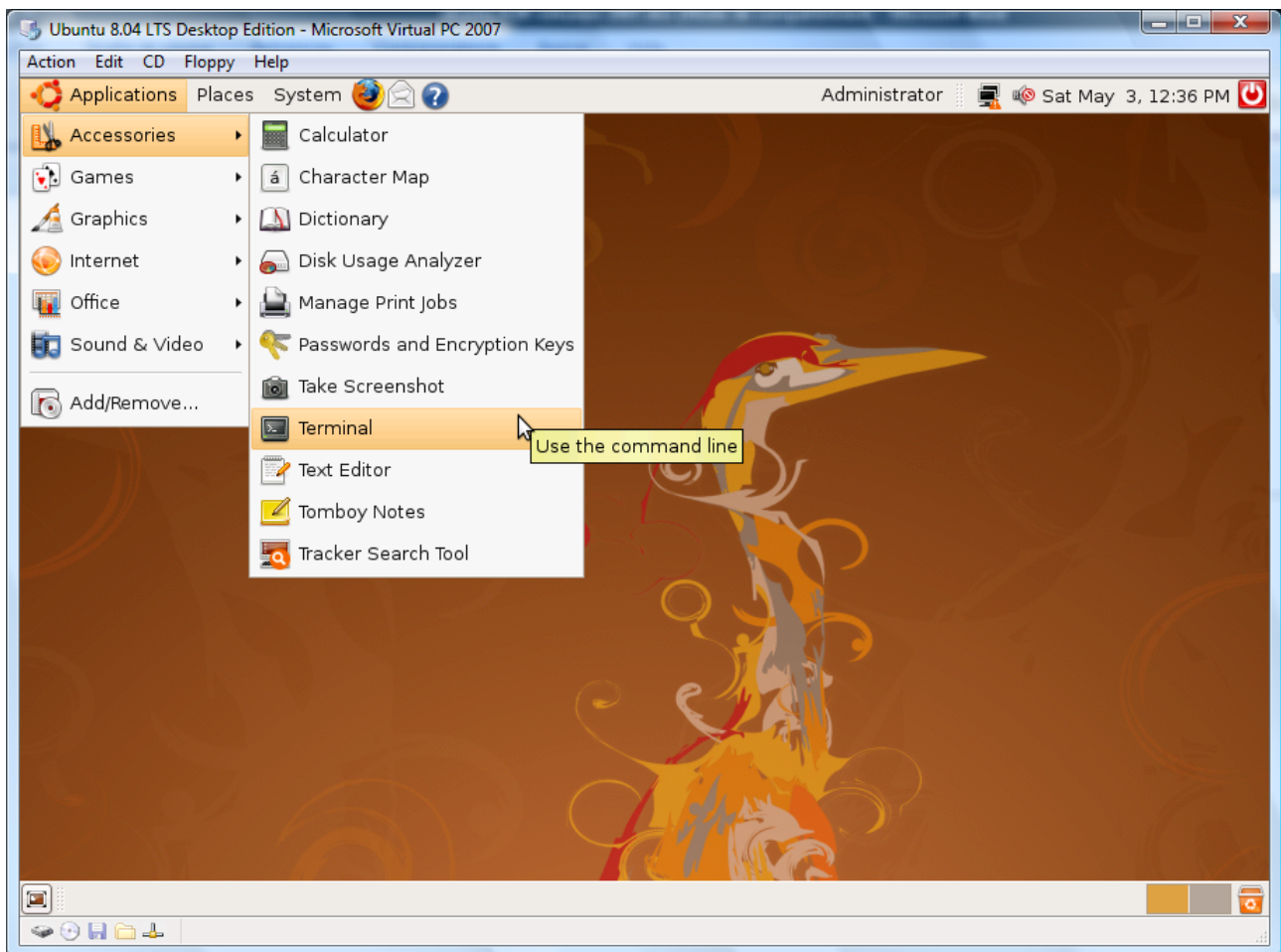


# INSTALL UBUNTU 8.04 IN MICROSOFT VIRTUAL PC 2007

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**TECHNICAL NOTEBOOK WRITTEN BY  
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## **INSTALL UBUNTU 8.04 IN MICROSOFT VIRTUAL PC 2007**

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### TRANSLATED FROM THE FIRST EDITION IN SPANISH OF:

***"INSTALACIÓN DE UBUNTU 8.04 EN MICROSOFT VIRTUAL PC 2007"***  
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## 1. INTRODUCTION

### ***1.1. What is Microsoft Virtual PC 2007?***

Microsoft Virtual PC 2007 is a free tool that allows us to use virtual machines with their respective operating systems in our own computer. See more details of this tool in ***section 2.2*** "***Links of interest***".

### ***1.2. What is Ubuntu 8.04?***

Ubuntu 8.04 is a Linux distribution with Gnome desktop environment. See more details in ***section 2.2*** "***Links of interest***".



## 2. WHAT WE NEED?

### 2.1. Requirements

For the installation of Ubuntu 8.04 in Microsoft Virtual PC 2007 we need:

- Intel Pentium 4 processor.
- 1 GB of RAM memory. Recommendable 2 GB of RAM memory.
- 3 GB of free space in hard disk.
- Microsoft Windows XP Professional operating system.
- Microsoft Virtual PC 2007
- ISO image of the Ubuntu 8.04 distribution CD (*ubuntu-8.04-desktop-i386.iso*).

If you do not have some of these characteristics, consult the requirements of Microsoft Virtual PC 2007 and Ubuntu 8.04 in their official Web sites, respectively.

### 2.2. Links of interest

» **Official Web site of Osc@rNET (my site):**

<http://www.ofgsoftware.com>

» **Microsoft Virtual PC 2007:**

<http://www.microsoft.com/windows/products/winfamily/virtualpc/default.msp>

» **Microsoft Virtual PC 2007 download:**

<http://www.microsoft.com/downloads/details.aspx?displaylang=en&FamilyID=04d26402-3199-48a3-afa2-2dc0b40a73b6>

» **Official Web site of Ubuntu:**

<http://www.ubuntu.com>

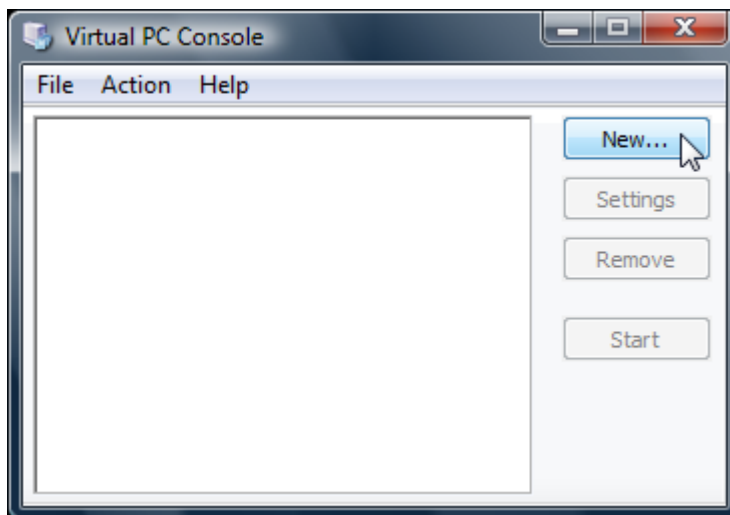
» **Ubuntu 8.04 download (CD-ISO image):**

