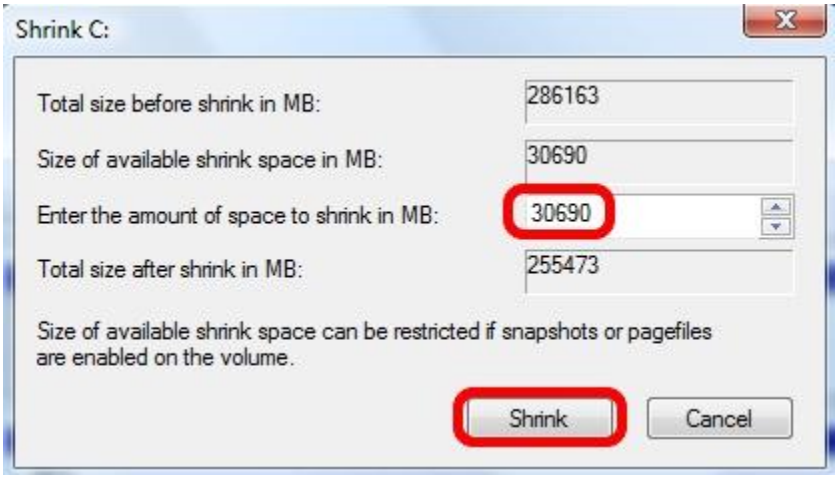
How to dual-boot Vista with Linux (Vista installed first) -- the step-by-step guide with screenshots

Scenario: You want the simplest way to dual-boot Vista and Linux. You've already installed Windows Vista and now want to dual-boot it with Ubuntu 9.04

Summary of tutorial: This is an updated tutorial - we previously used Ubuntu 8.04. In this tutorial we'll use Ubuntu 9.04, use the Vista management tools to resize the main partition and install Ubuntu into the freed space, then use the latest version of EasyBCD to reinstate the Vista bootloader

This tutorial has been tested on a VMWare Workstation 6.5 virtual machine.

Boot into Windows Vista and go into Disk Management - right-click My Computer, Manage, Disk Management.

