD allows you to try Ubuntu without changing your computer at all, and at your option to install it permanently later. This type of CD is what most
256MB of RAM to install from this CD.

There are two images available, each for a different type of computer:

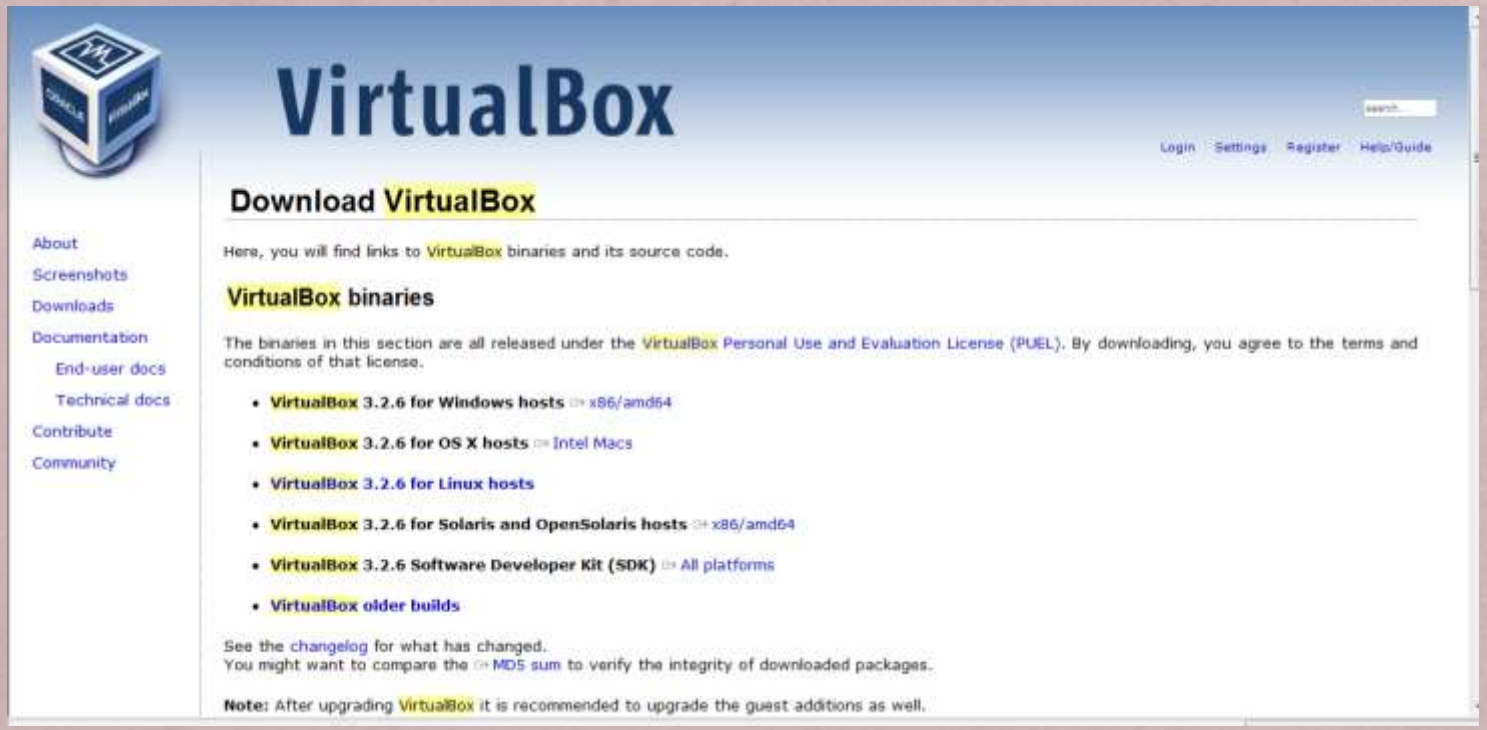
PC (Intel x86) desktop CD

For almost all PCs. This includes most machines with Intel/AMD/etc type processors and almost all computers that run Microsoft Windows, as well as
processors. Choose this if you are at all unsure.

STEP2.

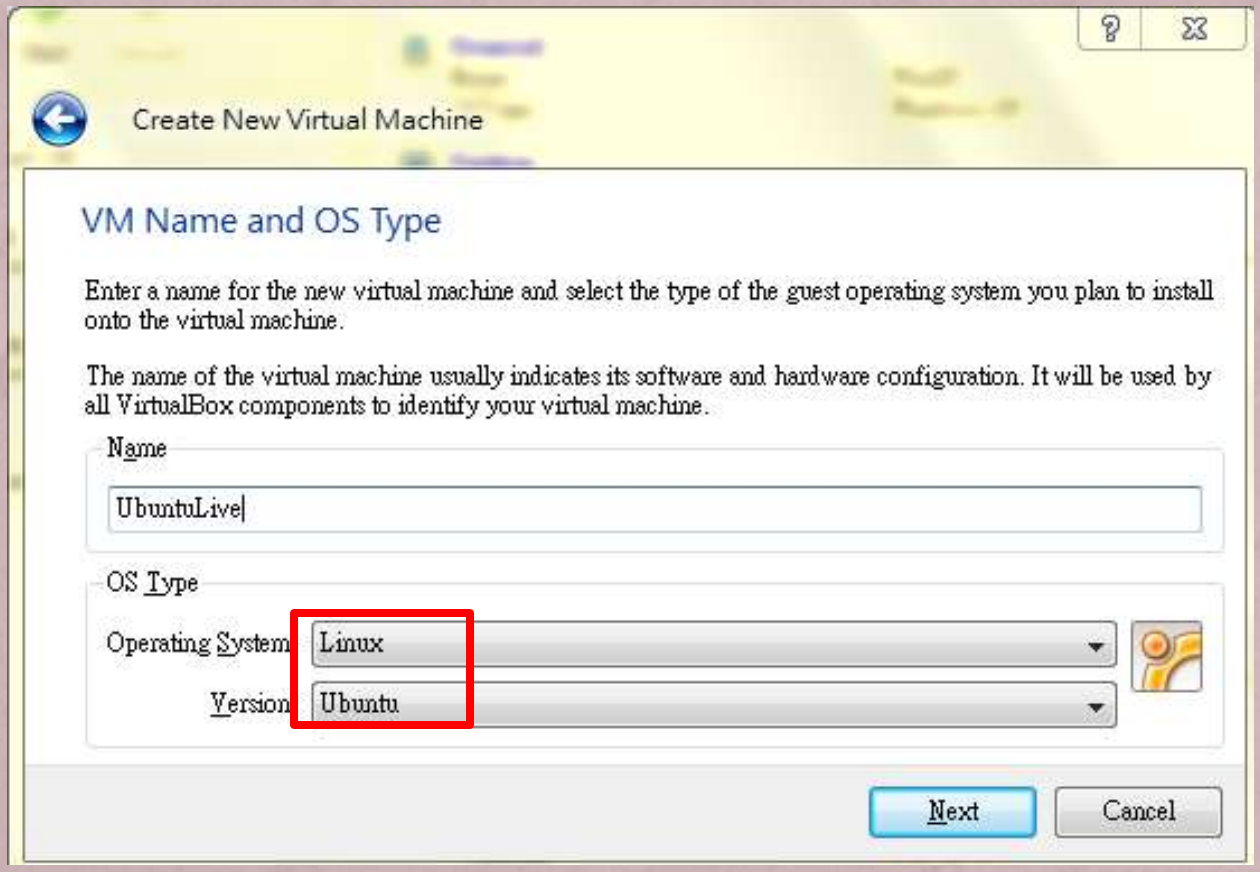
+ Download VirtualBox and install it into your computer

  download web: http://www.VirtualBox.org/wiki/downloads



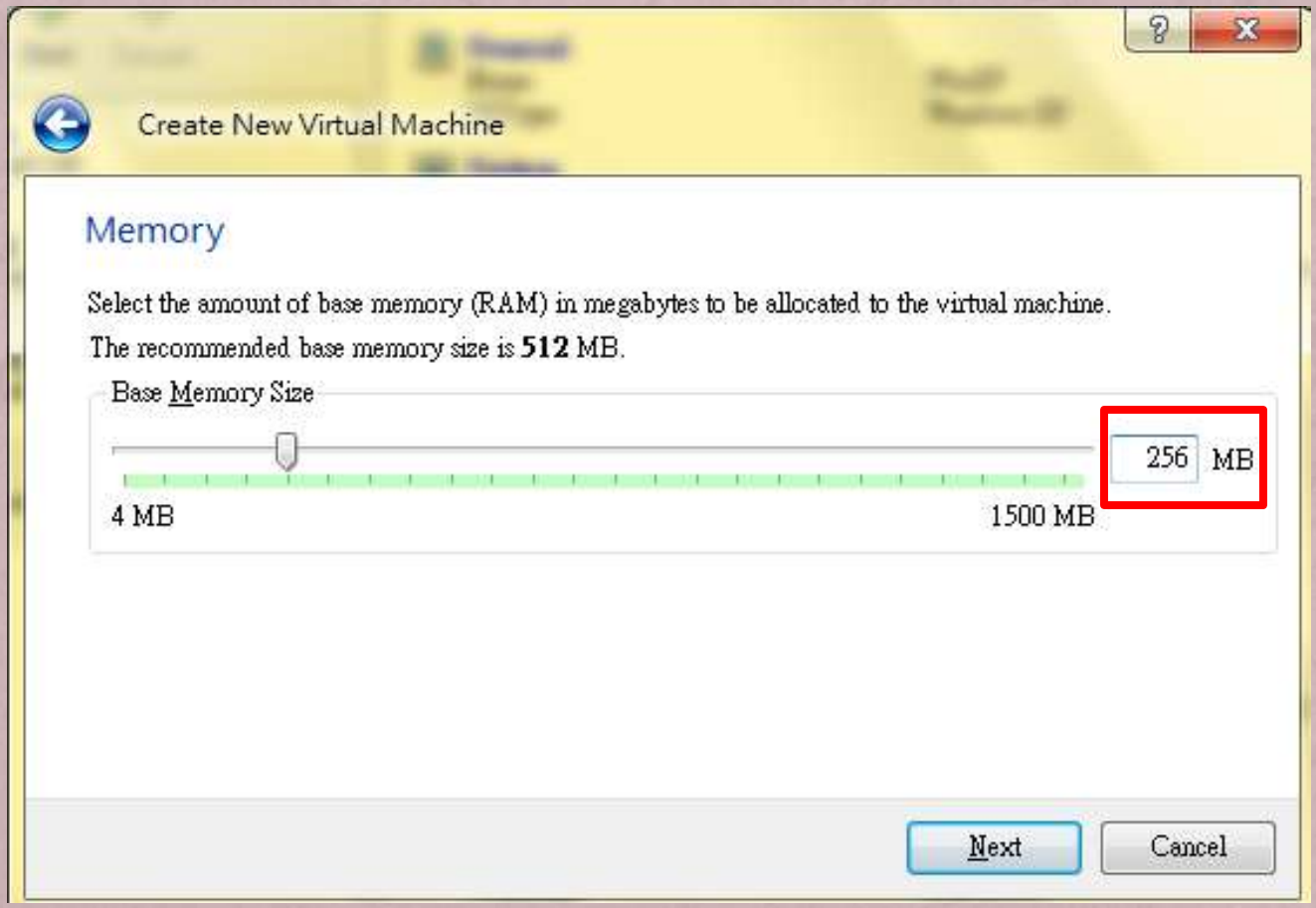
STEP3.

+ Open VirtualBox and create a new Virtual Machine



STEP4.

- Set memory size 256 MB (to match RoBoard RB-100/RB-110)

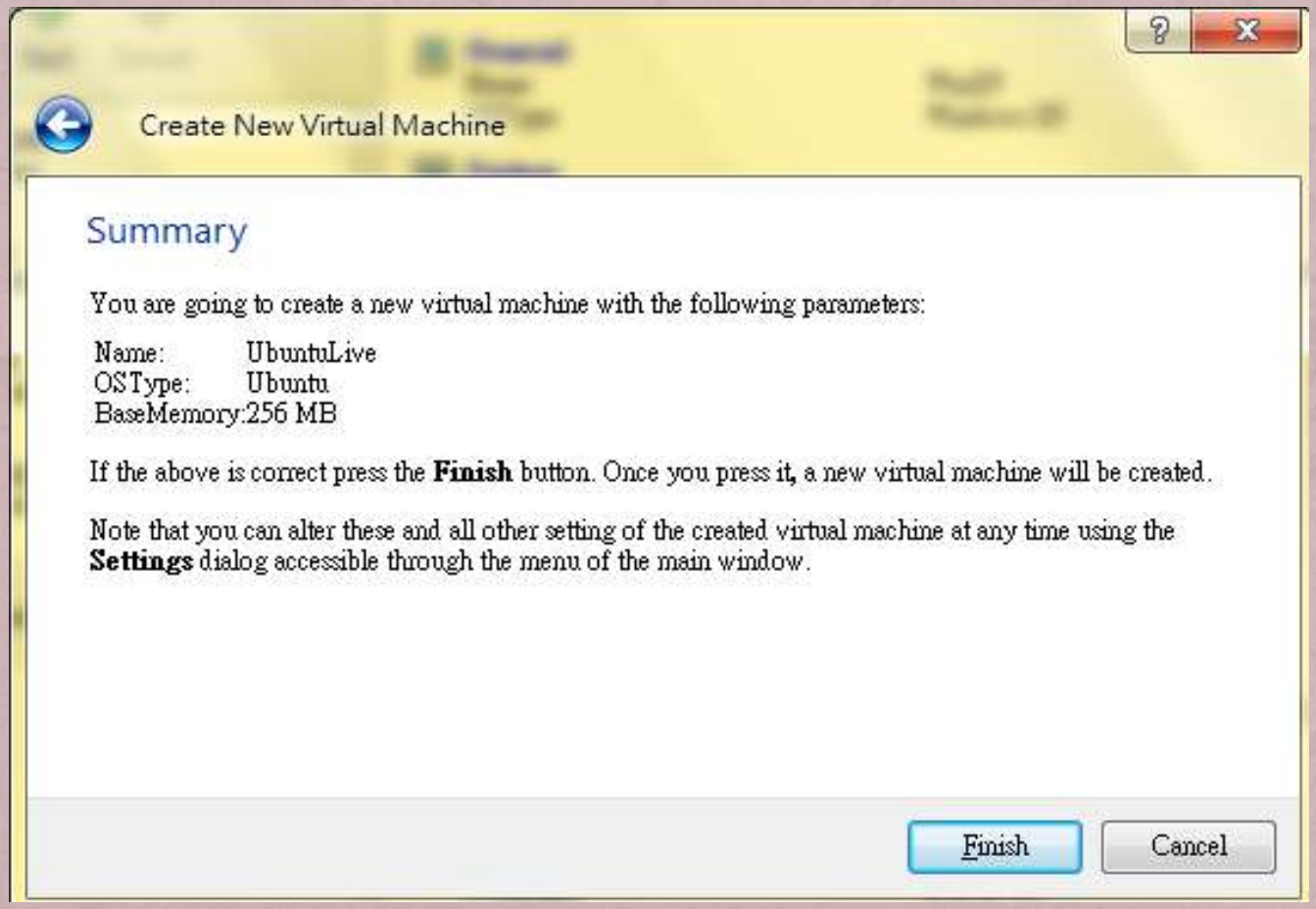


STEP5.

+ Don’t click “Boot Hard Disk”

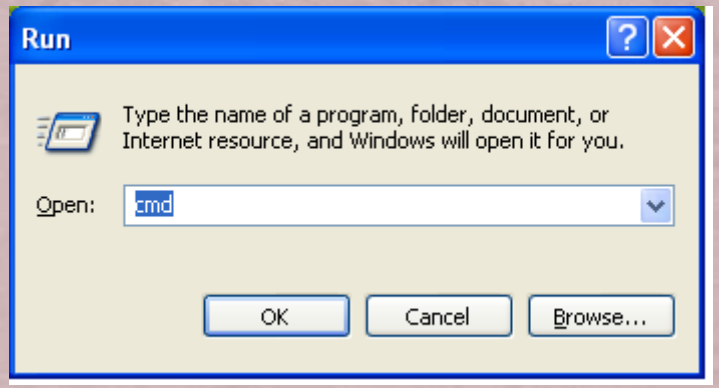
STEP6.