<http://releases.ubuntu.com/hardy/ubuntu-8.04-desktop-i386.iso>

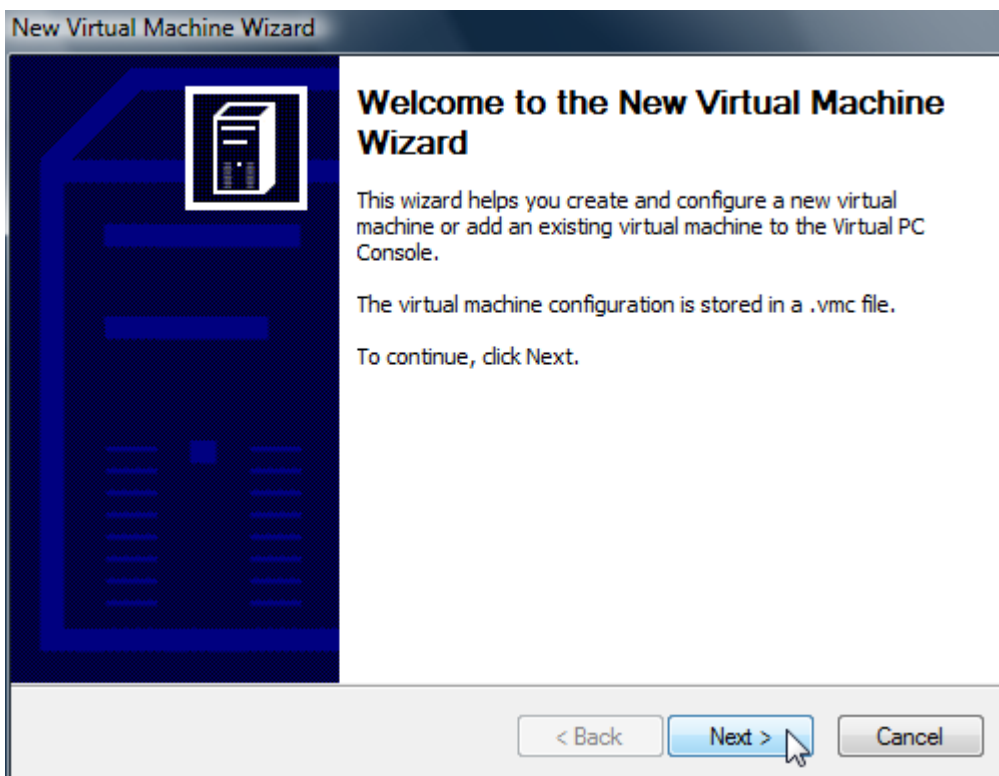
### 3. VIRTUALIZATION OF UBUNTU 8.04

#### 3.1. New virtual machine wizard

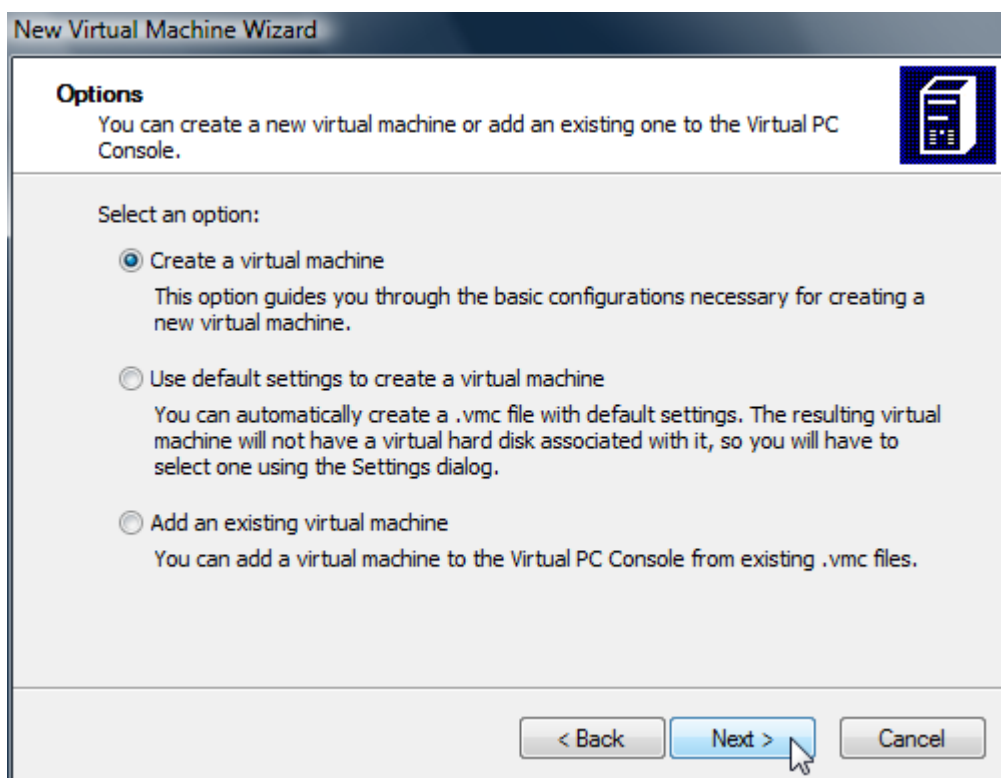
Before coming with the installation we need to create a new virtual machine. From the Virtual PC Console we click on the "**New...**" button in order to execute the "**New virtual machine wizard**":



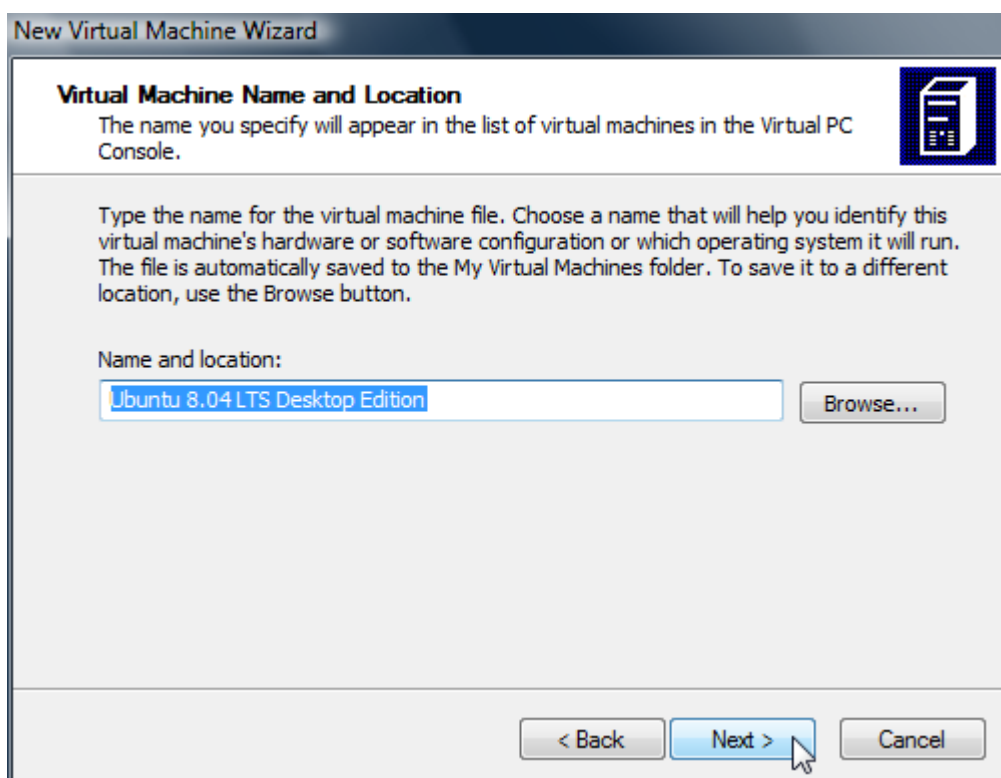
Through wizard we made step by step the virtual machine that will lodge version 8.04 of Ubuntu. In order to begin we click on the "**Next >**" button:



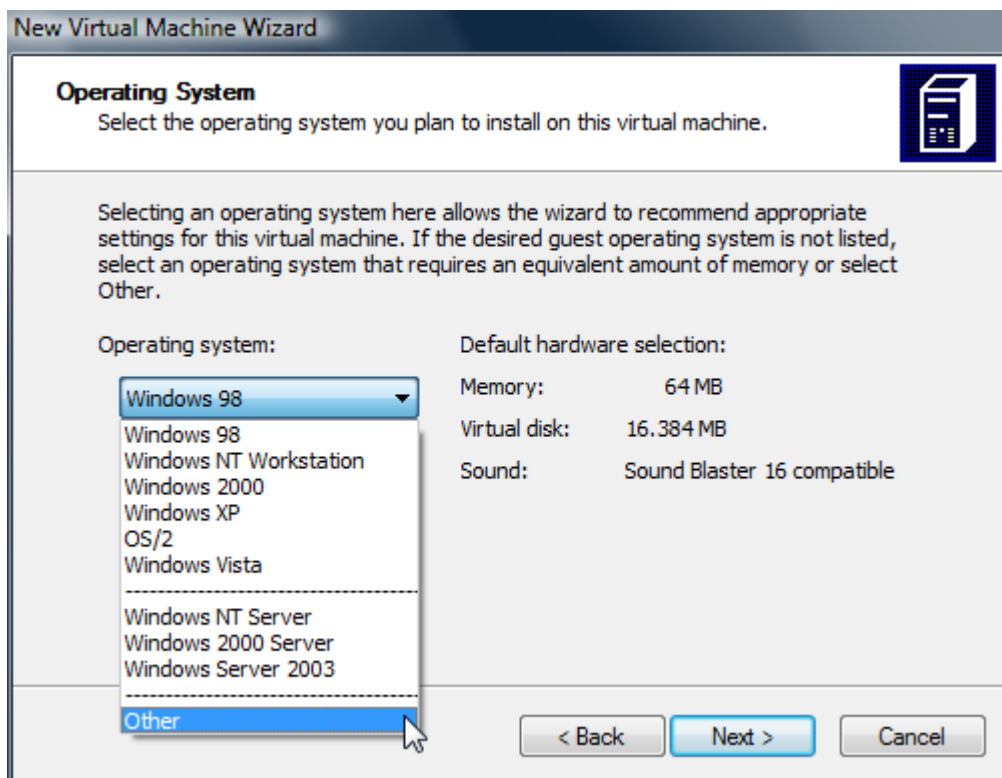
We select the "**Create a virtual machine**" option and click on the "**Next >**" button to continue:



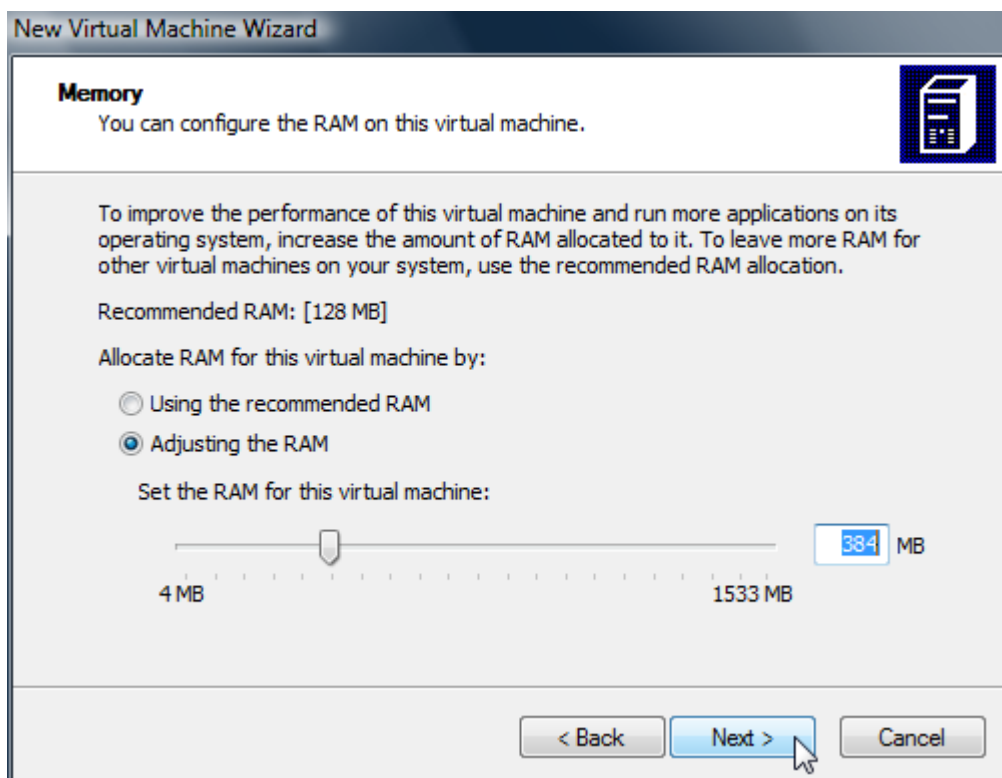
We give a name to the virtual machine, for example "**Ubuntu 8.04 LTS Desktop Edition**". By defect it will be created within the "**My virtual machines**" folder in "**My documents**" but we can choose another different location. In order to continue we click on the "**Next >**" button:



We select "**Other**" like operating system and click on the "**Next >**" button to continue:

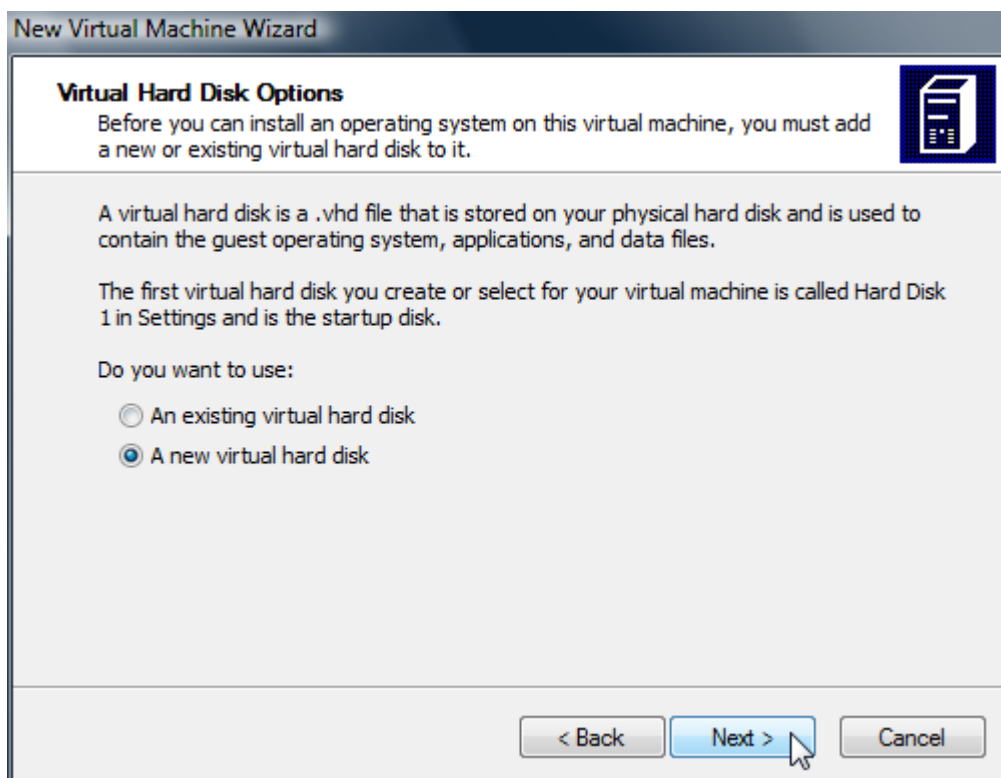


Now we fit the ram memory of the virtual machine according to our possibilities, that is, depending on the physical ram memory that we have in our computer. 384 MB of RAM memory are recommended for the installation of Ubuntu 8.04. We click on the "**Next >**" button to continue:

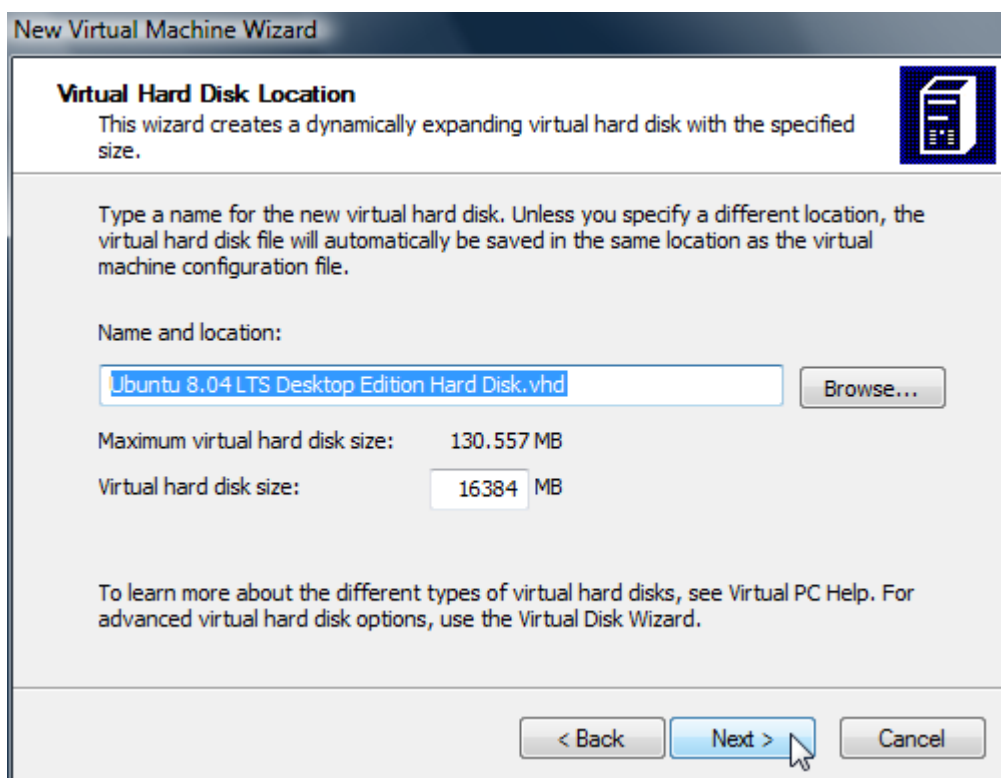


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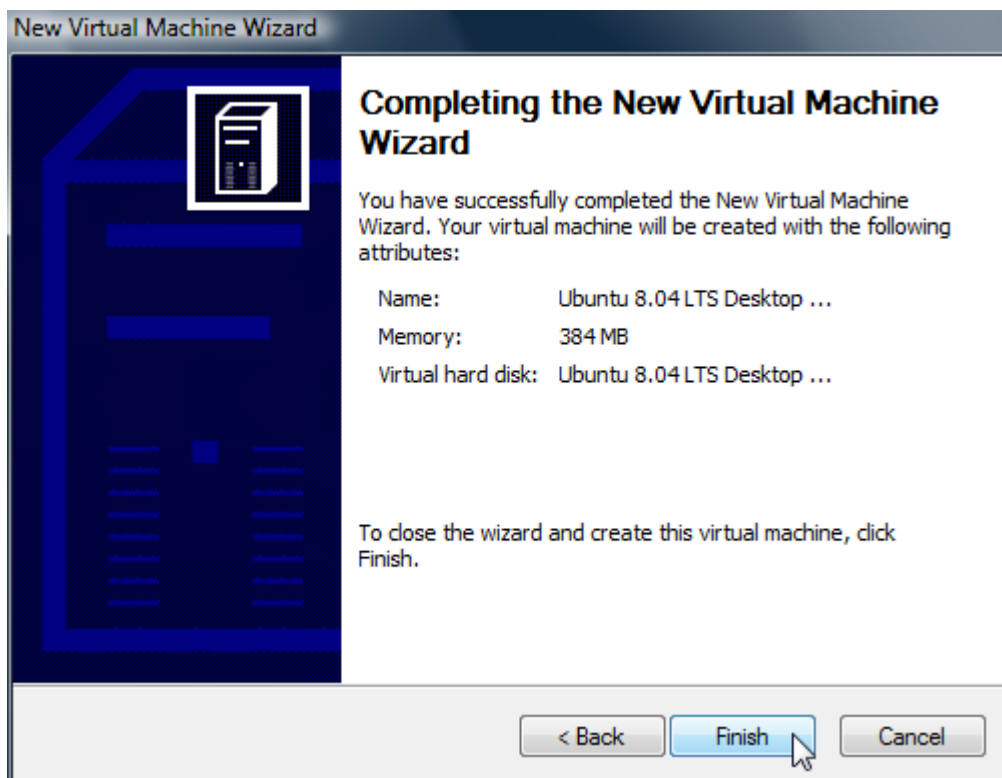
We select the "**A new virtual hard disk**" option to create the hard disk of the virtual machine and click on the "**Next >**" button to continue:



Now we fit the size of the virtual hard disk according to our possibilities, that is, depending on the free space that we have in our computer. Ubuntu 8.04 requires 3 GB minimum of free space in the hard disk. We click on the "**Next >**" button to continue:



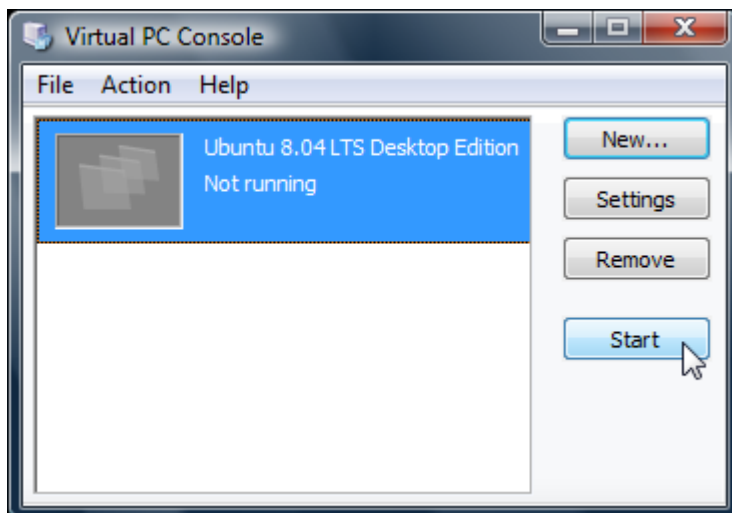
In order to create the virtual machine and to finish with the wizard we click on the "**Finish**" button:



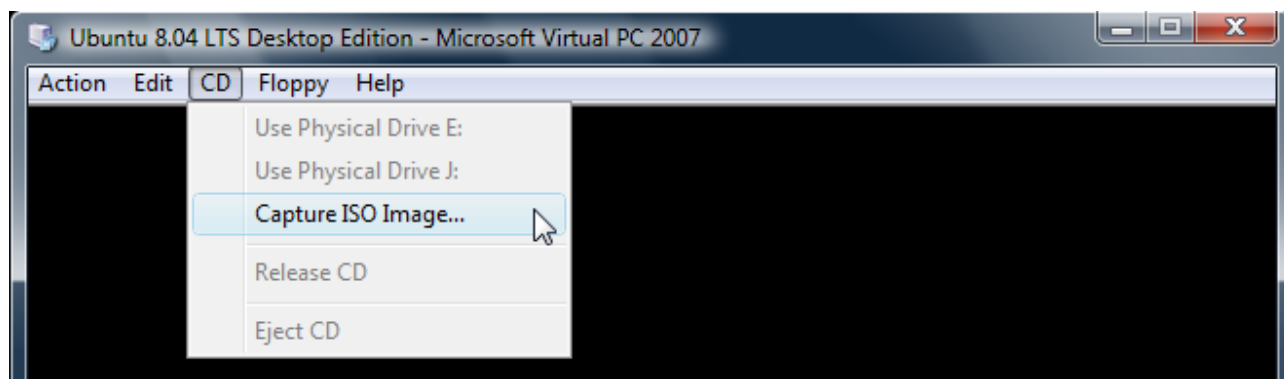
## 4. INSTALLATION OF UBUNTU 8.04

### 4.1. Execution of the virtual machine

From the Virtual PC Console we select the virtual machine that we have created with the wizard and we click on the "**Start**" button for its execution:



Once initiate the virtual machine, we select the "**Capture ISO image...**" option within the "**CD**" menu:



Then the "**Select CD Image to Capture**" dialog window appears where we select the ISO image of the Ubuntu 8.04 distribution CD "**ubuntu-8.04-desktop-i386.iso**".

## 4.2. Start Ubuntu installation

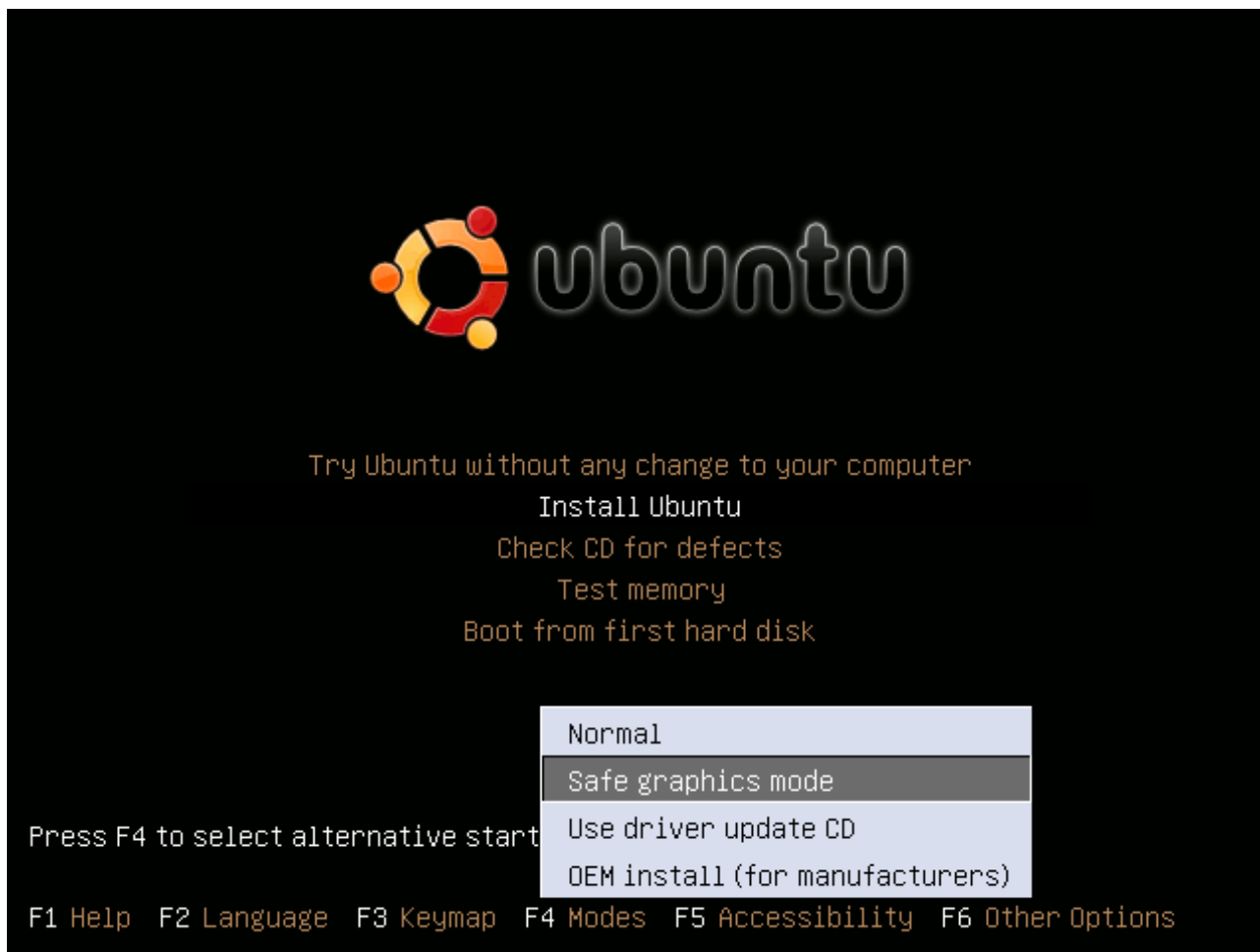
After capturing ISO image of the Ubuntu 8.04 CD distribution, the virtual machine starts from this image and appears a menu with diverse options:



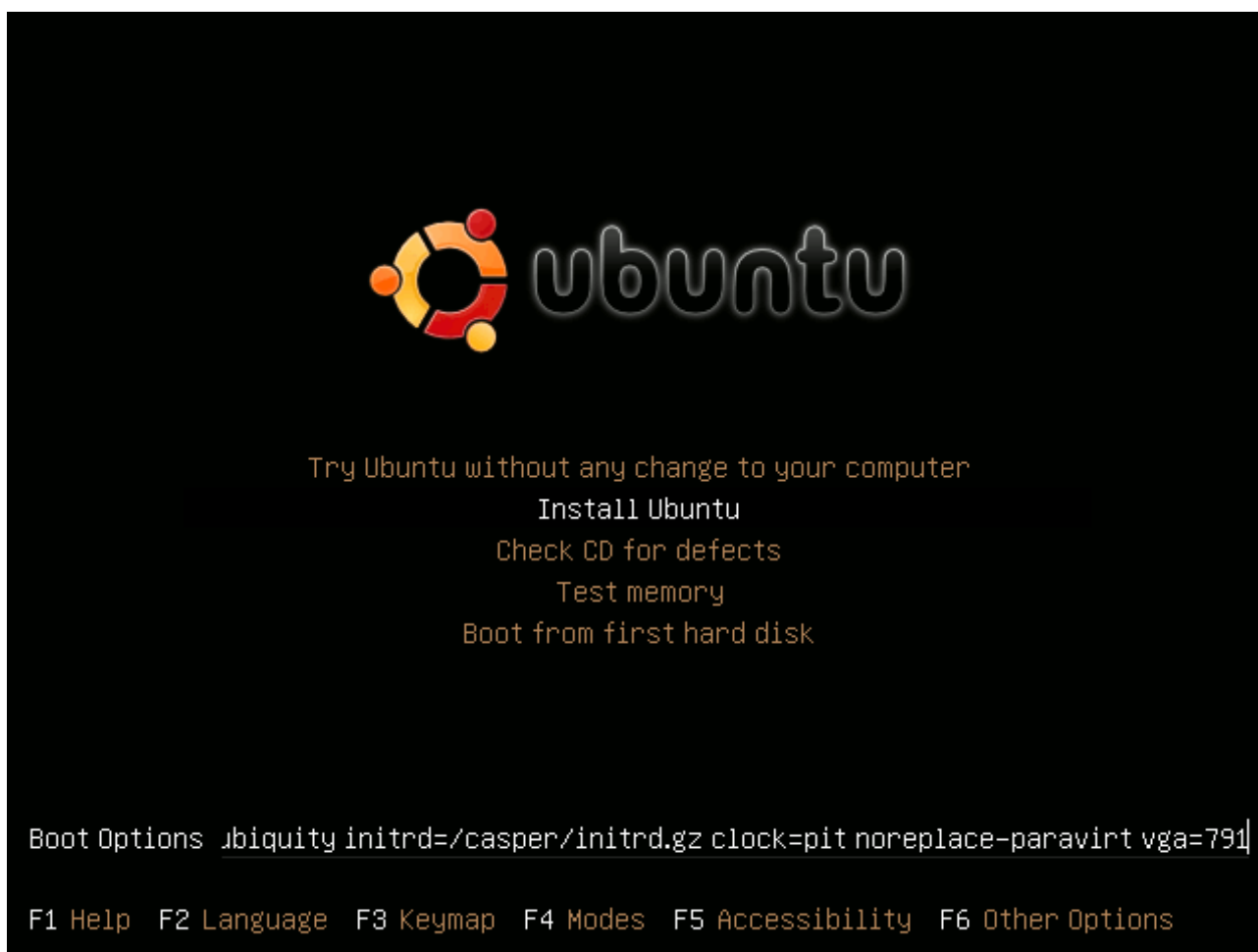
From this screen we must configure diverse aspects before coming with the installation, such as, the resolution of screen among others. We select the "**English**" option.



In order to change the resolution of the screen we press the "F4" key and select the "Safe graphics mode" option:



Now we select the "*Install Ubuntu*" option and press the "*F6*" key to add a series of additional parameters to the boot options:



We delete the following boot parameters:

```
quiet splash --
```

Then we must add next the following additional parameters:

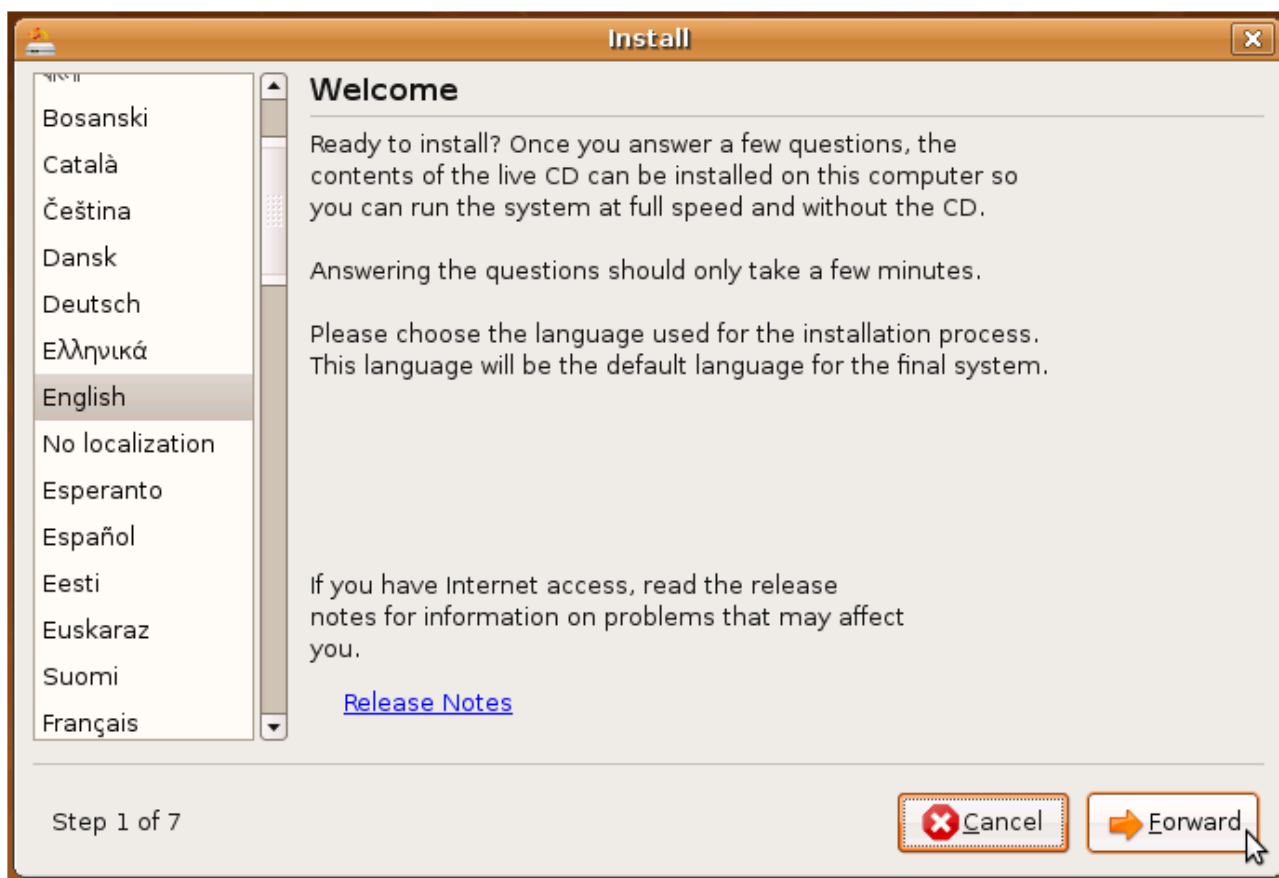
```
clock=pit noreplace-paravirt vga=791
```

Description of the parameters:

- The "**clock=pit**" parameter allows to correct certain problems with the internal clock of the virtual machine.
- The "**noreplace-paravirt**" parameter allows to correct the "An unrecoverable processor error" in Virtual PC.
- The "**vga=791**" parameter allows to set the "1024x768 16bit" screen resolution.

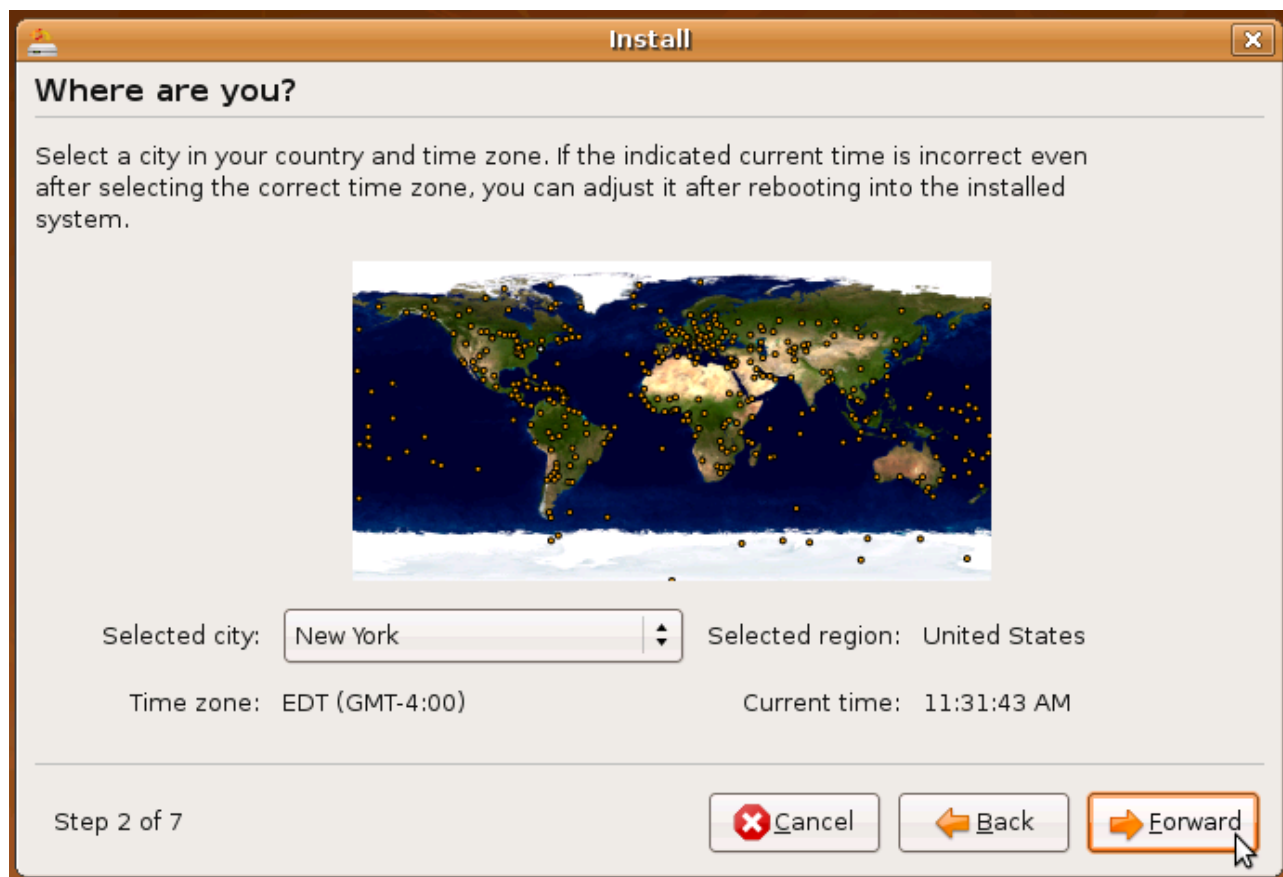
Once added the additional parameters we press the "**ENTER**" key to begin the load of Ubuntu.