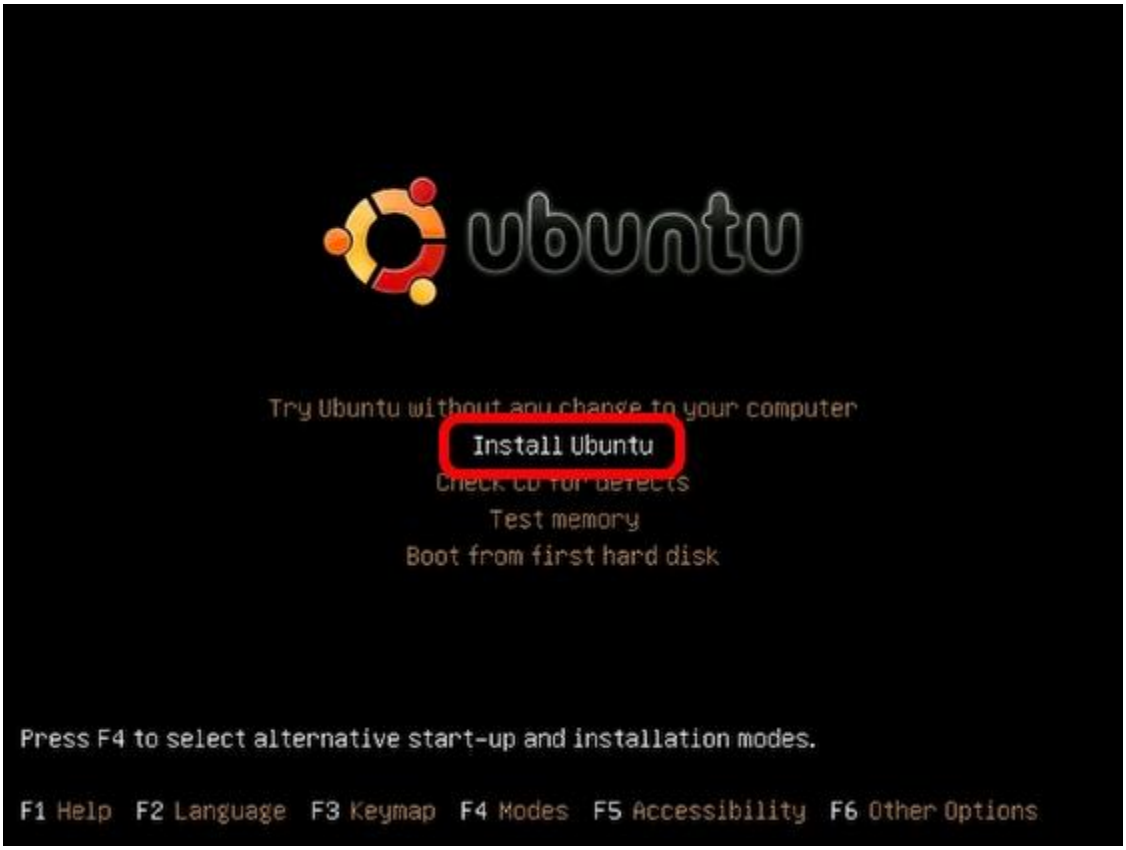


Right-click on the main Vista partition and select Shrink Volume - the Shrink tool will assess how much space can be freed up. /p>

As a rule of thumb Shrink will reduce the main system partition by about 50%. As long as the partition is big enough to begin with (at least 10GB) it should accommodate both operating systems.

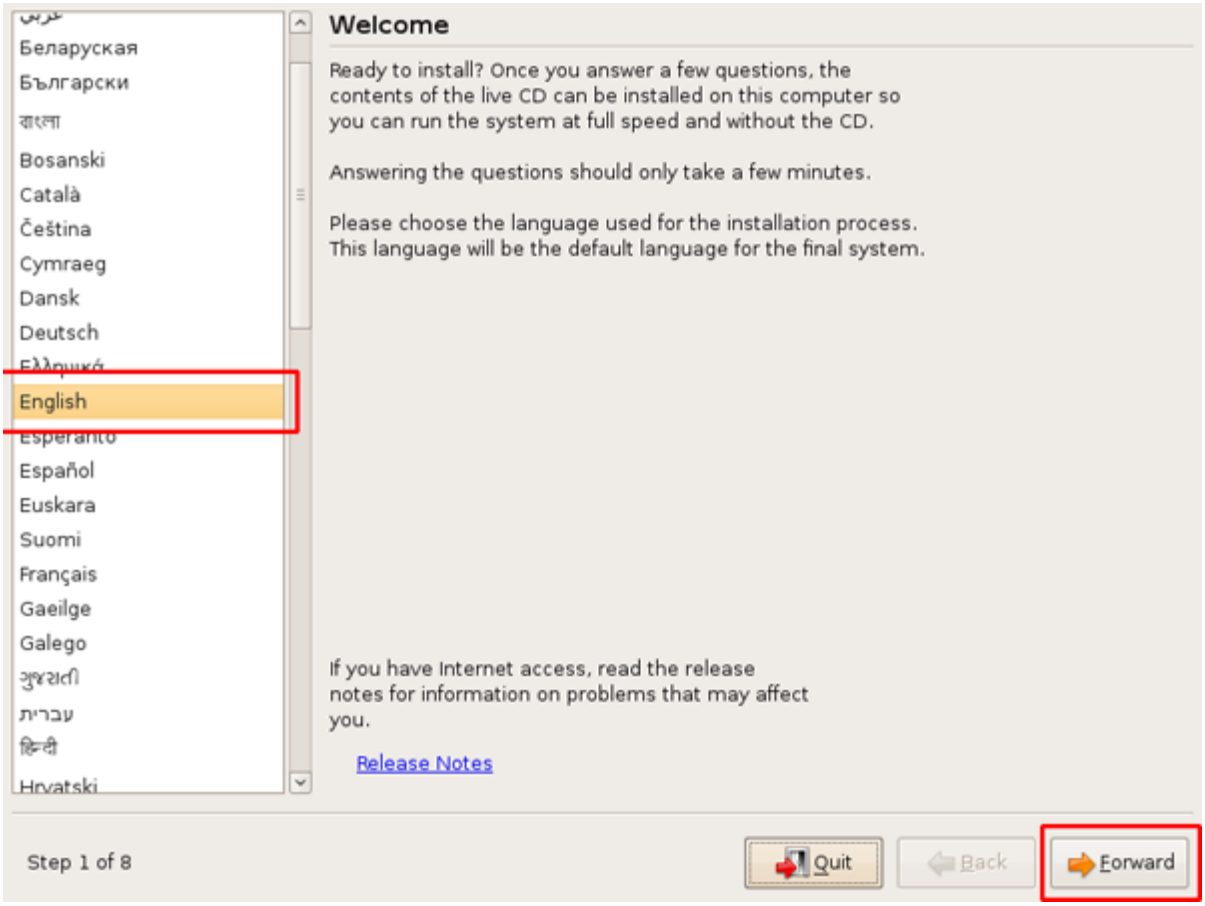
Select Shrink and the tool will reduce the volume of the primary partition, leaving the rest of the disk free as unpartitioned space.