- Click “Finish”



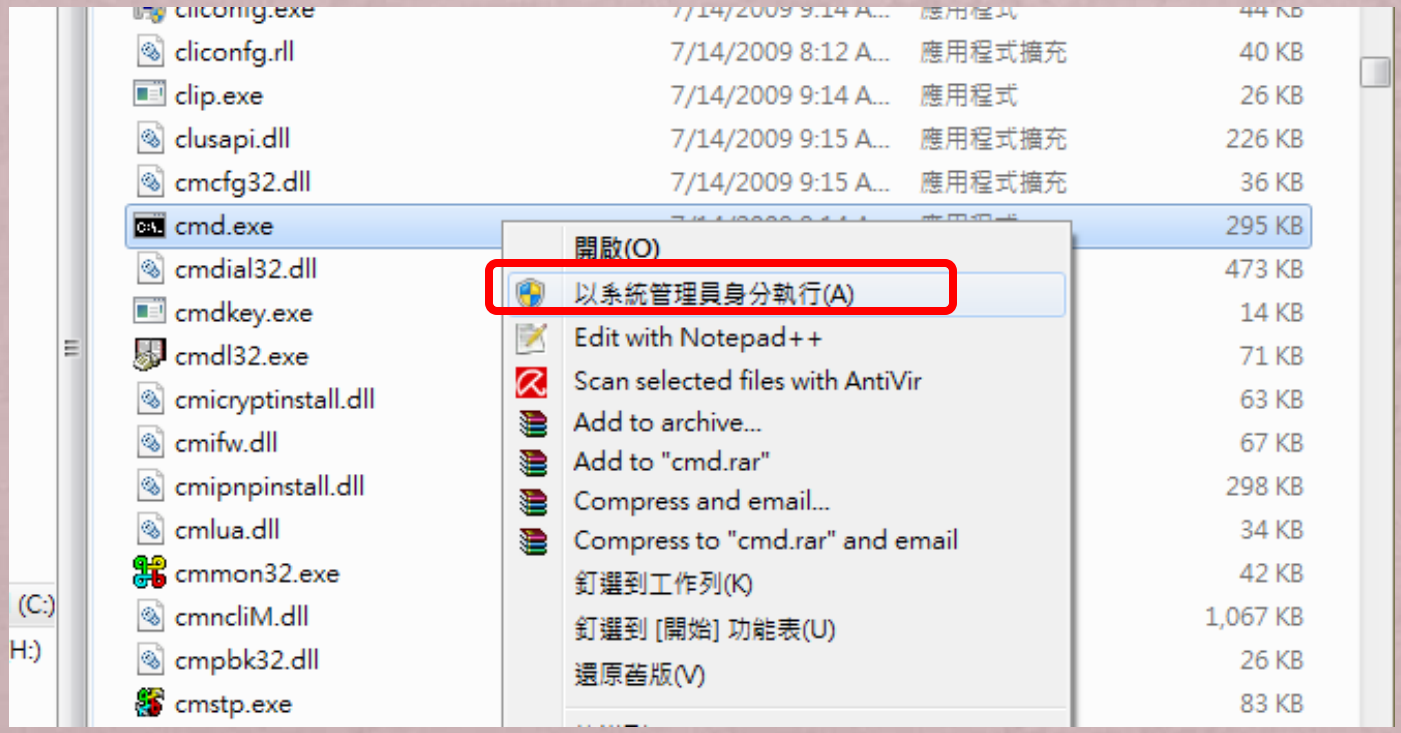
STEP7. (FOR WINXP)

- Open a MS-DOS Prompt
  - Click “Start Menu” → Click “Run” → Type “cmd”



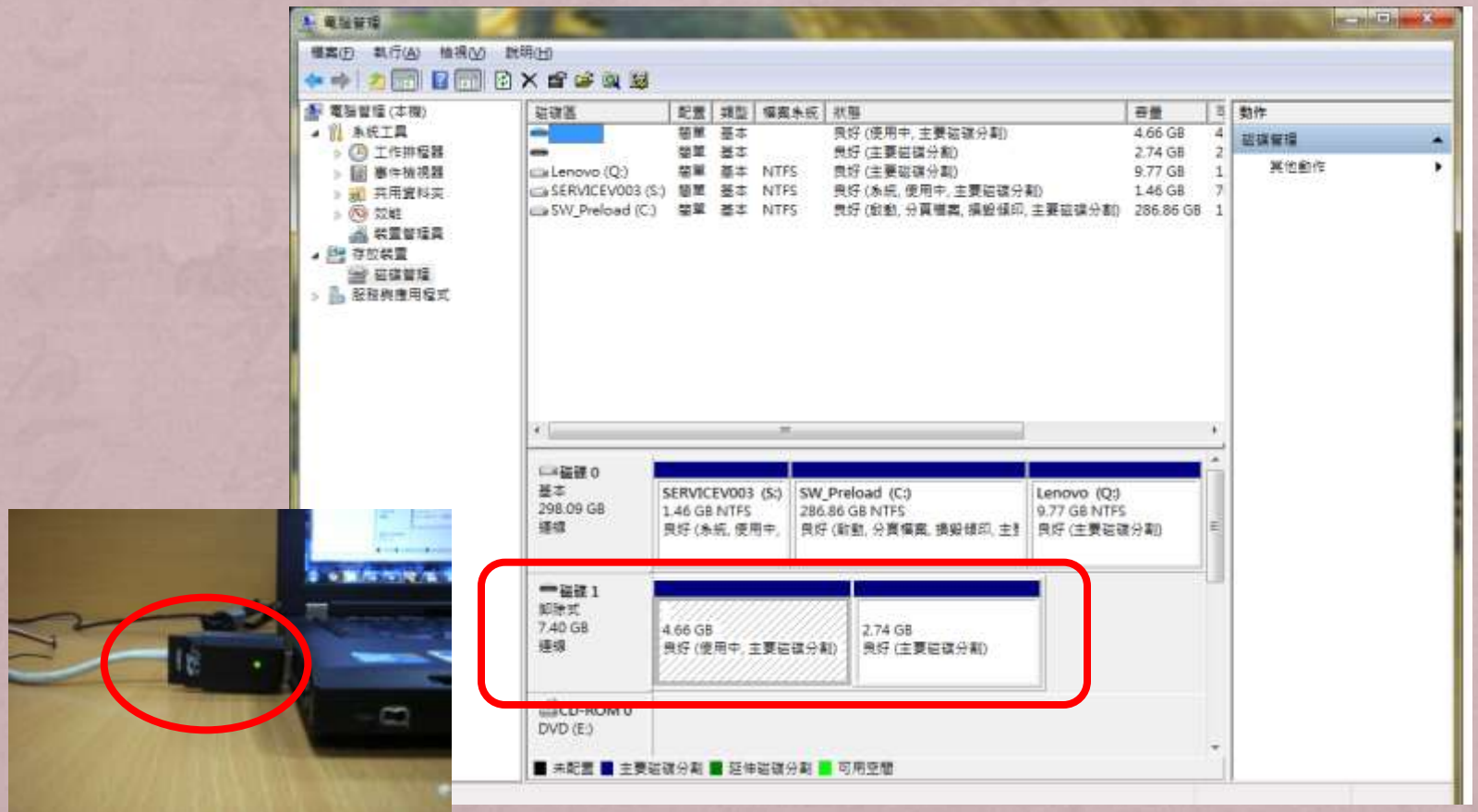
STEP7. (FOR VISTA OR WIN7)

- Open a MS-DOS Prompt
  - Find the “cmd.exe”
  - Right click on “cmd.exe” and choose run as “Administrator”



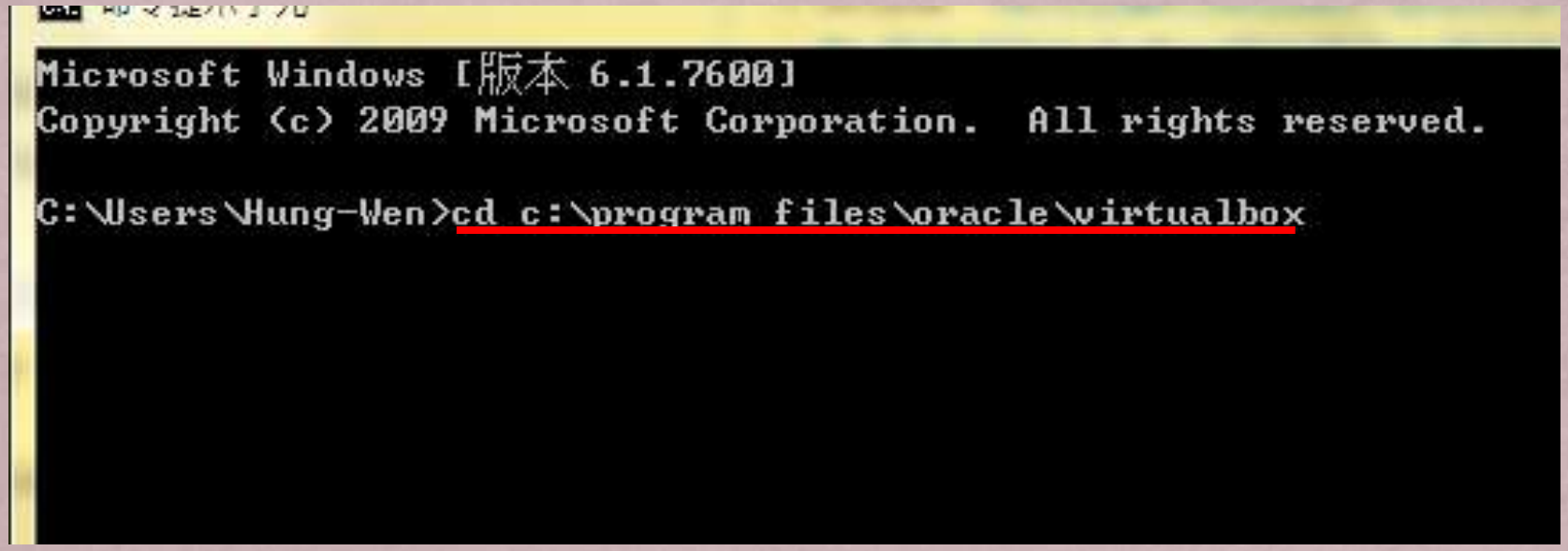
STEP8.

- Plugin the USB card reader with the MicroSD card
  - In this example, the USB device is numbered as Disk 1



STEP9.

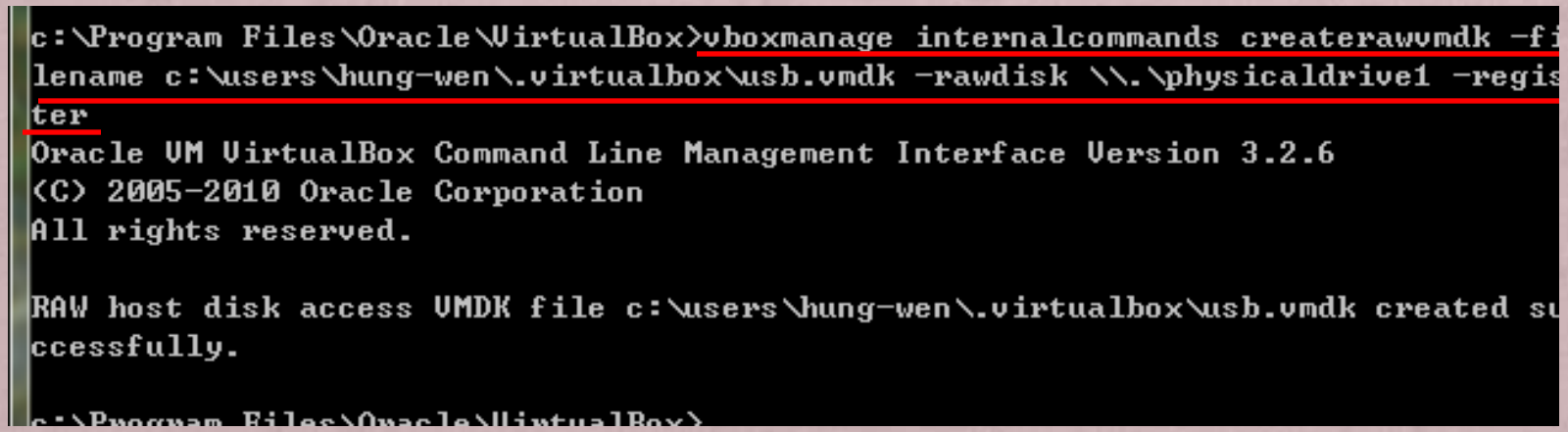
- In the MS-DOS Prompt, change the directory to the VirtualBox directory
  - In this example, VirtualBox is installed in **`C:\Program Files\Oracle\Virtualbox`**



STEP10.

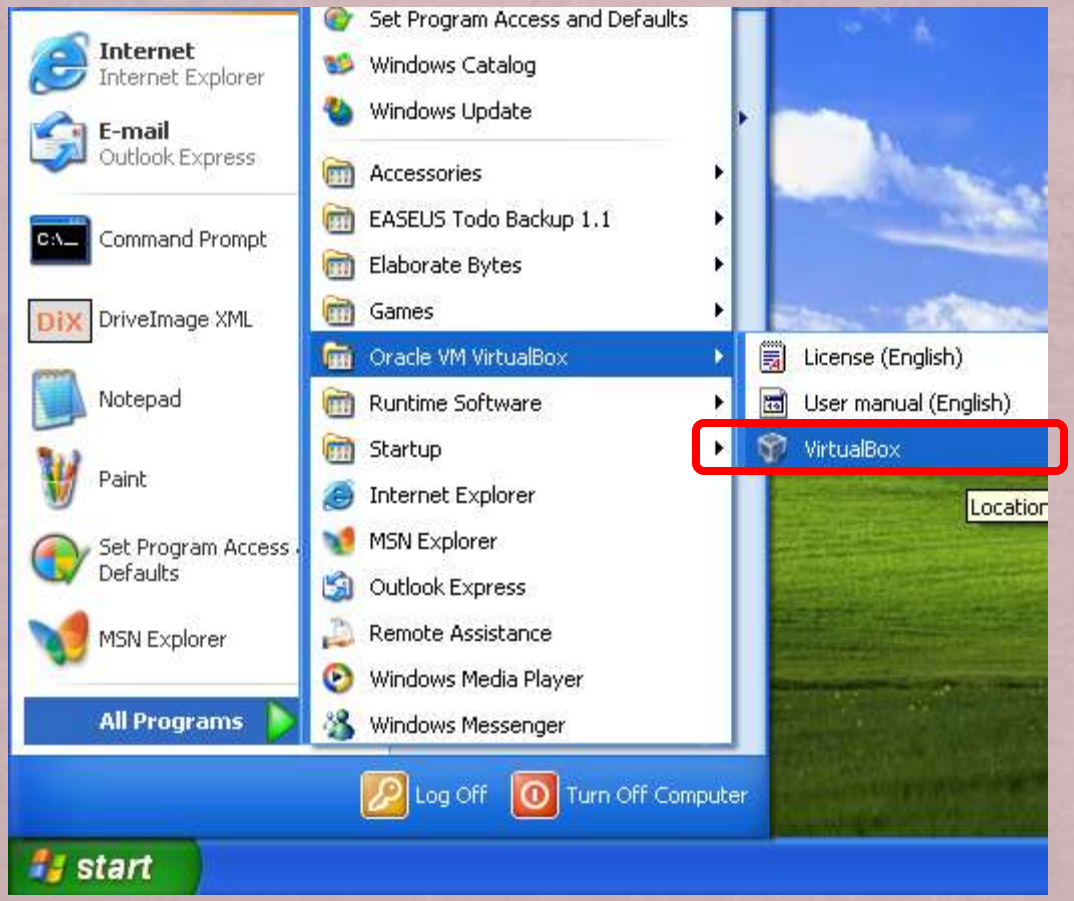
- Mount the USB device as a VirtualBox raw disk
  - Type in the MS-DOS Prompt:

    vboxmanage internalcommands createrawvmdk
    -filename <Absolute Path to output file>
    -rawdisk <Drive Specification> -register
  - In this example,
    - the path to output file is "**c:\users\hung-wen\.virtualbox\usb.vmdk**"
    - the drive specification of the USB device is "**\\.\physicaldrive1**" **(since it is numbered as Disk 1)**