When the Ubuntu desktop is loaded completely, the installation wizard is showed. First that we must do it is to select the "**English**" language that will be the predetermined one for the final system.



We click on the "**Forward**" button to continue.

Now we select the time zone, for example, the corresponding one to the city of "**New York**", United States.



We click on the "**Forward**" button to continue.

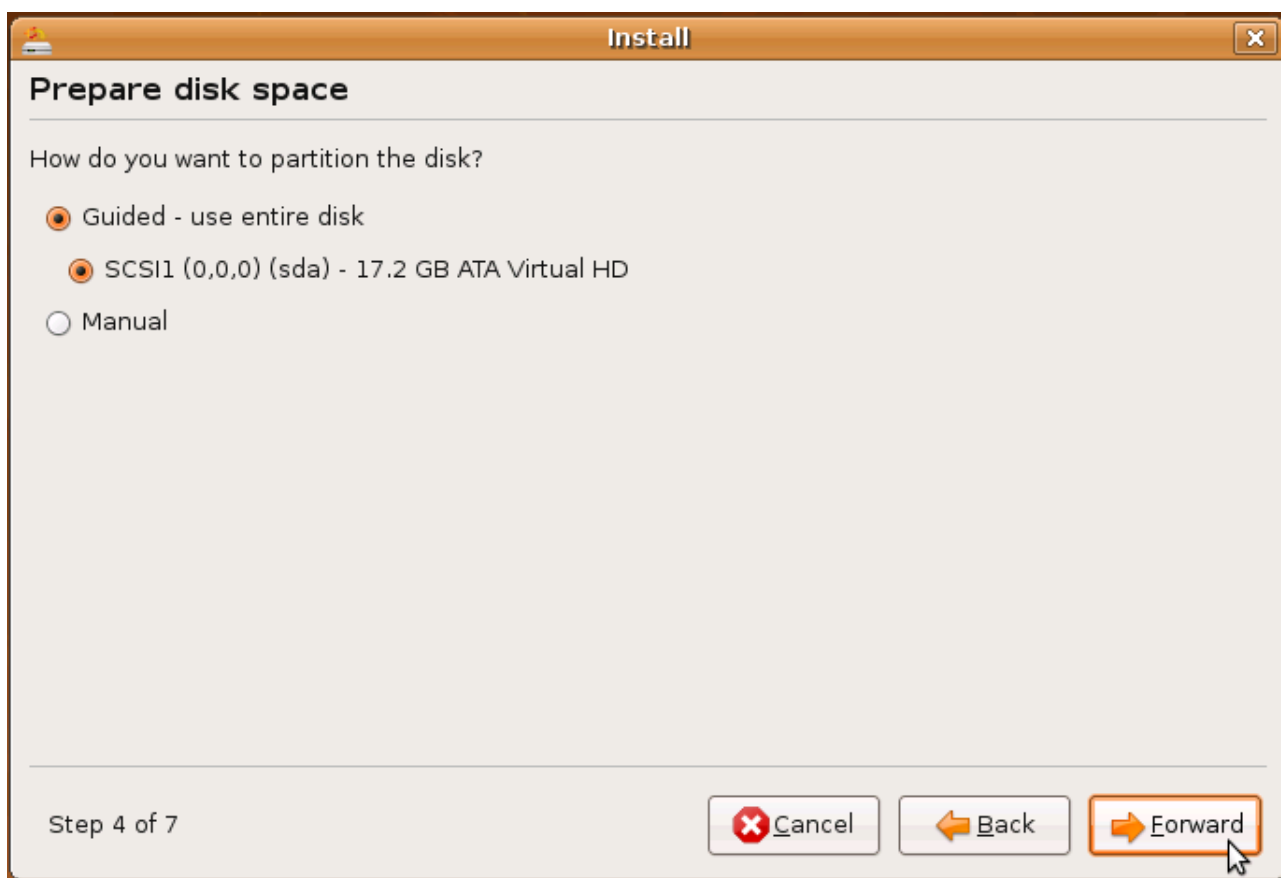
For the keyboard layout we select, for example, "**USA**" (for the USA keyboard layout).



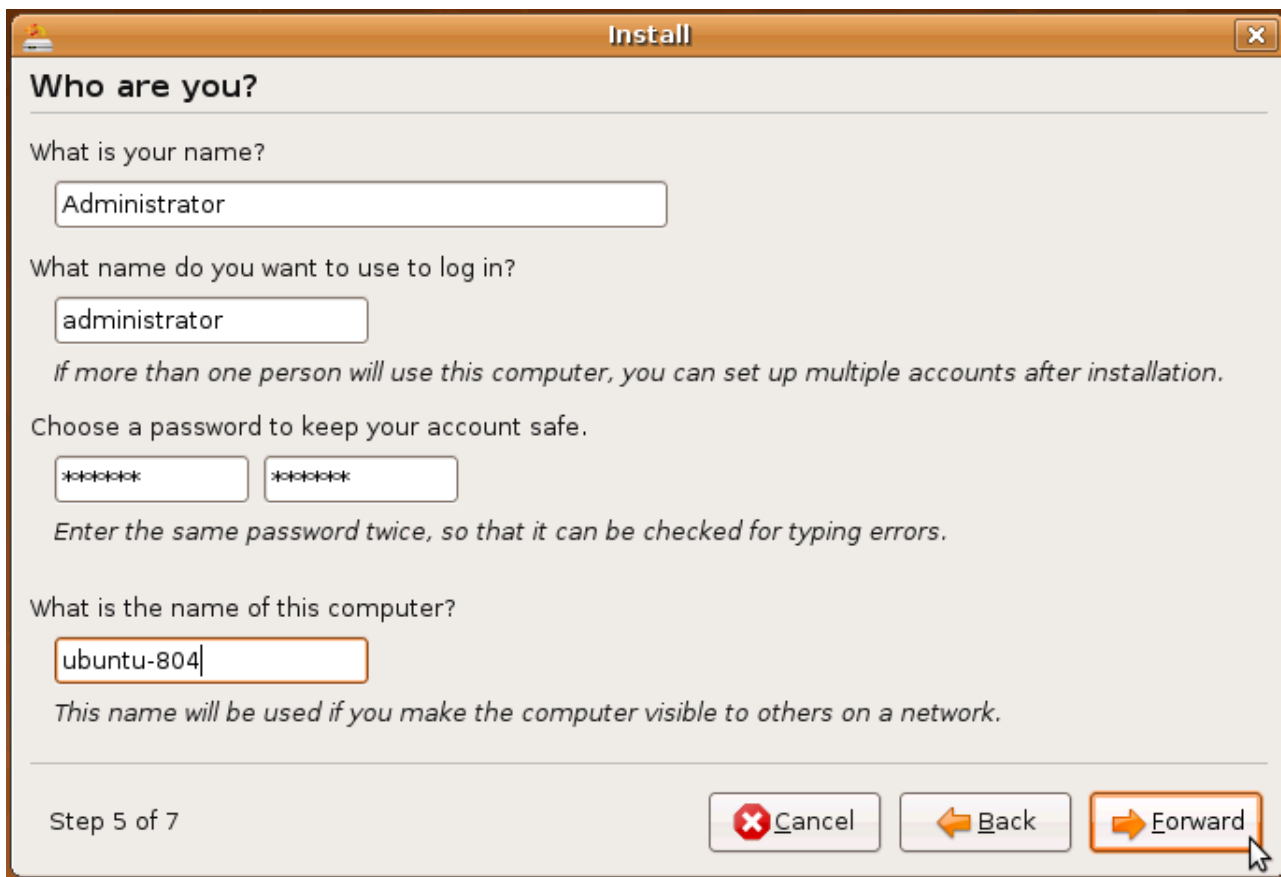
We click on the "**Forward**" button to continue.