Once that's done, shut down the Vista machine.

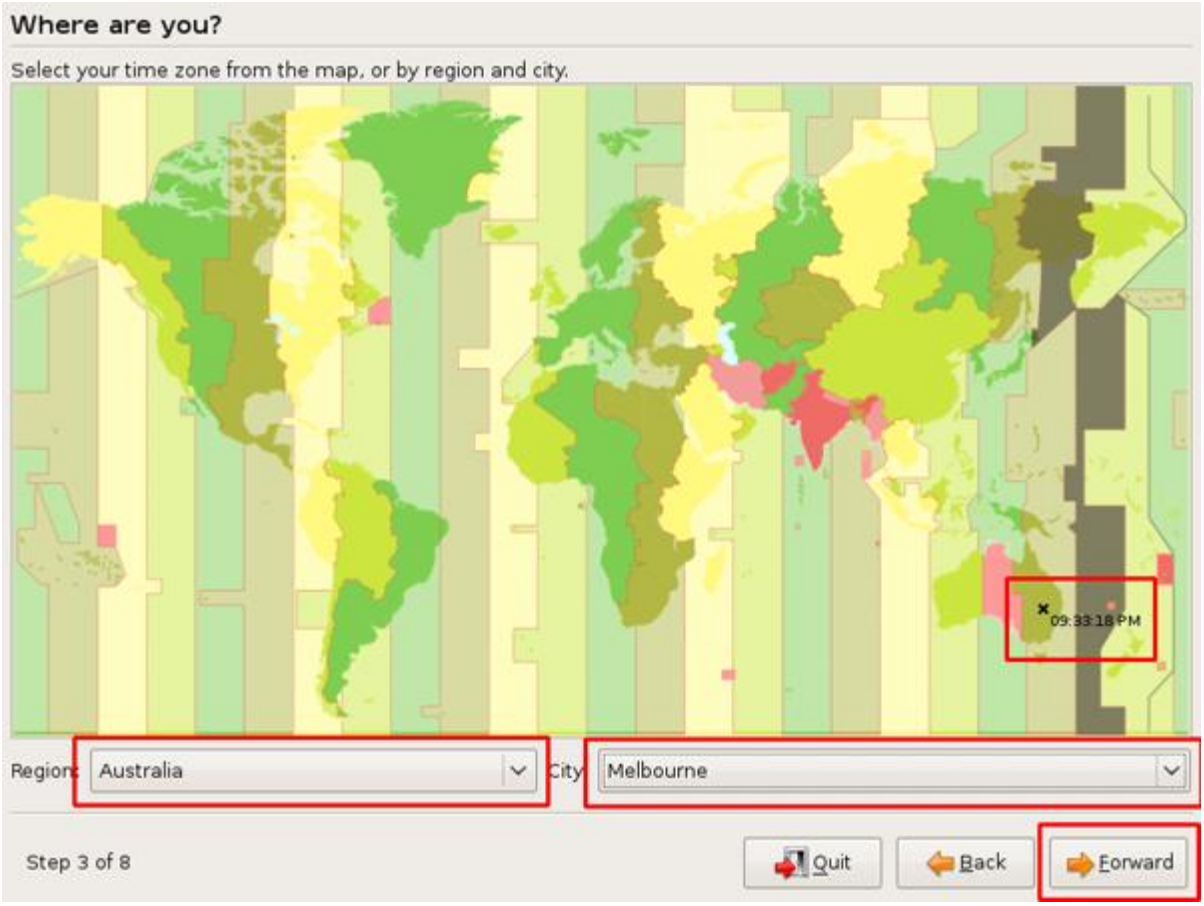


You'll need the latest desktop ISO of Ubuntu (9.04). You can choose a list of download mirrors from the Ubuntu website, or use this link from Planetmirror. Download the ISO and burn it to CD to create bootable Ubuntu CD.