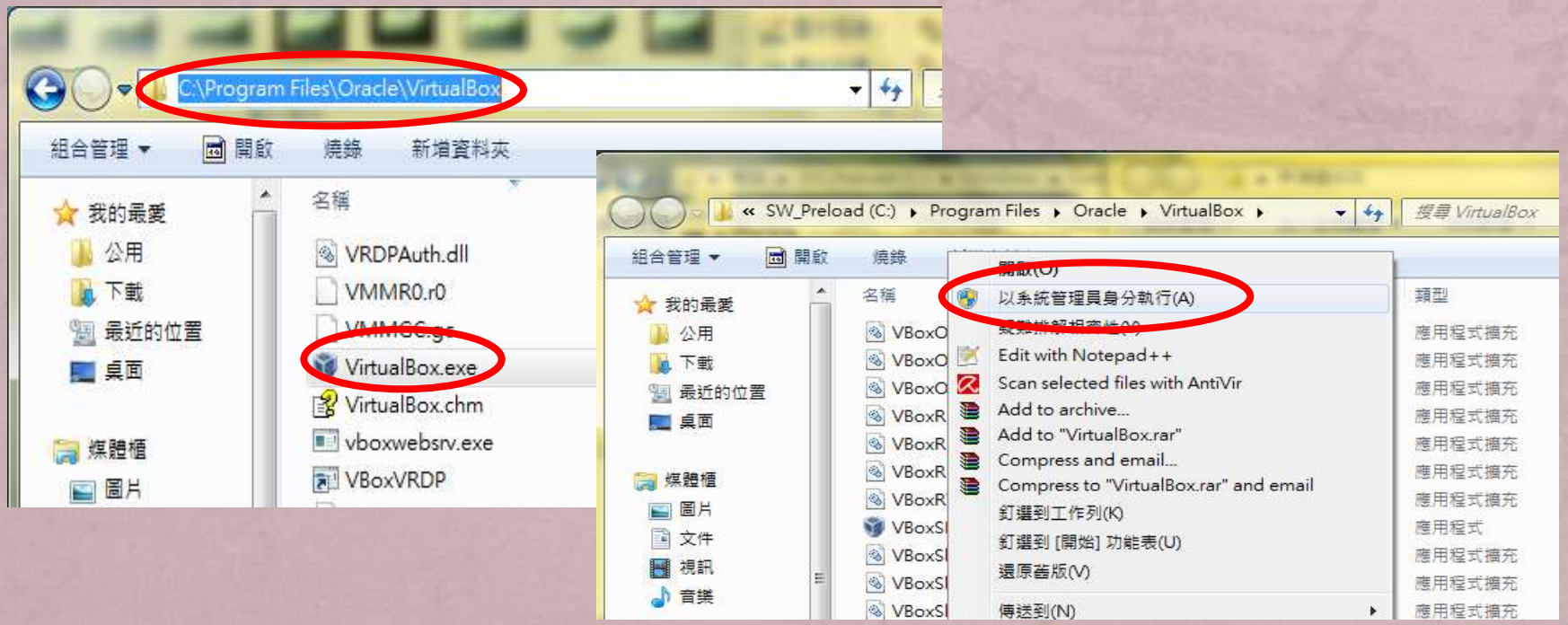
STEP11. (FOR WINXP)

+ Launch VirtualBox in Windows XP



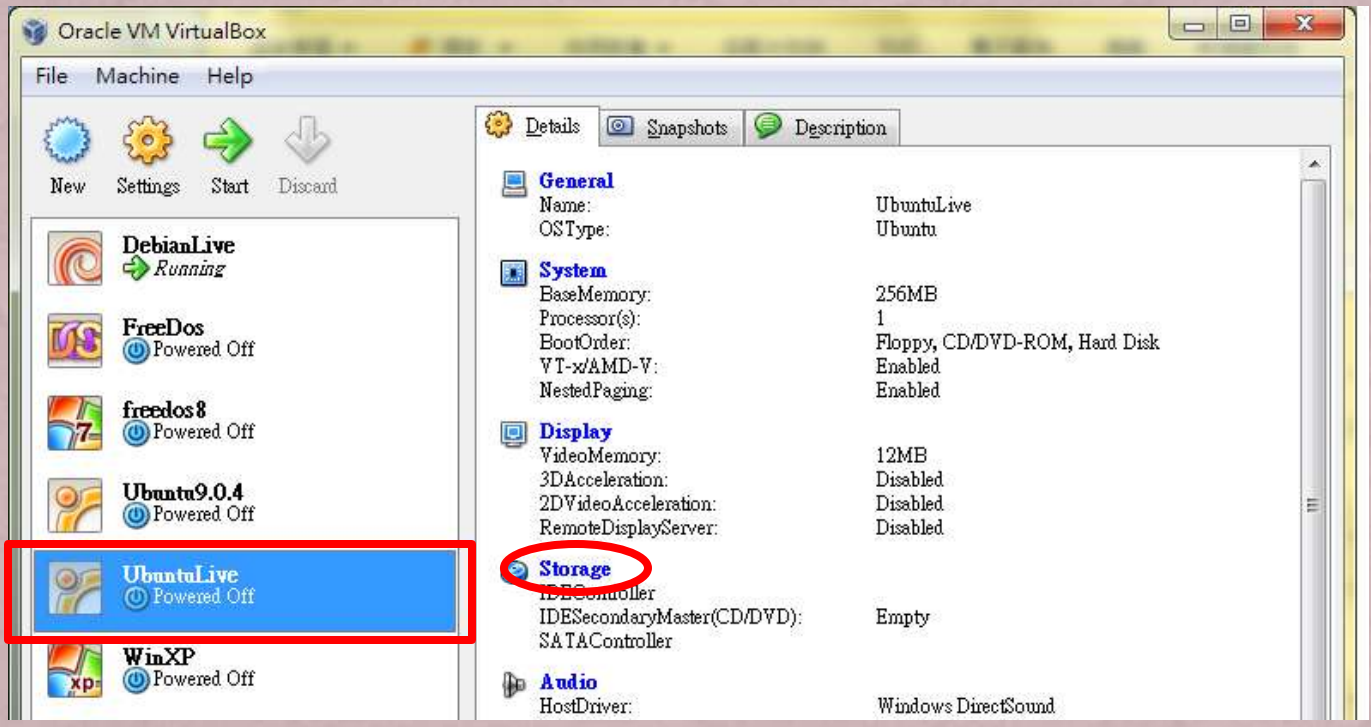
STEP11. (FOR VISTA OR WIN7)

- Launch VirtualBox
  - Find the “VirtualBox.exe”
  - Right click on “VirtualBox.exe” and choose run as “Administrator”



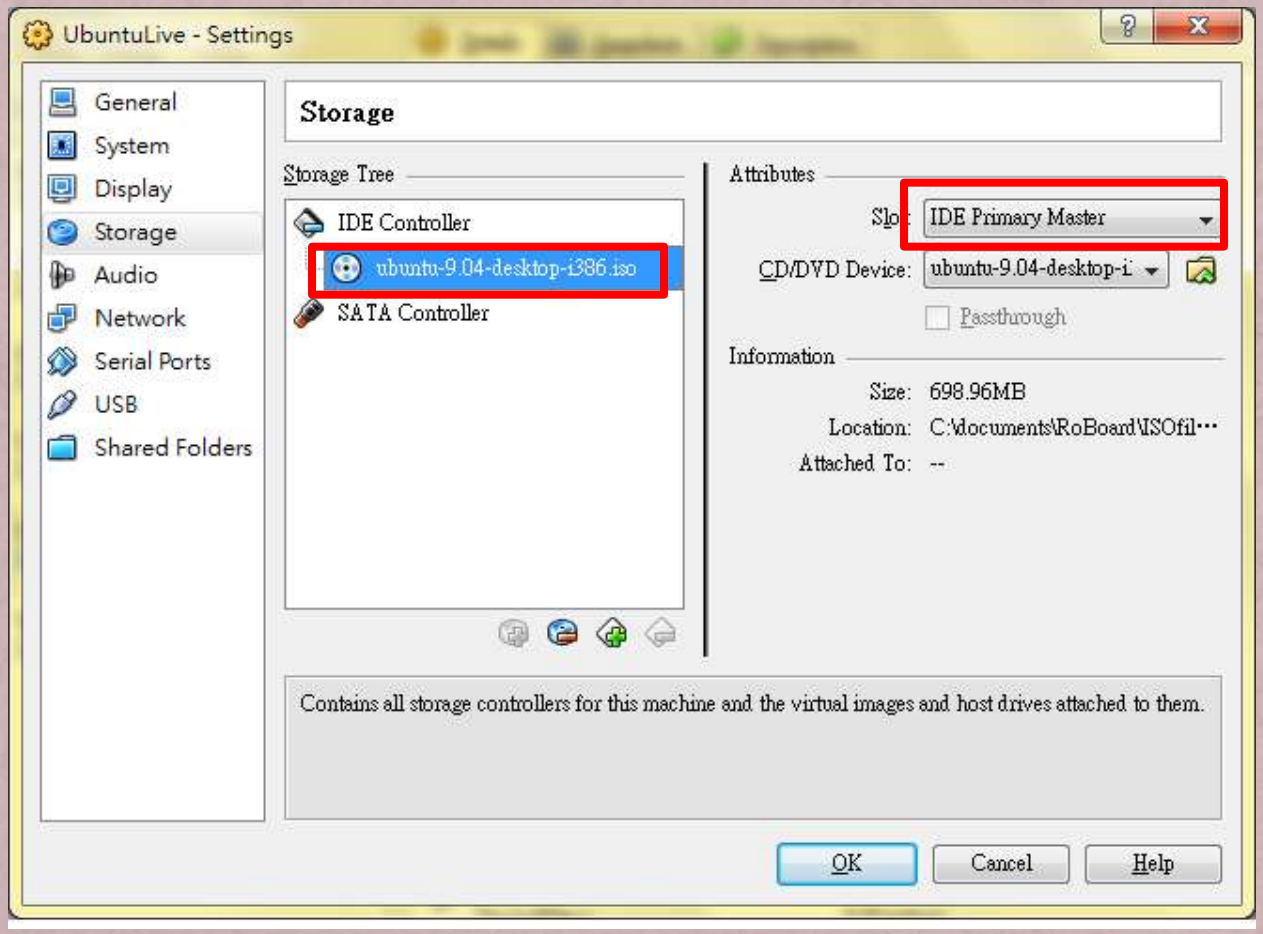
STEP12.

+ Choose the virtual machine built in Step3 and click “Storage”



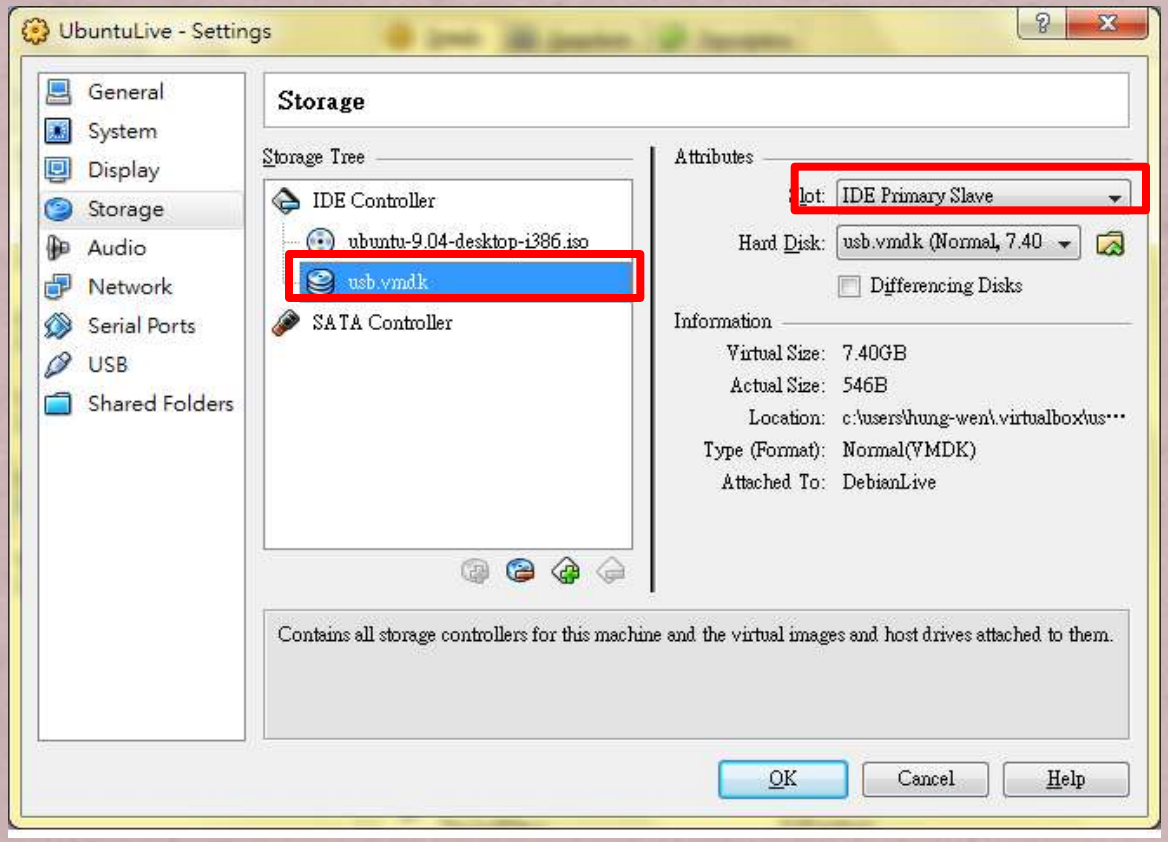
STEP13.

+ Mount Ubuntu 9.04 ISO file and set it as IDE Primary Master



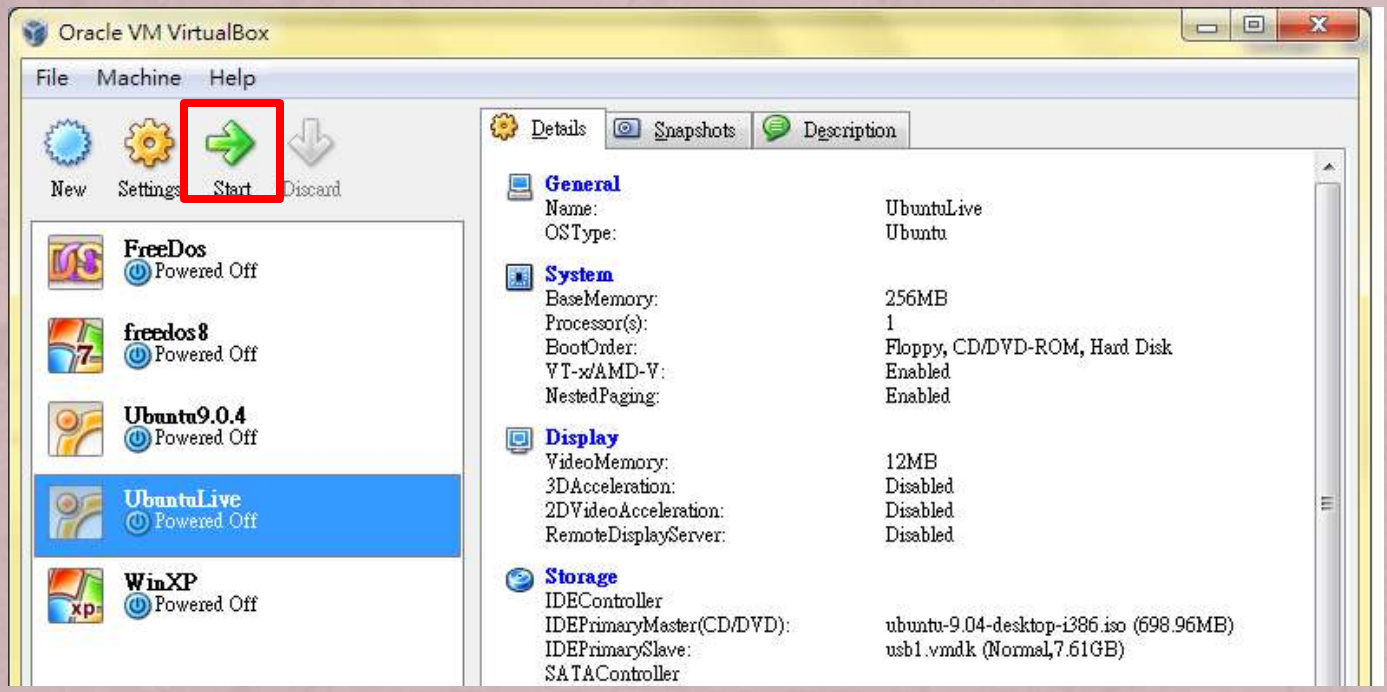
STEP14.