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Now is the screen where we can configure the hard disk partitions to our pleasure. By defect, we left the options that the wizard provides to us and click on the button "**Forward**" to follow:



Now we specify our user account, for example "**administrator**" and the password "**system**". In addition we must specify the name of the computer, for example, "**ubuntu-804**":



The screenshot shows the 'Install' window titled 'Who are you?'. It contains the following fields and text:

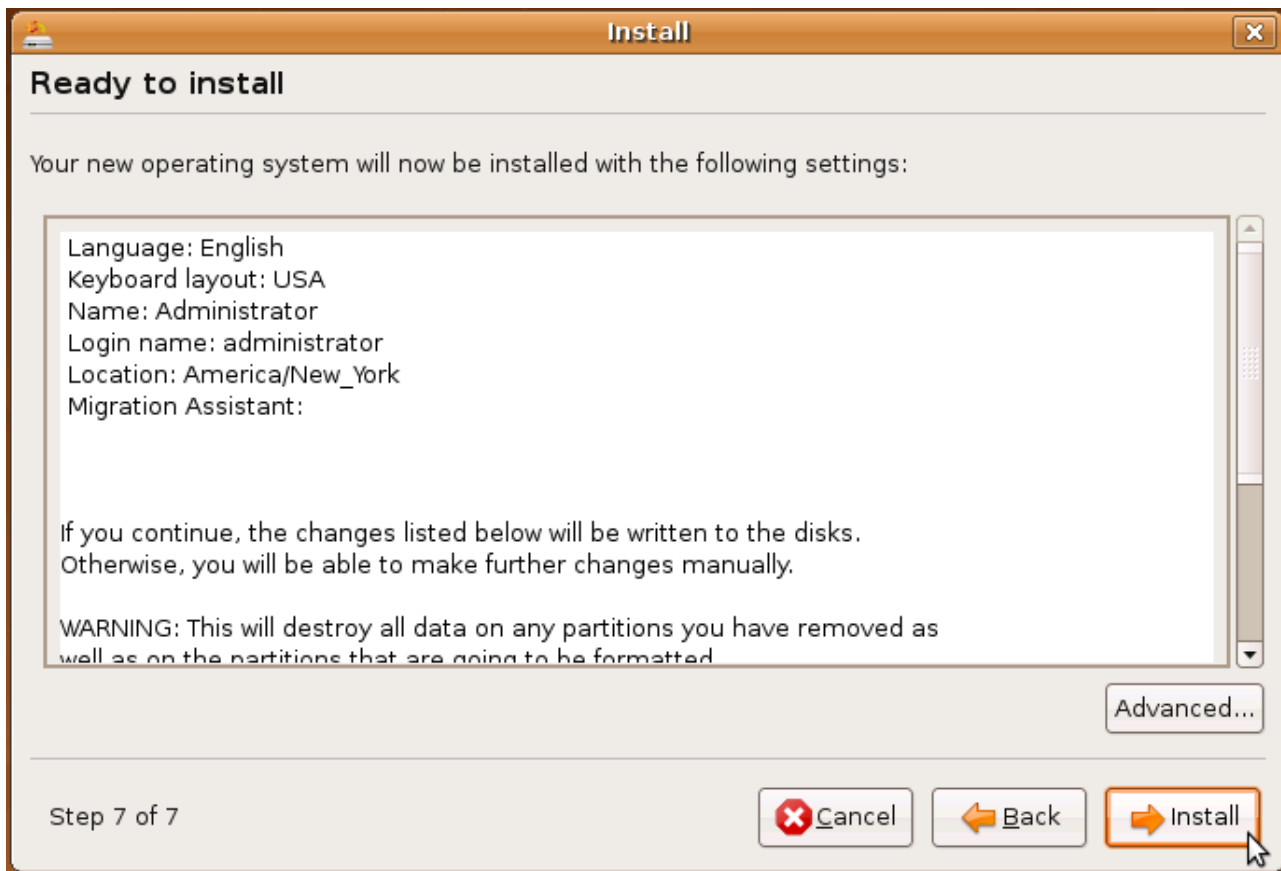
- What is your name?
- What name do you want to use to log in?
- If more than one person will use this computer, you can set up multiple accounts after installation.*
- Choose a password to keep your account safe.
- Enter the same password twice, so that it can be checked for typing errors.*
- What is the name of this computer?
- This name will be used if you make the computer visible to others on a network.*

At the bottom, it says 'Step 5 of 7' and has three buttons: 'Cancel', 'Back', and 'Forward'. A mouse cursor is pointing at the 'Forward' button.

We click on the "**Forward**" button to continue.

In order to begin with the installation we click on the "**Install**" button.

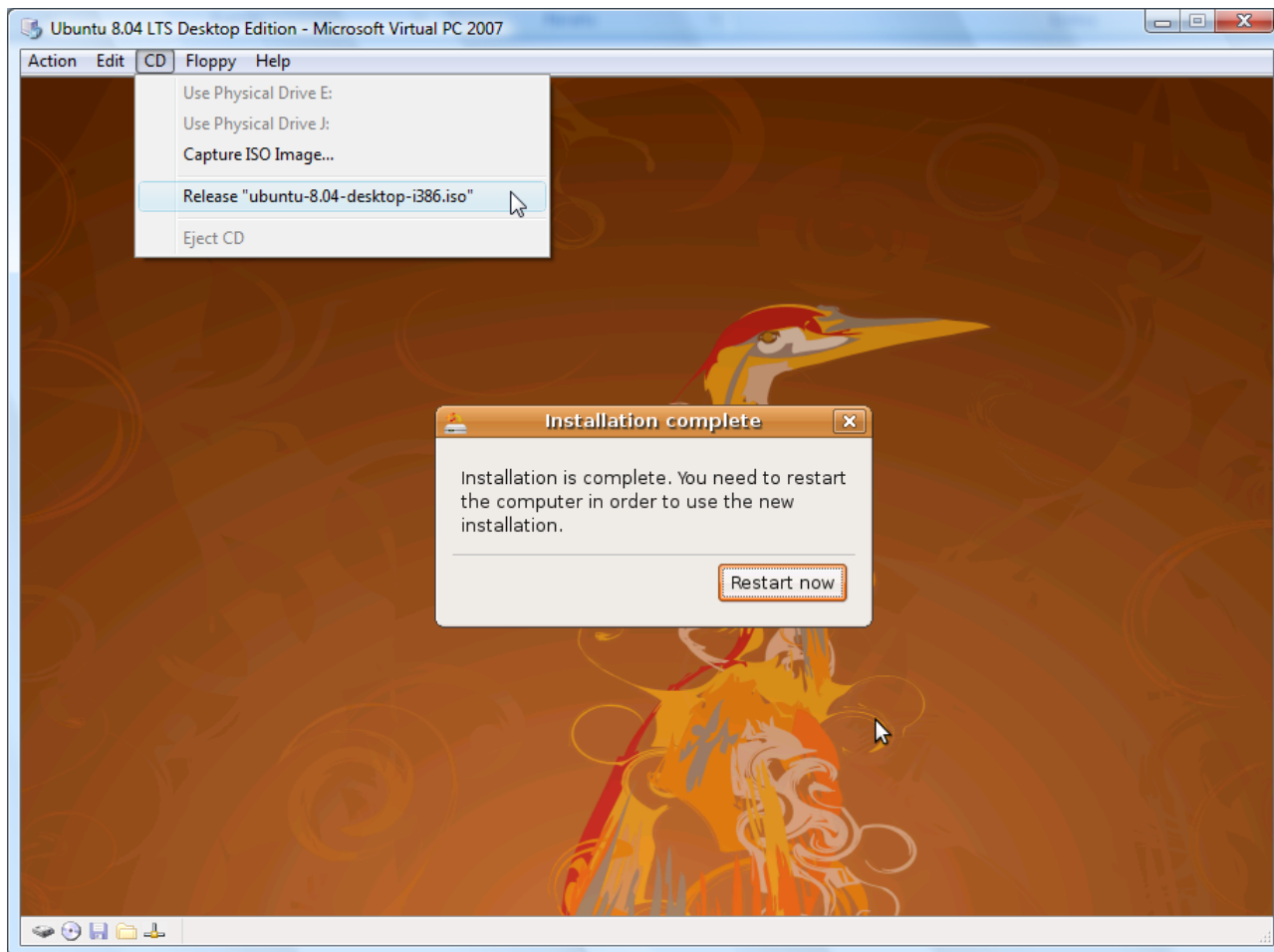
This process can take several minutes depending on the characteristics of our system.





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Once finalized the installation of Ubuntu we must reboot the virtual machine, but before we must release the ISO image of the Ubuntu 8.04 distribution CD. For it, from the menu bar of the virtual machine we select the "**Release ubuntu-8.04-desktop-i386.iso**" option of the "**CD**" menu. Next, we can reboot already.



After the virtual machine reboot we must make some settings before using Ubuntu 8.04. For it, in the boot screen and when the "**GRUB loading...**" message is visualized to us we press the "**ESC**" key to enter the boot menu:

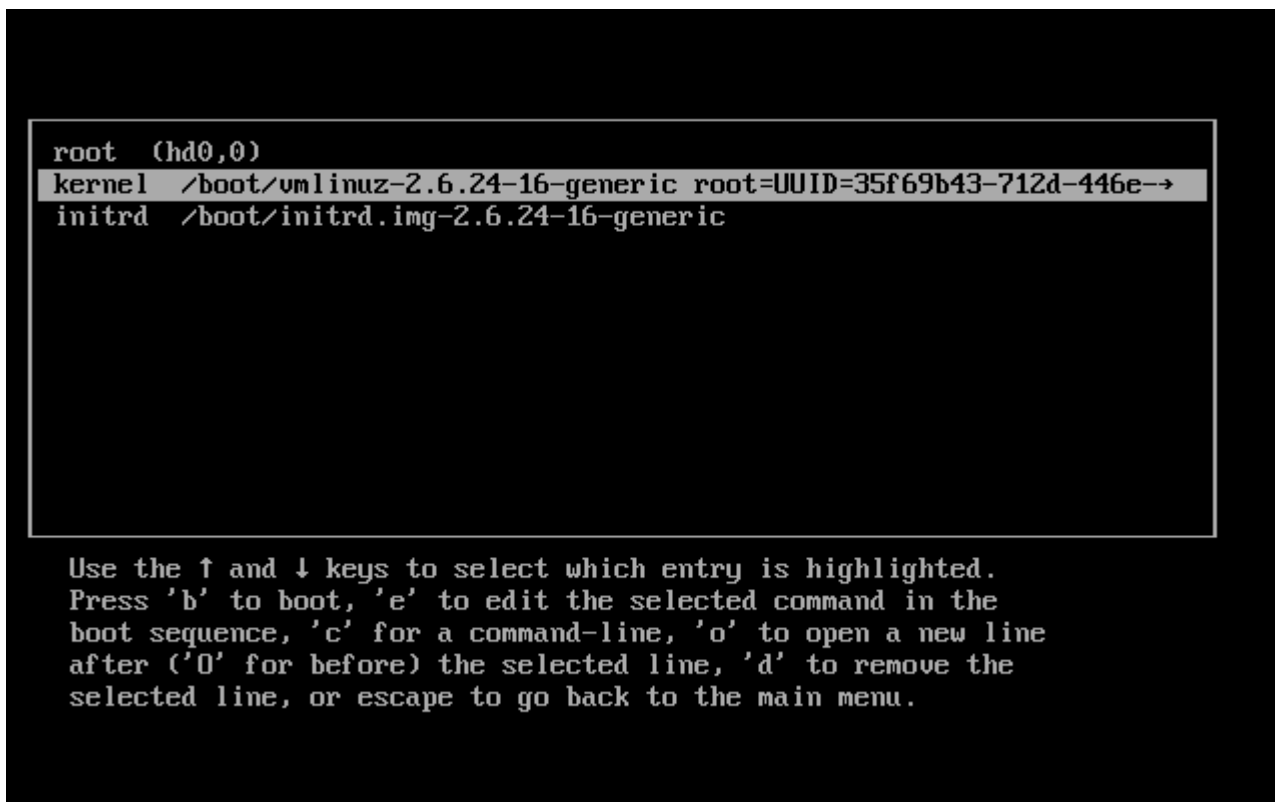
```
GRUB Loading stage1.5.  
  
GRUB loading, please wait...  
Press `ESC' to enter the menu... 2 _
```

In the boot menu we select the "**... (recovery mode)**" option that allows us to boot in recovery mode:

```
Ubuntu 8.04, kernel 2.6.24-16-generic  
Ubuntu 8.04, kernel 2.6.24-16-generic (recovery mode)  
Ubuntu 8.04, memtest86+
```

```
Use the ↑ and ↓ keys to select which entry is highlighted.  
Press enter to boot the selected OS, 'e' to edit the  
commands before booting, or 'c' for a command-line.
```

We press the "e" key for edit the commands before booting. After we select the "kernel..." option and press the "e" key for edit it.

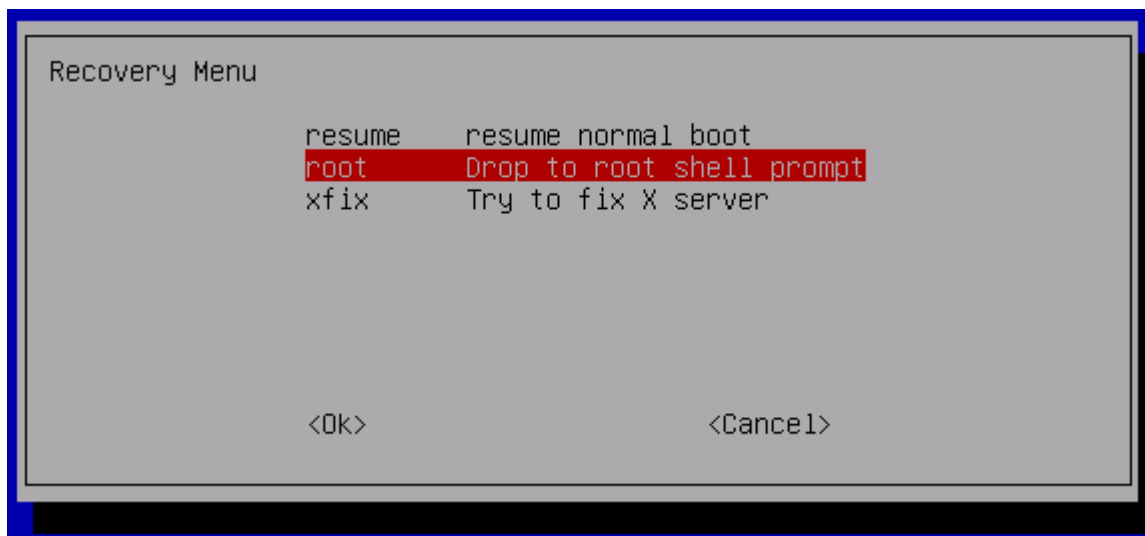


Now we must add next the following additional parameters:

```
clock=pit noreplace-paravirt vga=791
```

Once added the additional parameters we press the "ENTER" key and then the "b" key to boot.

Once the system booted it appears the "Recovery Menu" where we select the "root" option for drop to root shell prompt (#).



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We must modify the "*menu.lst*" file that contains the boot parameters of GRUB manager. This file is in the "*/boot/grub*" directory (it is a good idea for making a copy of this file before, otherwise, a bad modification could give us problems later in the booting):

```
# cd /boot/grub
# cp menu.lst menu.lst.original
# nano menu.lst
```

We locate within this file the block of parameters of the "*Ubuntu 8.04, kernel 2.6.24-16-generic*" boot option, and in the "*kernel*" line we delete:

```
quiet splash
```

and we add:

```
clock=pit noreplace-paravirt vga=791
```

```
title          Ubuntu 8.04, kernel 2.6.24-16-generic
root           (hd0,0)
kernel         /boot/vmlinuz-2.6.24-16-generic root=UUID=35f69b43-712d-446e-8152-e63c31b4f68b ro clock=pit noreplace-paravirt
initrd        /boot/initrd.img-2.6.24-16-generic
quiet

title          Ubuntu 8.04, kernel 2.6.24-16-generic (recovery mode)
root           (hd0,0)
kernel         /boot/vmlinuz-2.6.24-16-generic root=UUID=35f69b43-712d-446e-8152-e63c31b4f68b ro single clock=pit noreplace-paravirt
initrd        /boot/initrd.img-2.6.24-16-generic

title          Ubuntu 8.04, memtest86+
root           (hd0,0)
kernel         /boot/memtest86+.bin
quiet
```

Now we save the file and we reboot:

```
# reboot
```

With this we will have our already Ubuntu 8.04 operating system working perfectly in Virtual PC 2007.

## 5. OTHER UBUNTU 8.04 SETTINGS

### 5.1. "root" user password setting

If we want to change the "root" user password we must execute the following command from the console:

```
$ sudo passwd root
```

It will request the new password and its confirmation to us for the "root" user.

### 5.2. Sound setting

Since Virtual PC emulates the SB16 soundcard (Sound Blaster), we can set the sound of our virtual machine so that it works correctly with Ubuntu. For it, we must modify the `/etc/modules` file and add a line that contains the `snd-sb16` word. We do it from the system console. In order to modify the file we can make it in two ways:

1. Executing the next command:

```
$ sudo nano /etc/modules
```

2. Executing these commands (like "root" user):

```
$ su
# echo snd-sb16 >> /etc/modules
```

### 5.3. Change the system clock from UTC to Local

In order to change the system clock from UTC to Local we must modify the `rcS` file that is located in the `/etc/default` directory and change the `UTC=yes` line by `UTC=no`.

### 5.4. Change the configuration of X graphical environment

We have to edit the configuration file of X graphical environment X, `xorg.conf` which is located in the `/etc/X11` directory:

```
$ cd /etc/X11
# sudo nano xorg.conf
```

We remove the current contents of this file and add the following contents:

```
# Xorg configuration for Microsoft Virtual PC 2007

Section "ServerLayout"
    Identifier      "Layout0"
    Screen 0       "Screen0" 0 0
    InputDevice    "Mouse0" "CorePointer"
    InputDevice    "Keyboard0" "CoreKeyboard"
EndSection
```

```
Section "Module"
    Load      "dbe"
    Load      "extmod"
    Load      "fbdevhw"
    Load      "glx"
    Load      "record"
    Load      "freetype"
    Load      "type1"
    Load      "dri"
EndSection

Section "InputDevice"
    Identifier "Keyboard0"
    Driver     "kbd"
    Option     "XkbRules" "xorg"
    Option     "XkbModel" "pc105"
    Option     "XkbLayout" "us"
EndSection

Section "InputDevice"
    Identifier "Mouse0"
    Driver     "mouse"
    Option     "Protocol" "IMPS/2"
    Option     "Device"  "/dev/input/mice"
    Option     "ZAxisMapping" "4 5"
    Option     "Emulate3Buttons" "yes"
EndSection

Section "Device"
    Identifier "Videocard0"
    Driver     "vesa"
EndSection

Section "Monitor"
    Identifier "Monitor0"
    ModelName  "LCD Panel 1024x768"
    HorizSync  31.5 - 48.5
    VertRefresh 40.0 - 70.0
    Option     "dpms"
EndSection

Section "DRI"
    Group      0
    Mode       0666
EndSection

Section "Screen"
    Identifier "Screen0"
    Monitor    "Monitor0"
    Device     "Videocard0"
    DefaultDepth 16
    SubSection "Display"
        Viewport 0 0
        Depth    16
        Modes    "1024x768" "800x600" "640x480"
    EndSubSection
EndSection
```

### **5.5. Fix "*sudo: unable to resolve host*"**

Check you're "*/etc/hosts*", like in:

<https://bugs.launchpad.net/ubuntu/+s...ta/+bug/195308>