- Mount the “usb.vmdk” file created in Step10 and set it as IDE Primary Slave



STEP15.

+ Click Start

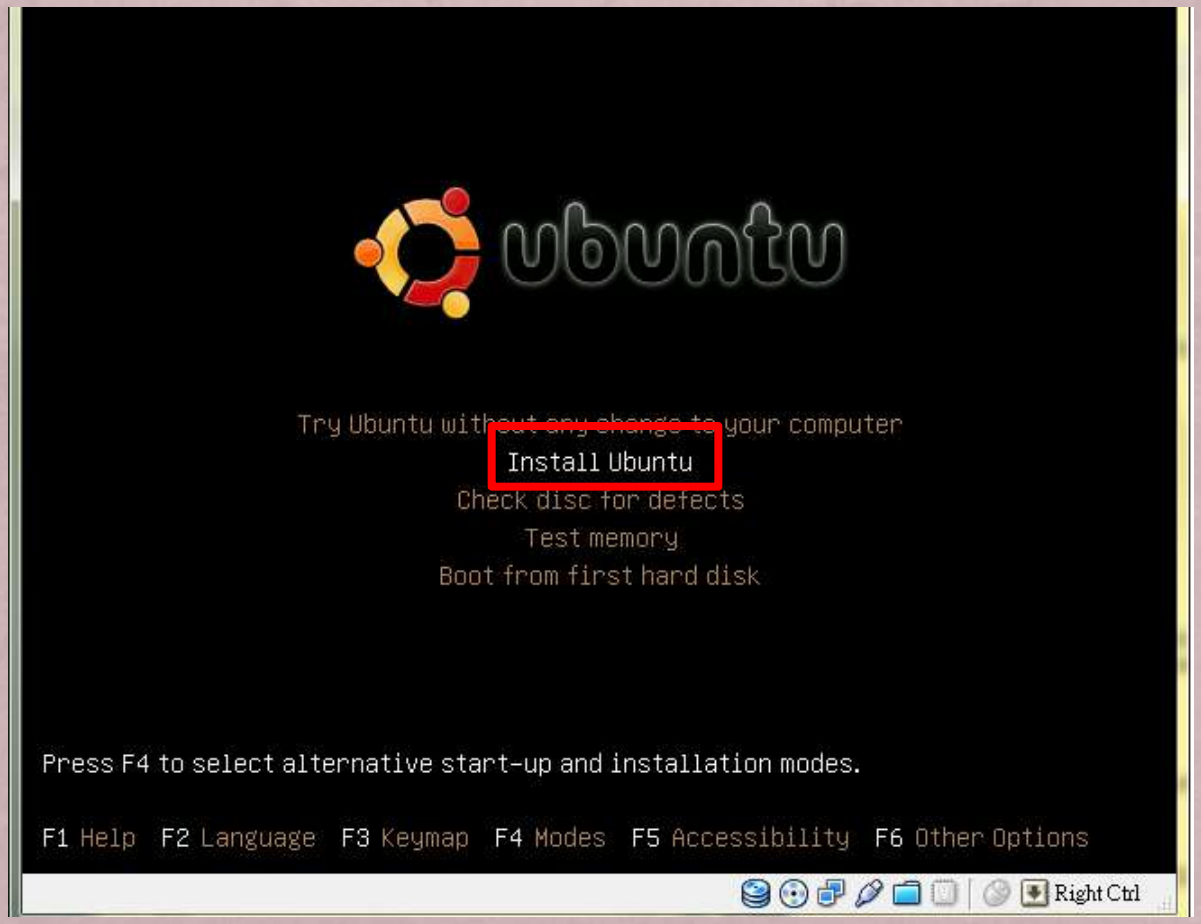


STEP16.

- VirtualBox will boot into the Ubuntu installation ISO
- Choose the language for installation process

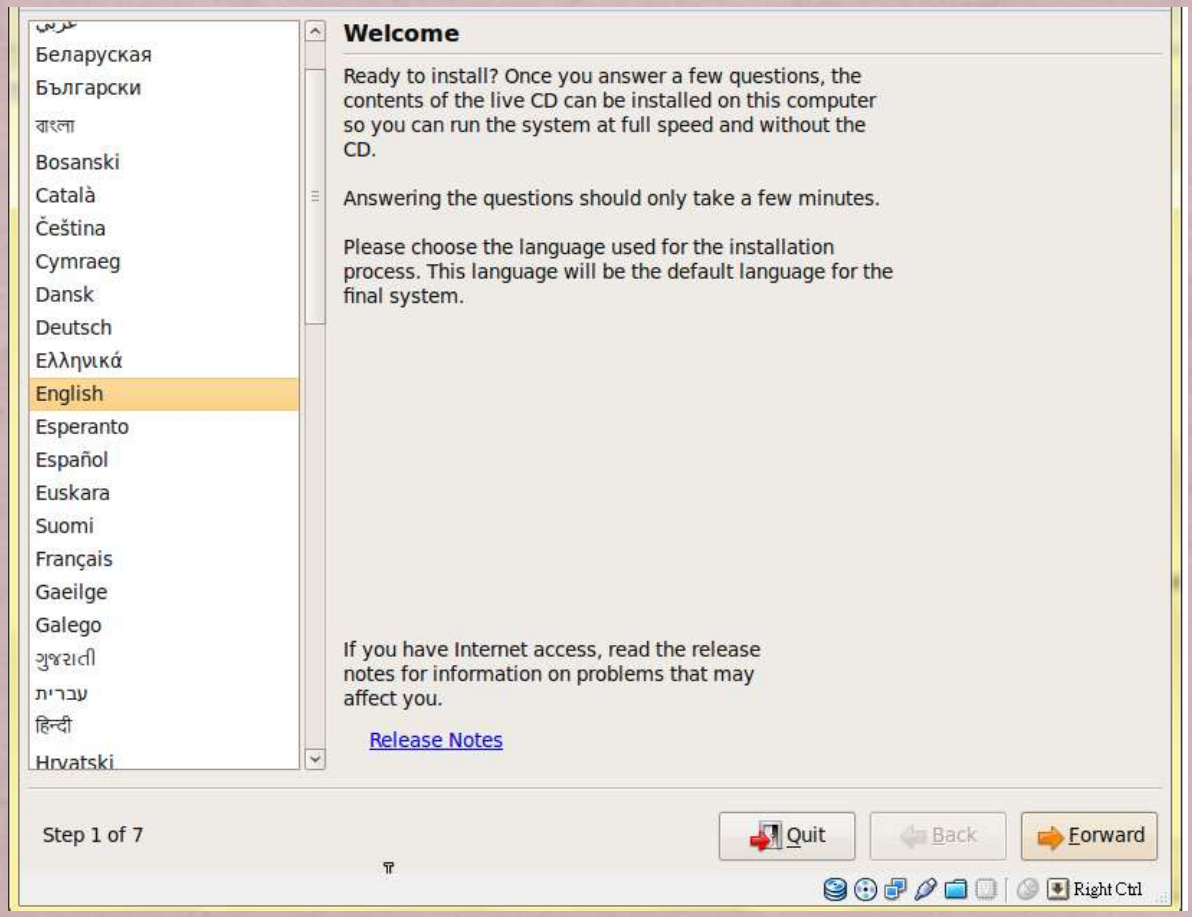
STEP17.

- Choose “Install Ubuntu”



STEP18.

+ Choose installation language

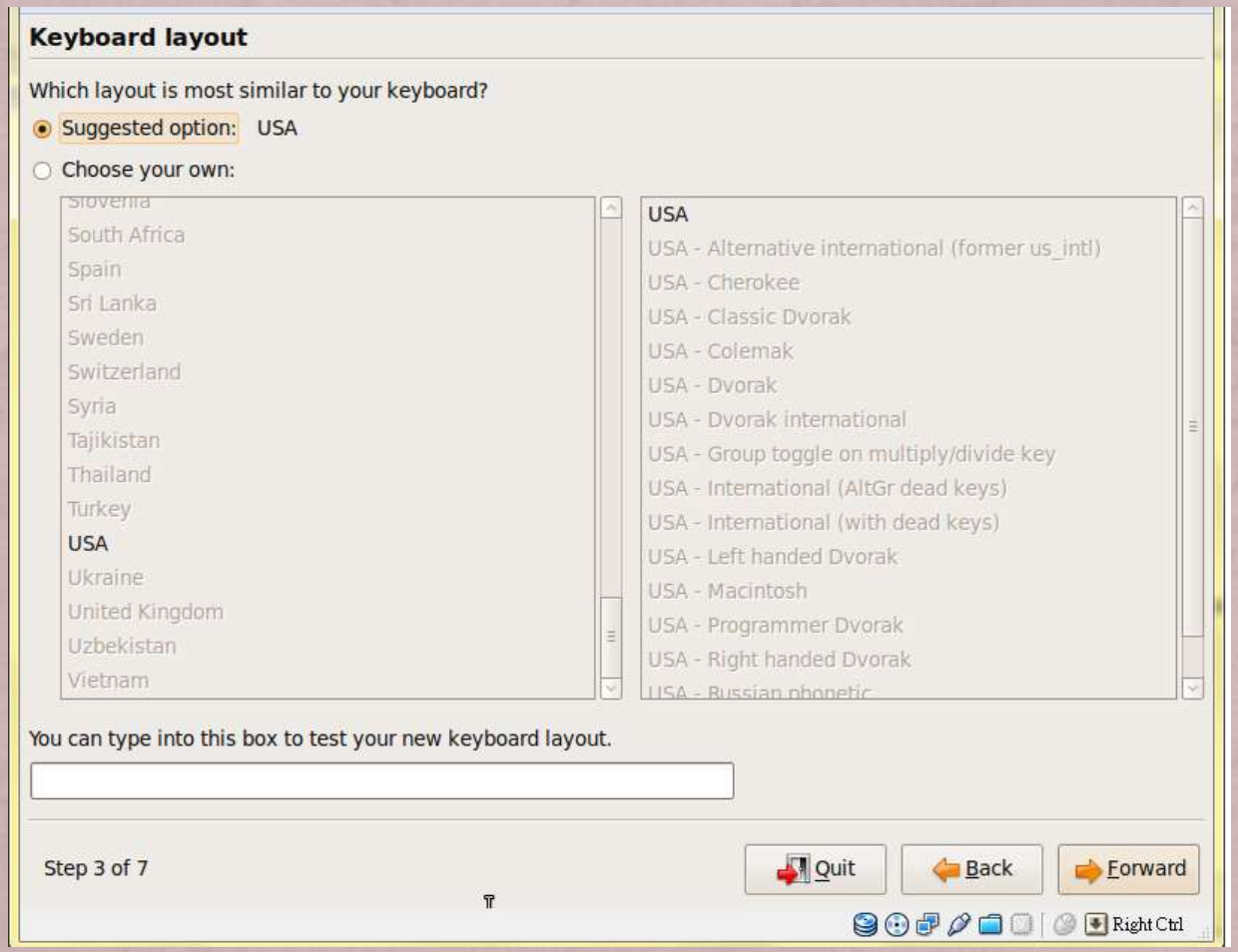


STEP19.

+ Choose Region and City

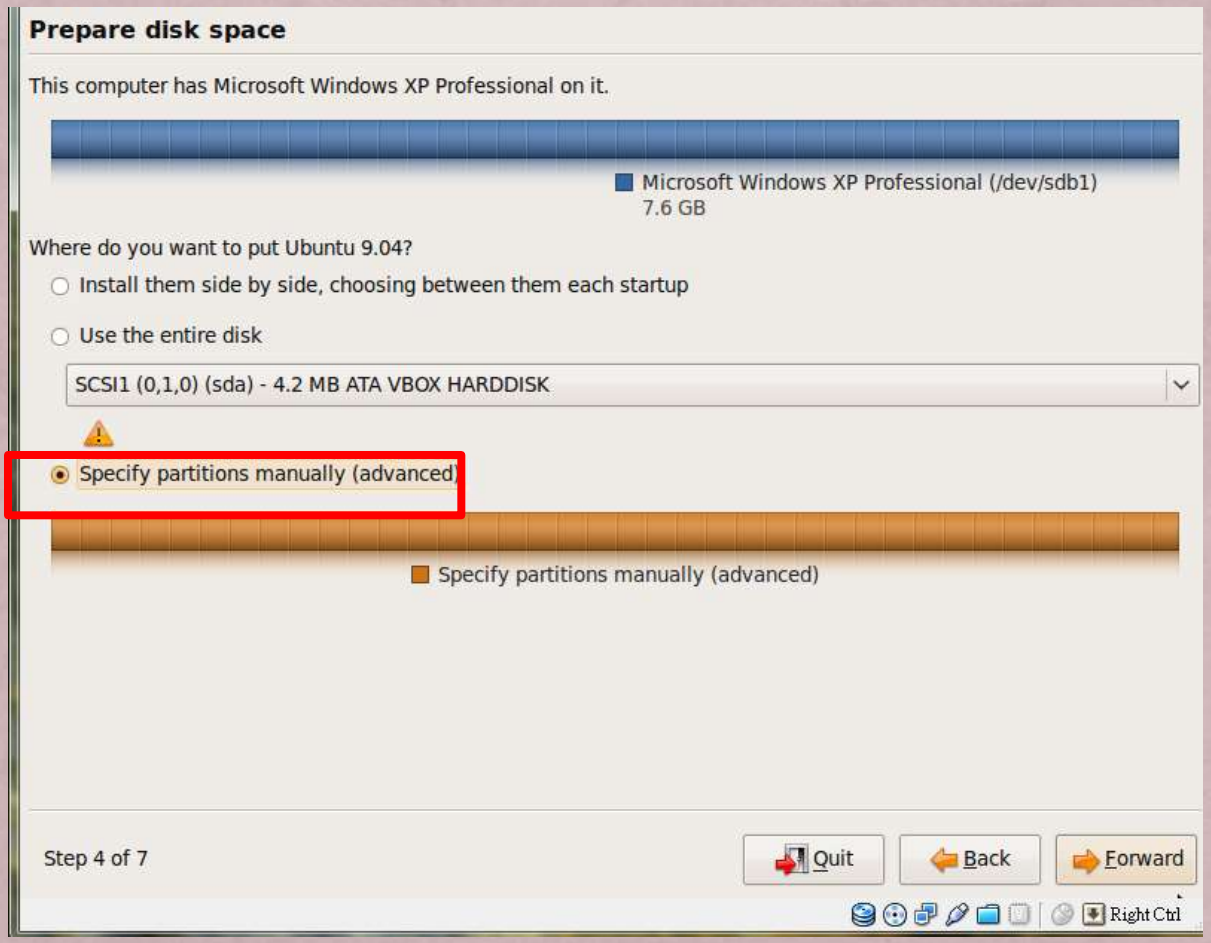
STEP20.

+ Choose keyboard layout



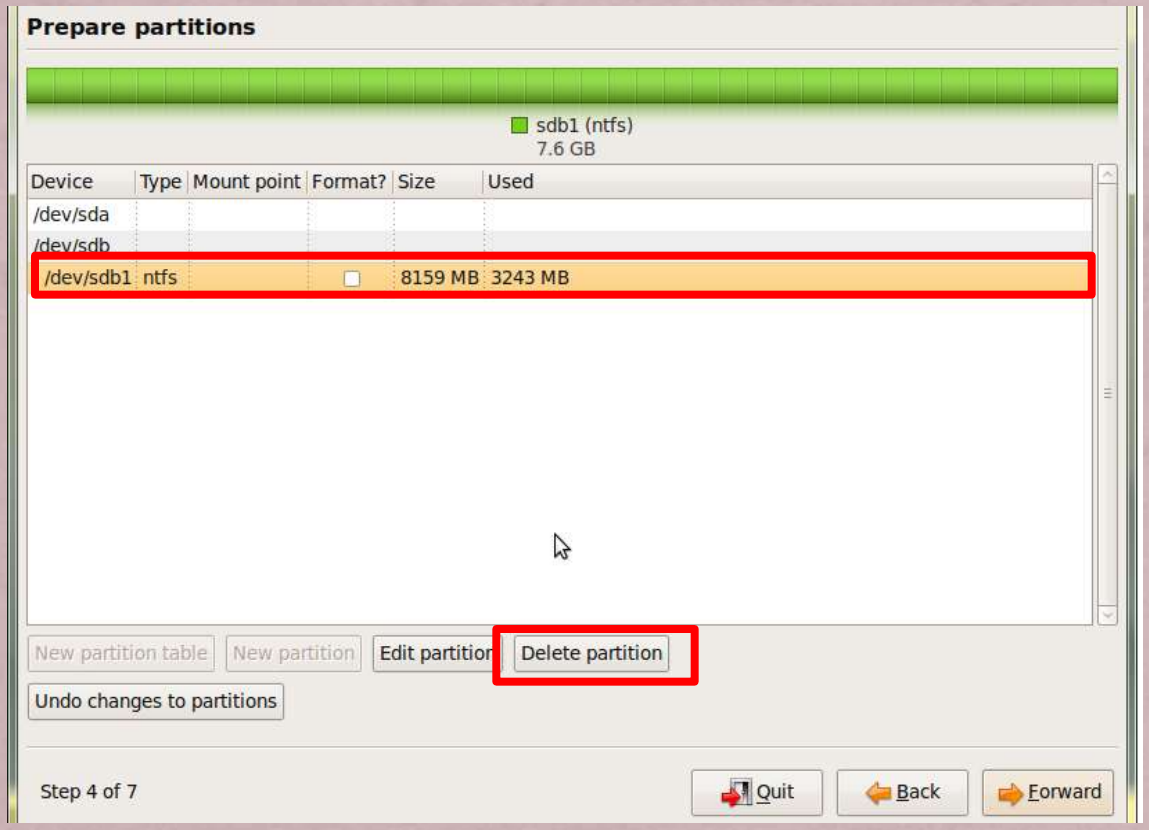
STEP21.

+ Choose “specify partitions manually (advancecd)”



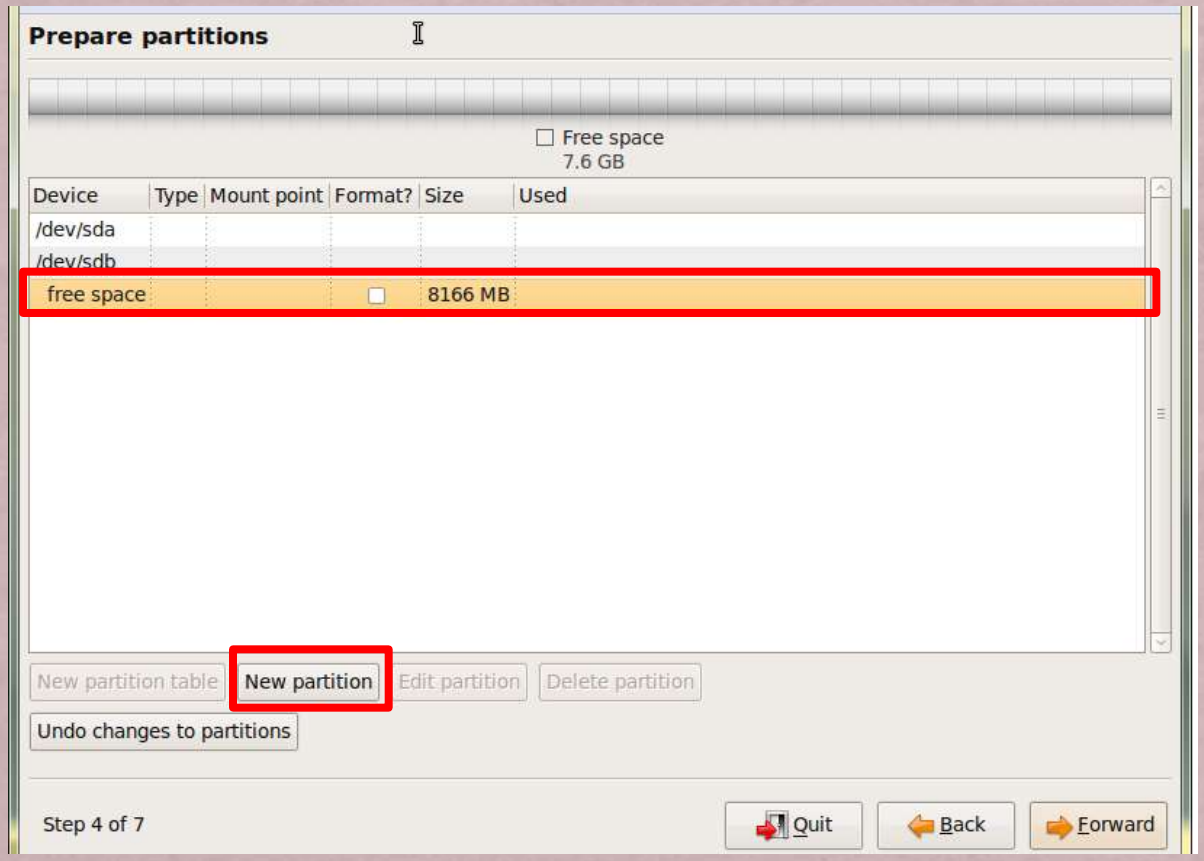
STEP22. [OPTION]

- Repartition the USB raw disk
  - 1. Delete the original partitions of “usb.vmdk” if they exist



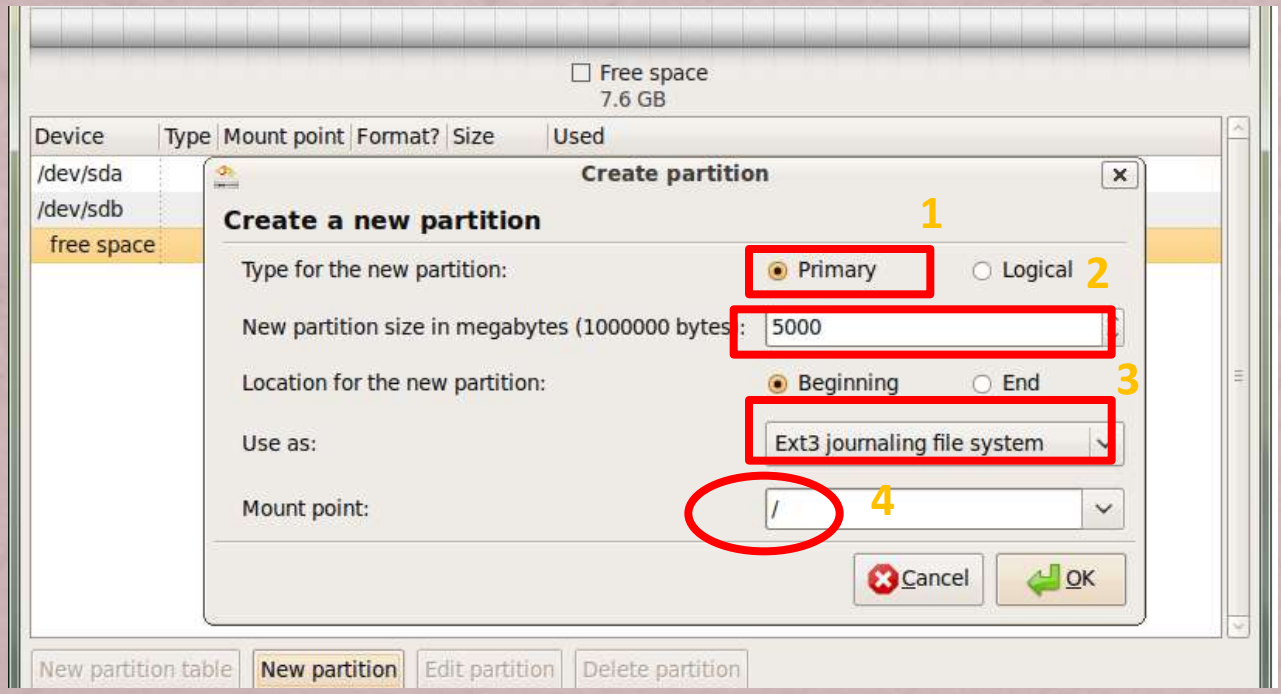
STEP22. [OPTION]

- Repartition the USB raw disk (cont.)
  - 2. Create new partitions



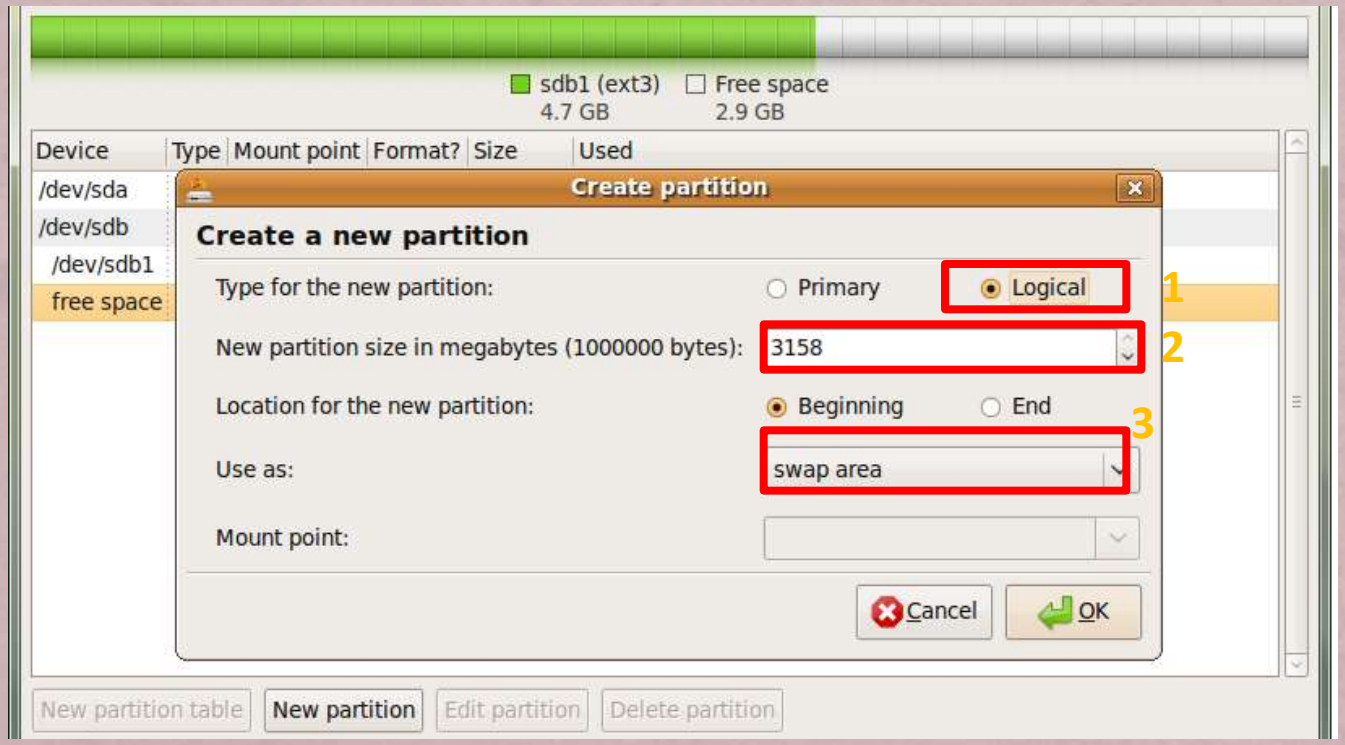
STEP22. [OPTION]

- Repartition the USB raw disk (cont.)
  - 3. Set the Primary partition



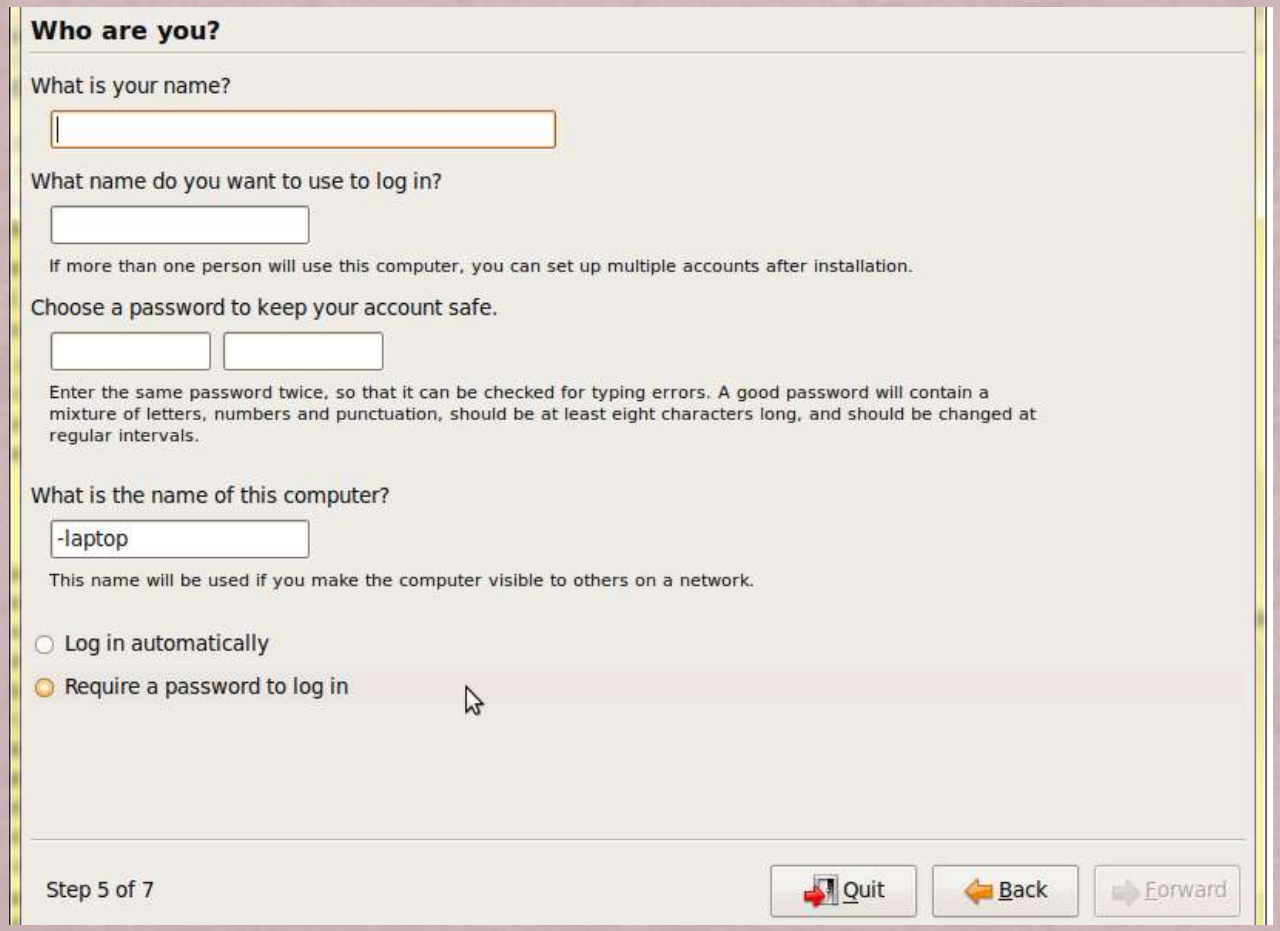
STEP22. [OPTION]

- Repartition the USB raw disk (cont.)
  - 4. Set the Logical partition



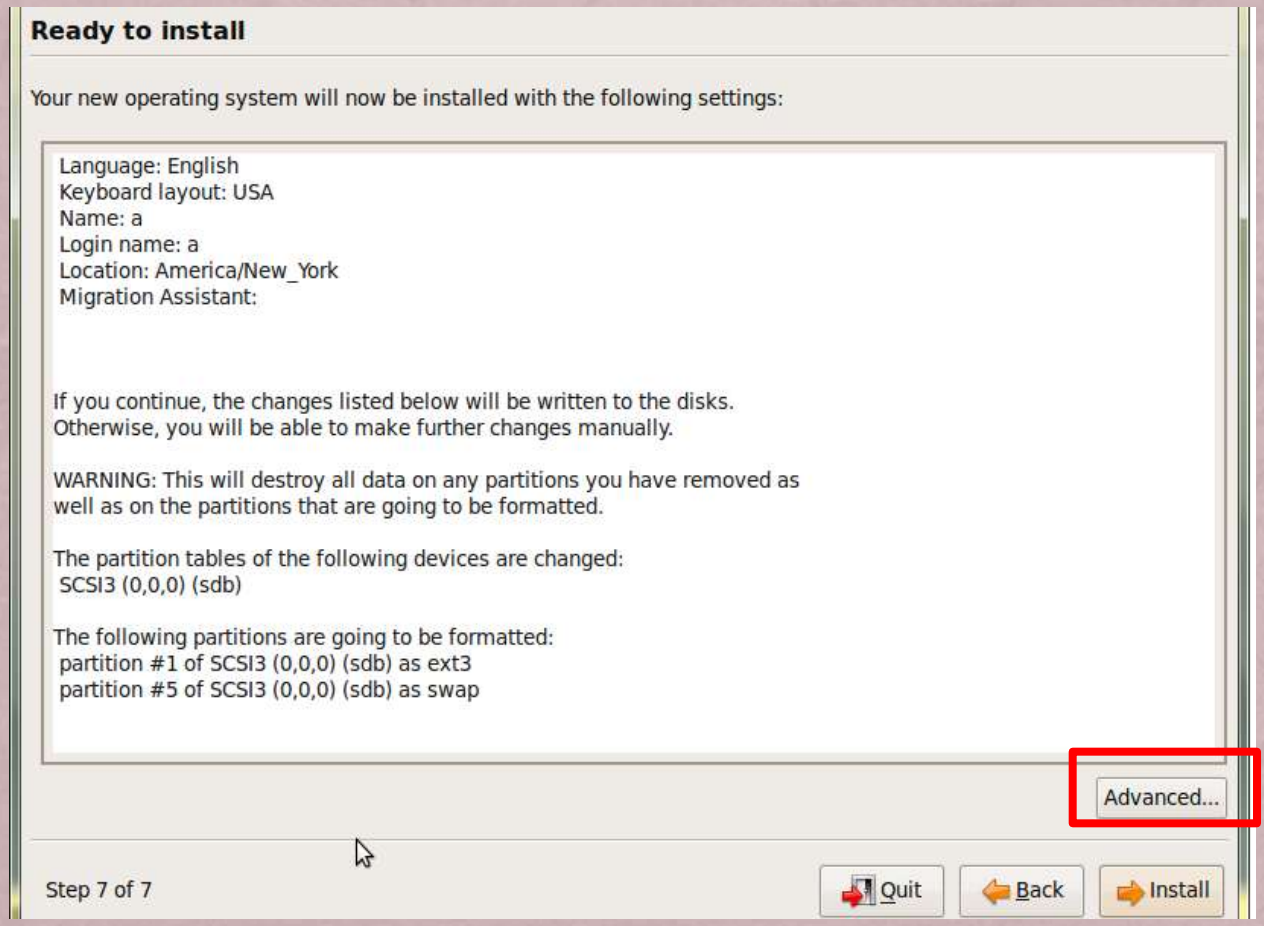
STEP23.

+ Set usename and password



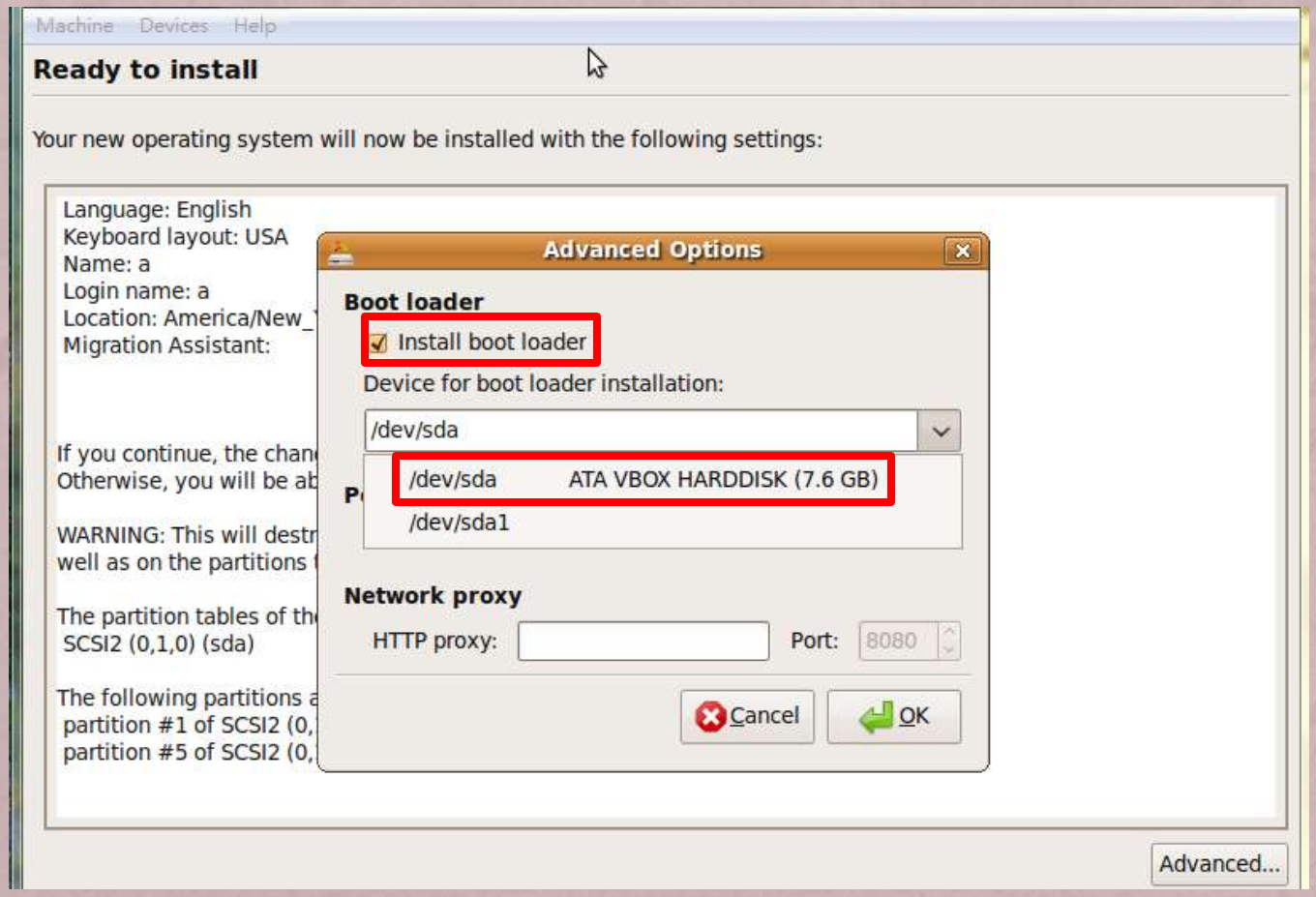
STEP24.

+ Click “Advanced…”



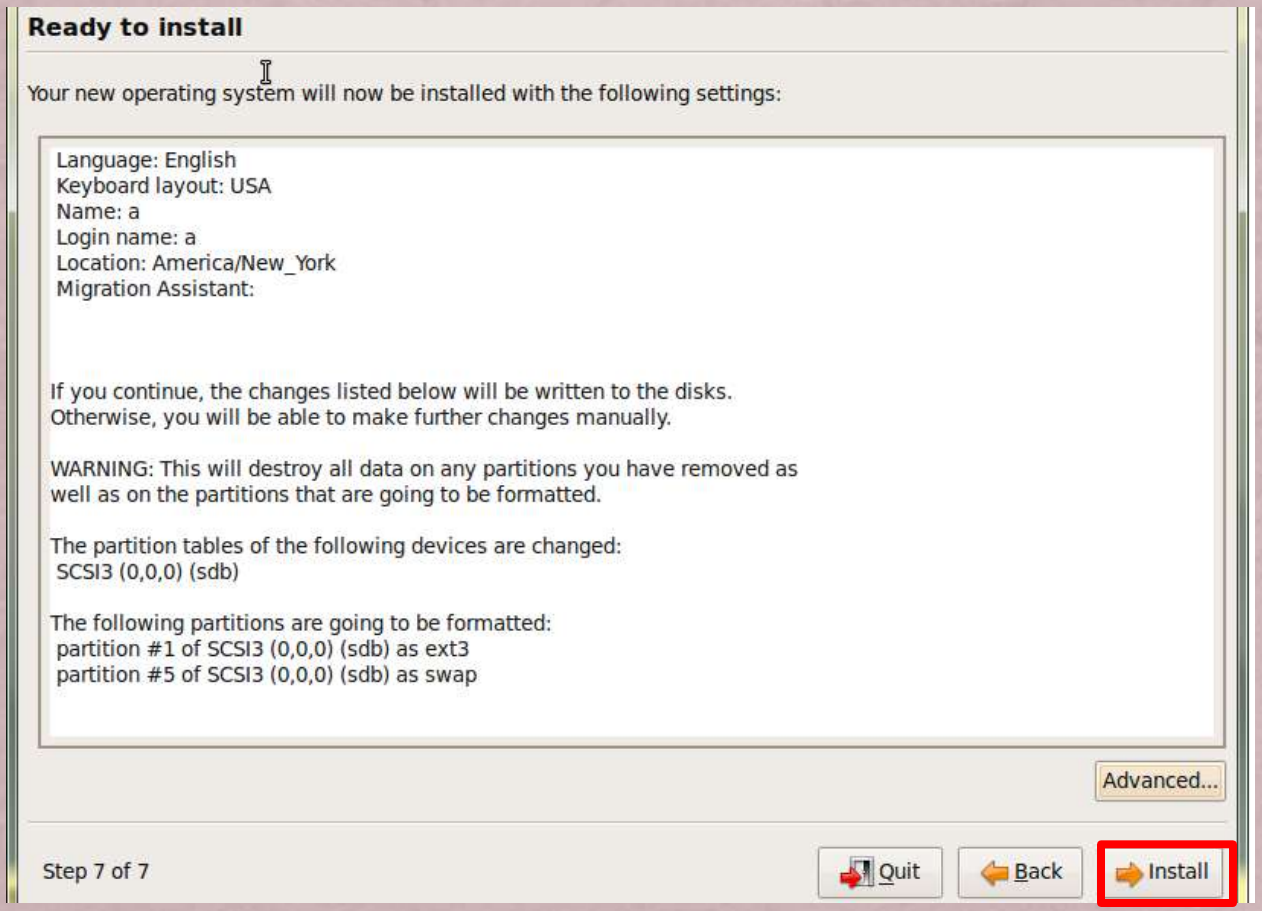
STEP25.

+ Click “install boot loader” and choose the USB raw disk



STEP26.

+ Click “Install”

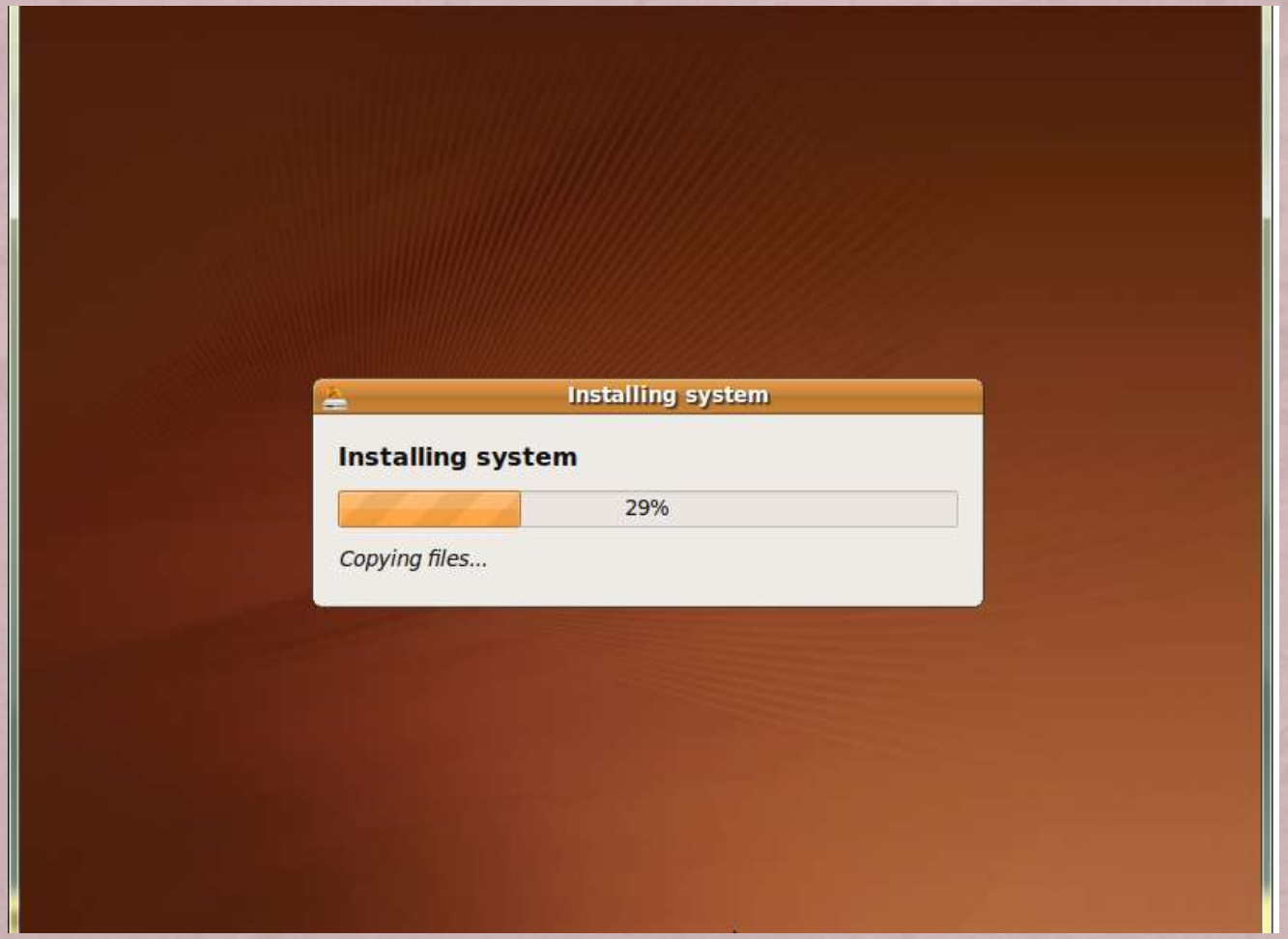


STEP27.

- Partitions formatting

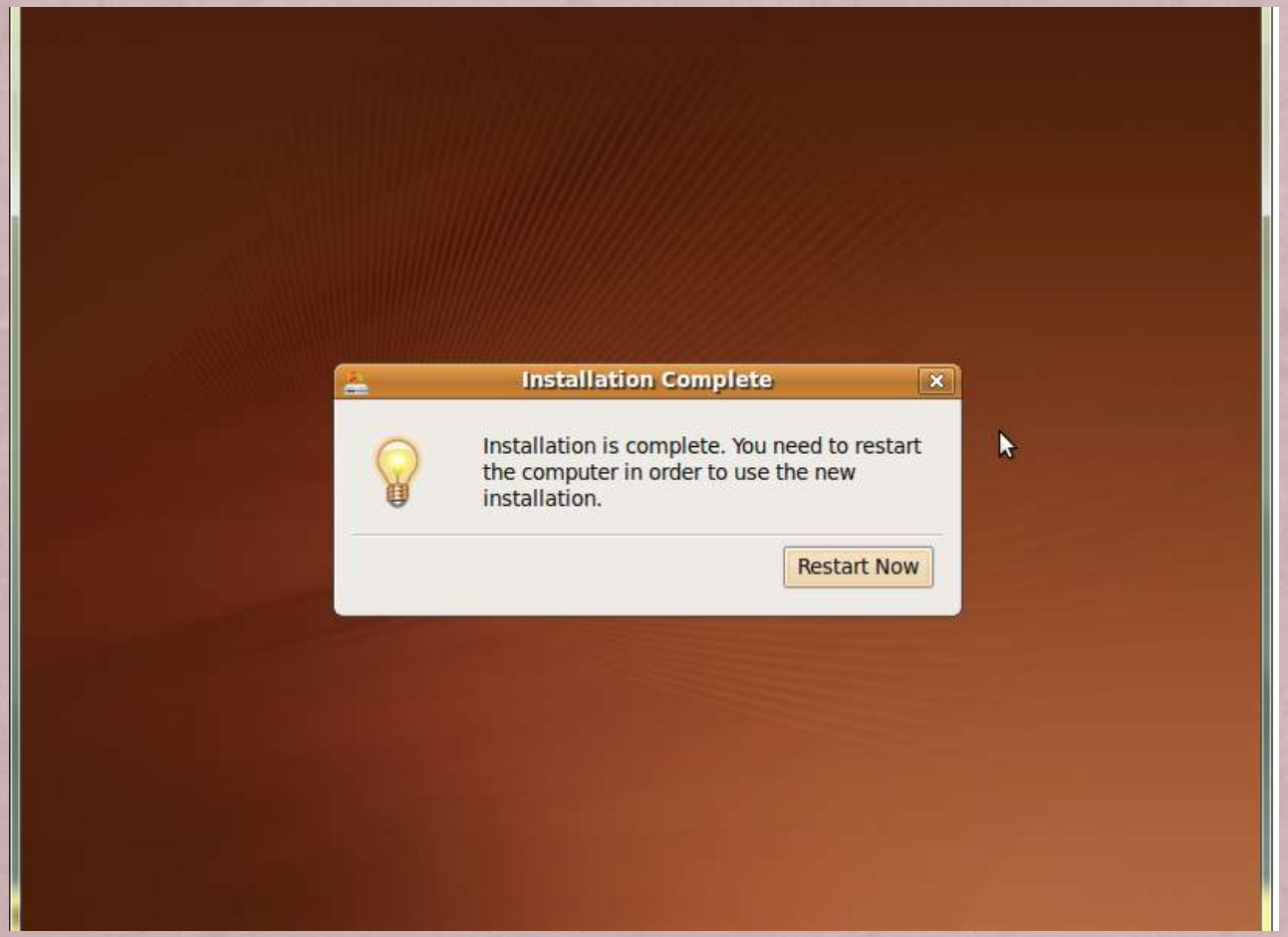
STEP28.

- Installing system



STEP29.

- Click “Restart Now”

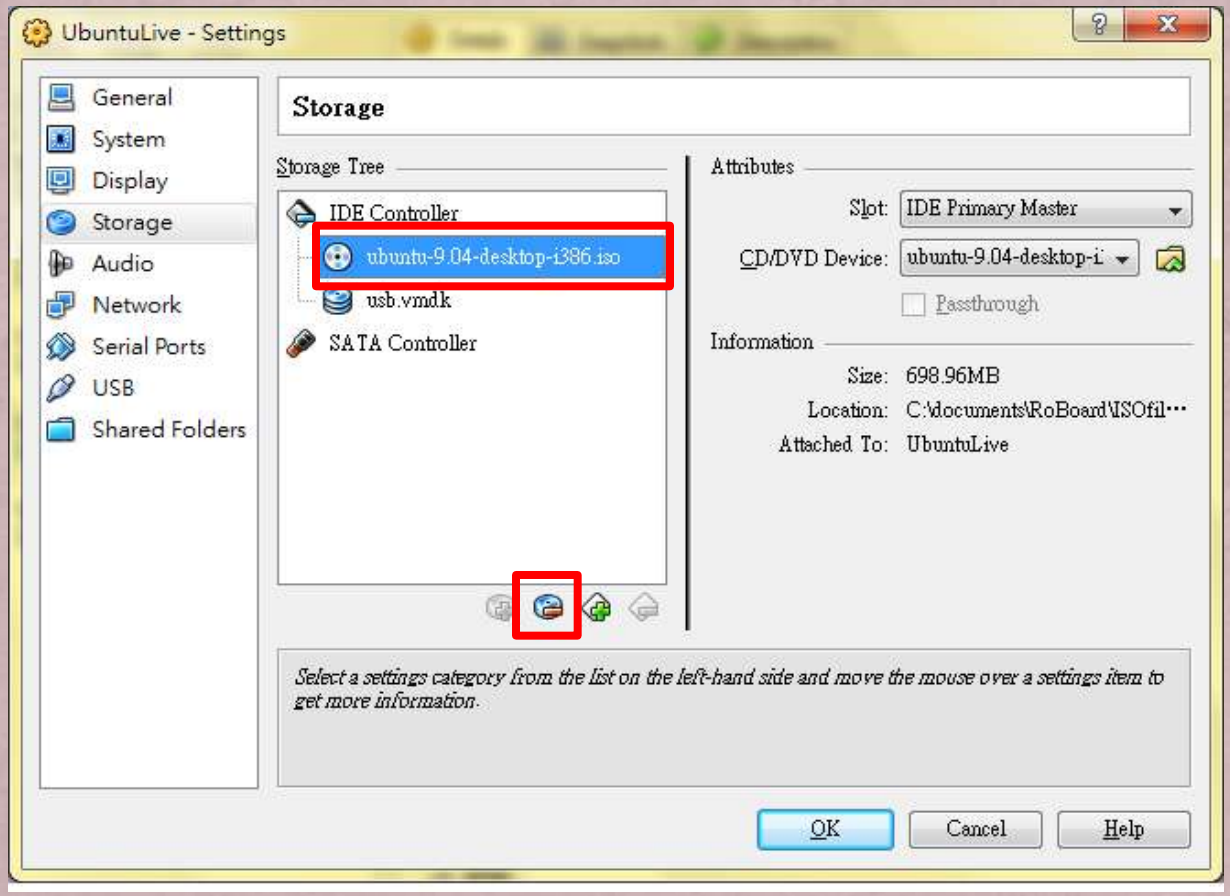


STEP30.

- Press ENTER to continue
- Then turn off the VirtualBox virtual machine

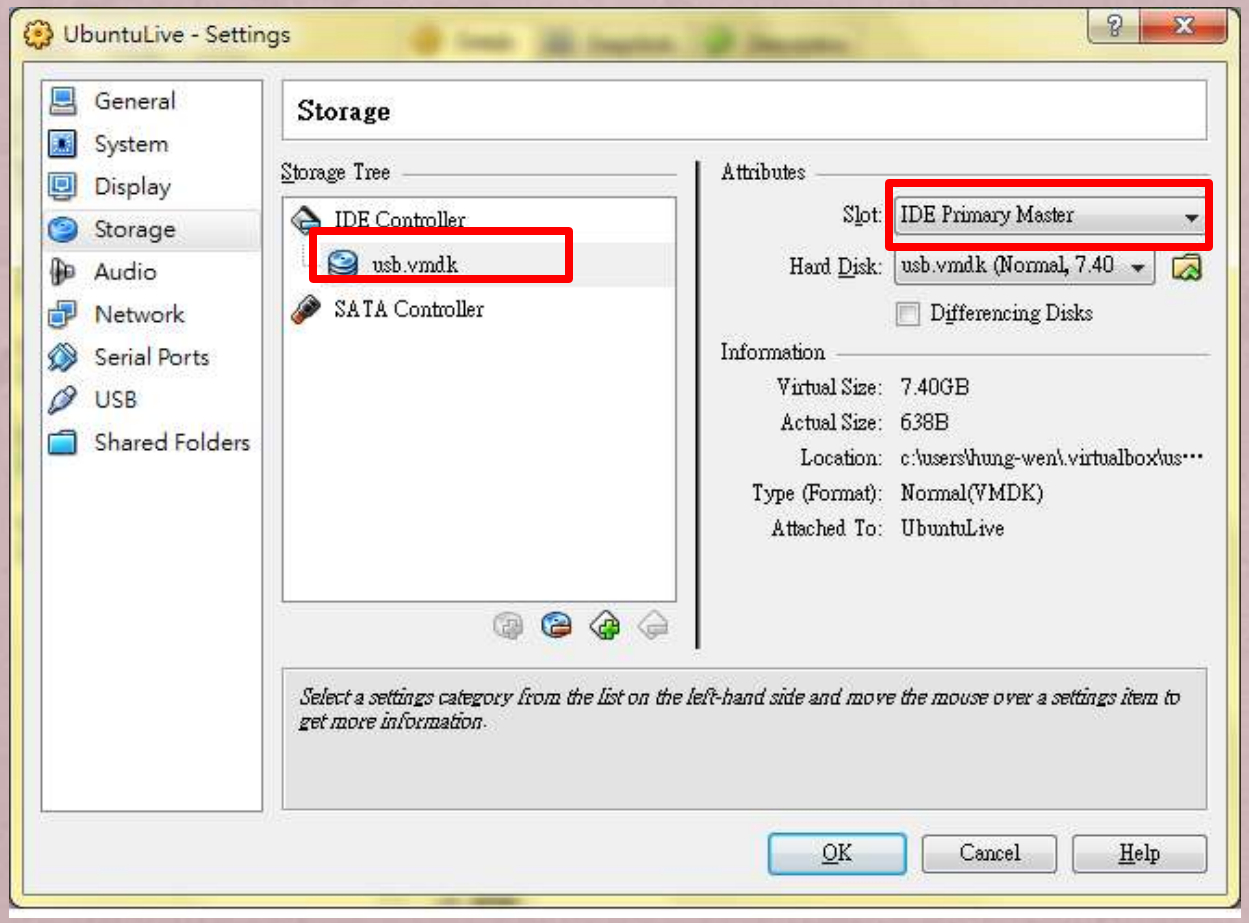
STEP31.

+ Remove the Ubuntu 9.04 ISO file



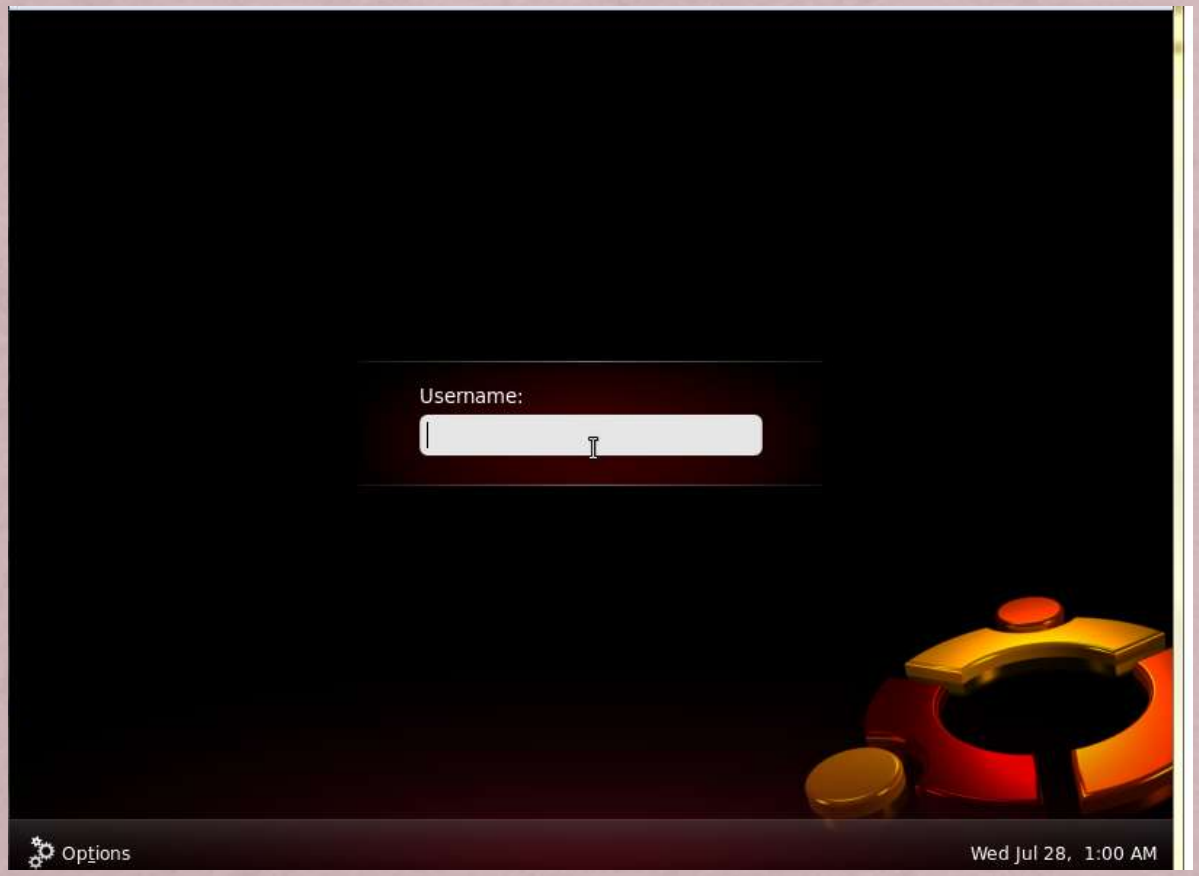
STEP32.

+ Set the “usb.vmdk” as IDE Primary Master



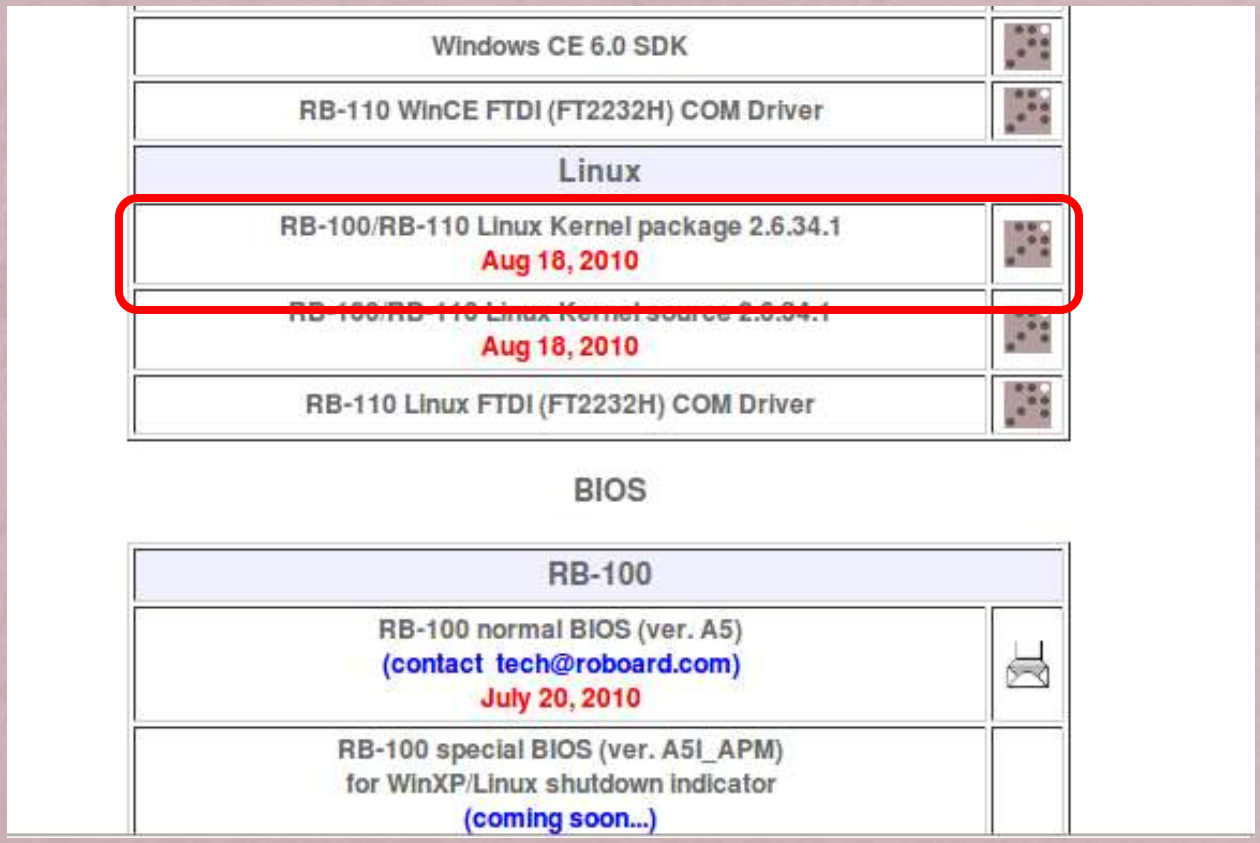
STEP33.

- Start the VirtualBox virtual machine again
  - You will boot into Ubuntu 9.0.4 GUI



STEP34.

- In the virtual machine, download the RoBoard Linux kernel package from `http://www.roboard.com/download_ml.htm`



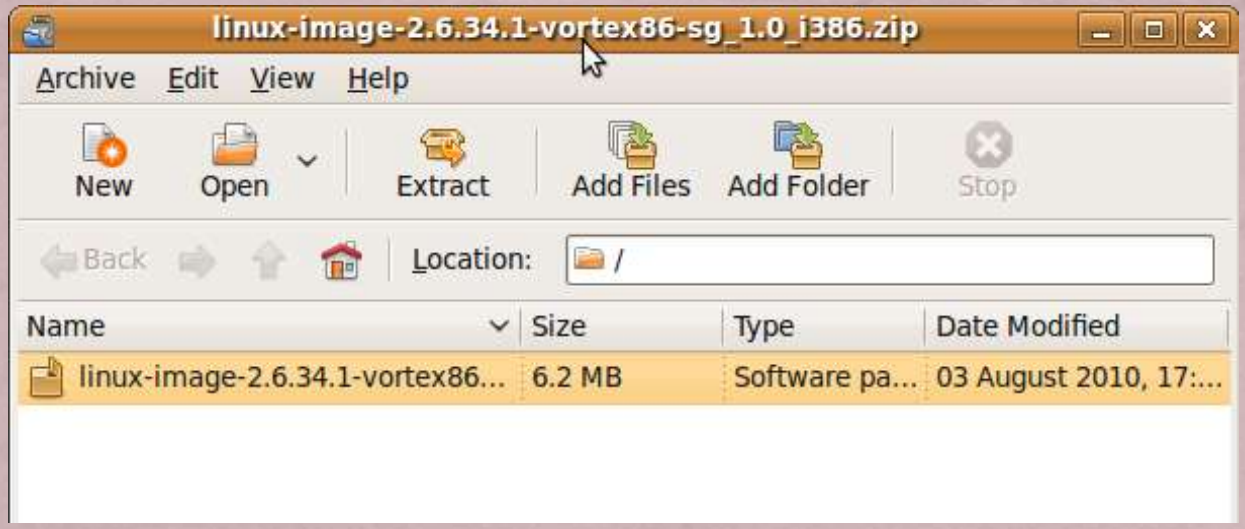
STEP35.

- Extract the kernel package in Ubuntu
  - In this example, the package is

    `linux-image-2.6.34.1-vortex86-sg_1.0_i386.zip`

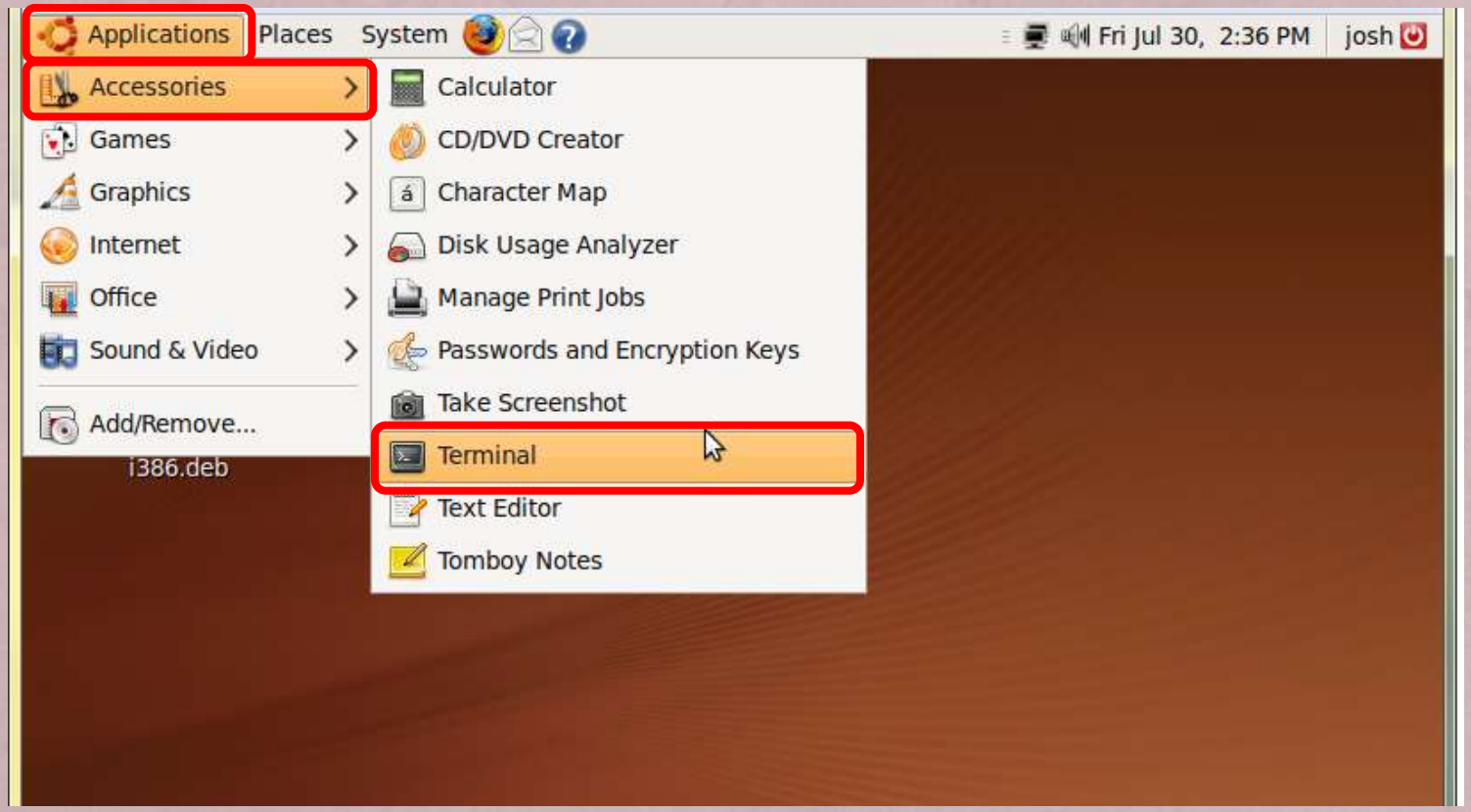
    Extracting it, we get

    `linux-image-2.6.34.1-vortex86-sg_1.0_i386.deb`



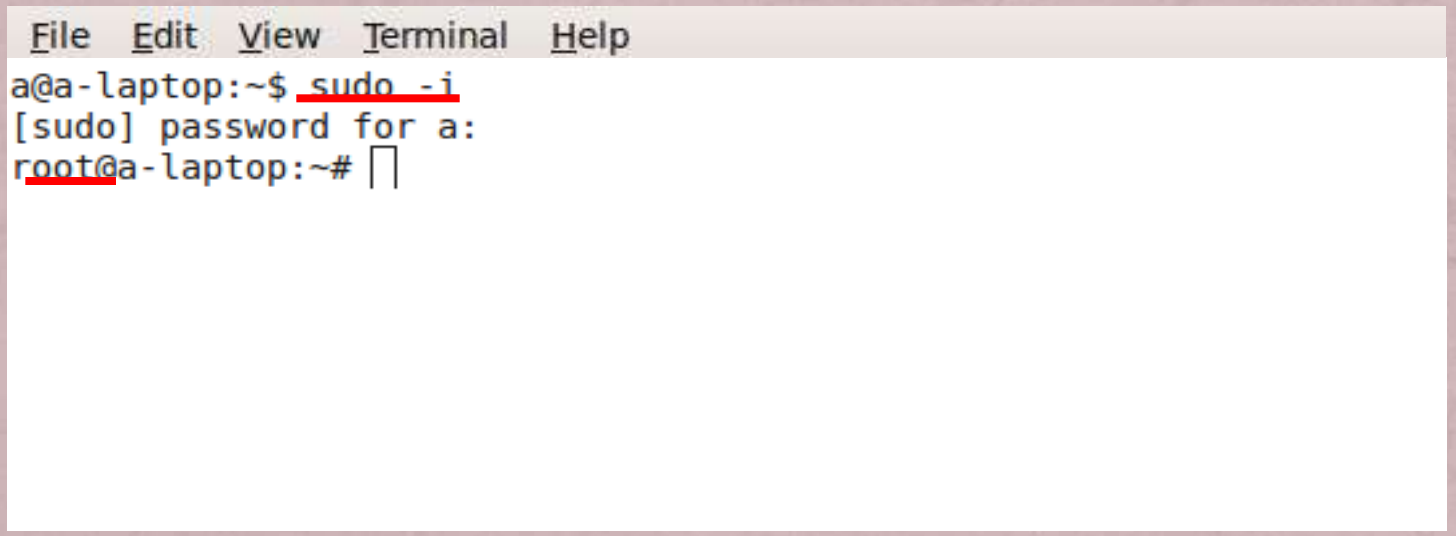
STEP36.

+ Open a Terminal window



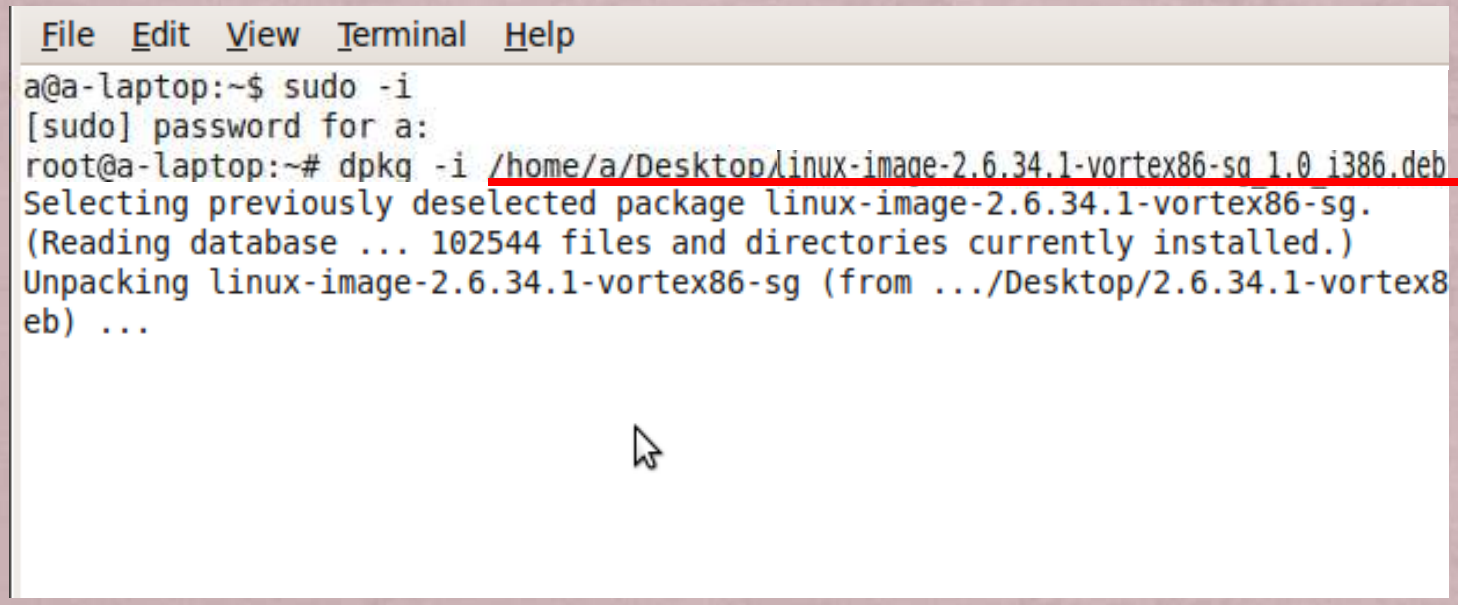
STEP37.

+ Type **`sudo -i`**



STEP38.

- Type **dpkg -i <RoBoard Linux kernal package path>**
  - In this example, the path is **/home/a/Desktop/linux-image-2.6.34.1-vortex86-sg_1.0_i386.deb**



STEP39.

+ Type **update-initramfs -k 2.6.34.1-vortex86-sg -c**

```
Found kernel: /boot/vmlinuz-2.6.28-11-generic
Found kernel: /boot/memtest86+.bin
Replacing config file /var/run/grub/menu.lst with new version
Updating /boot/grub/menu.lst ... done

root@a-laptop:~# update-initramfs -k 2.6.34.1-vortex86-sg -c
```

STEP40.

- Type **update-grub**

```
root@a-laptop:~# update-initramfs -k 2.6.34.1-vortex86-sg -c
update-initramfs: Generating /boot/initrd.img-2.6.34.1-vortex86-sg

root@a-laptop:~#
root@a-laptop:~# update-grub
Searching for GRUB installation directory ... found: /boot/grub
Searching for default file ... found: /boot/grub/default
Testing for an existing GRUB menu.lst file ... found: /boot/grub/menu.lst
Searching for splash image ... none found, skipping ...
Found kernel: /boot/vmlinuz-2.6.34.1-vortex86-sg
Found kernel: /boot/vmlinuz-2.6.28-11-generic
Found kernel: /boot/memtest86+.bin
Replacing config file /var/run/grub/menu.lst with new version
Updating /boot/grub/menu.lst ... done
```

STEP41.

- Type **poweroff**
- Then turn off the VirtualBox virtual machine

```
Found kernel: /boot/vmlinuz-2.6.28-11-generic
Found kernel: /boot/memtest86+.bin
Replacing config file /var/run/grub/menu.lst with new version
Updating /boot/grub/menu.lst ... done

root@a-laptop:~# poweroff
```

STEP42.

- Remove the MicroSD card from the card reader
- Plug the MicroSD card into your Roboard

STEP43.

- Power on RoBoard, and then you will boot into Ubuntu 9.04

THANK YOU

tech@roboard.com
http://www.roboard.com