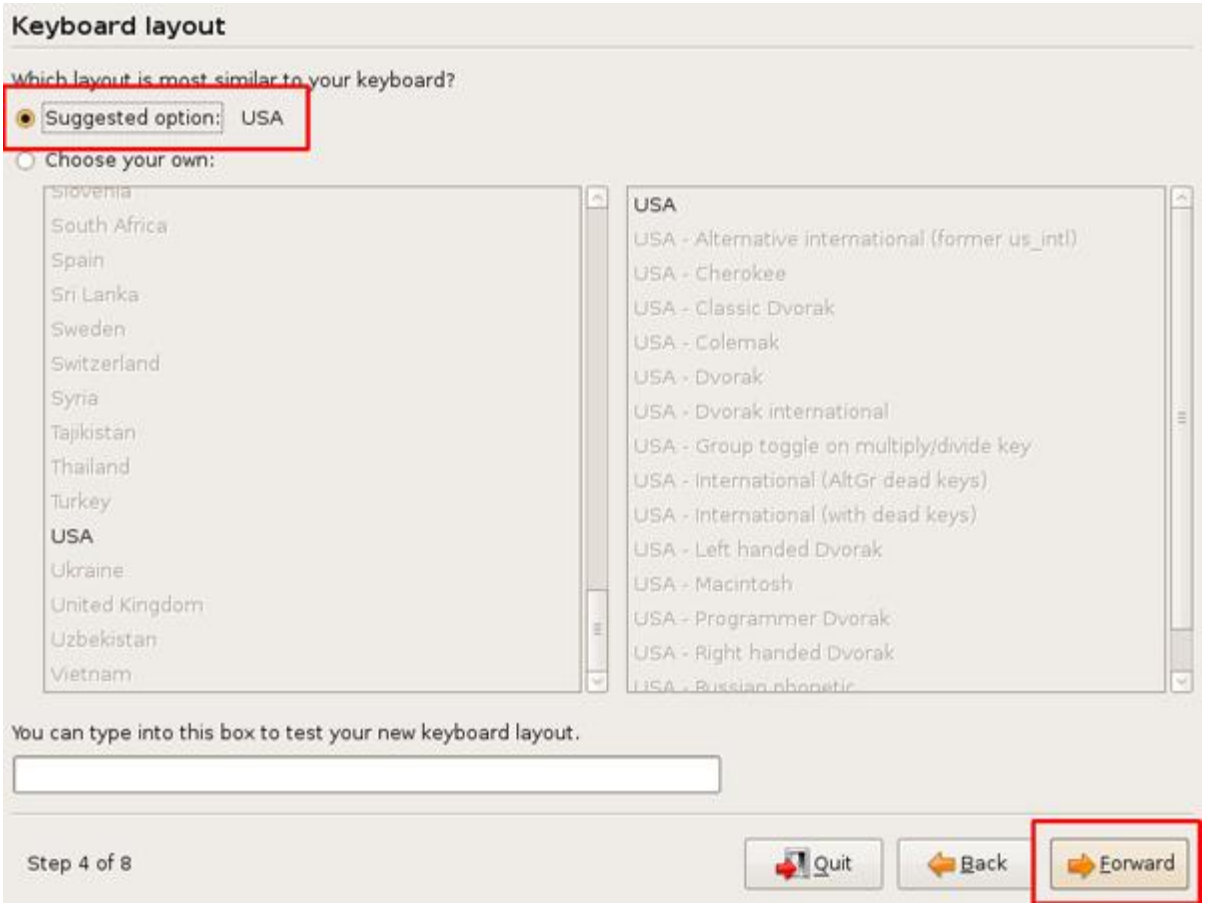
Boot the Vista machine from the CD and select "Install Ubuntu".



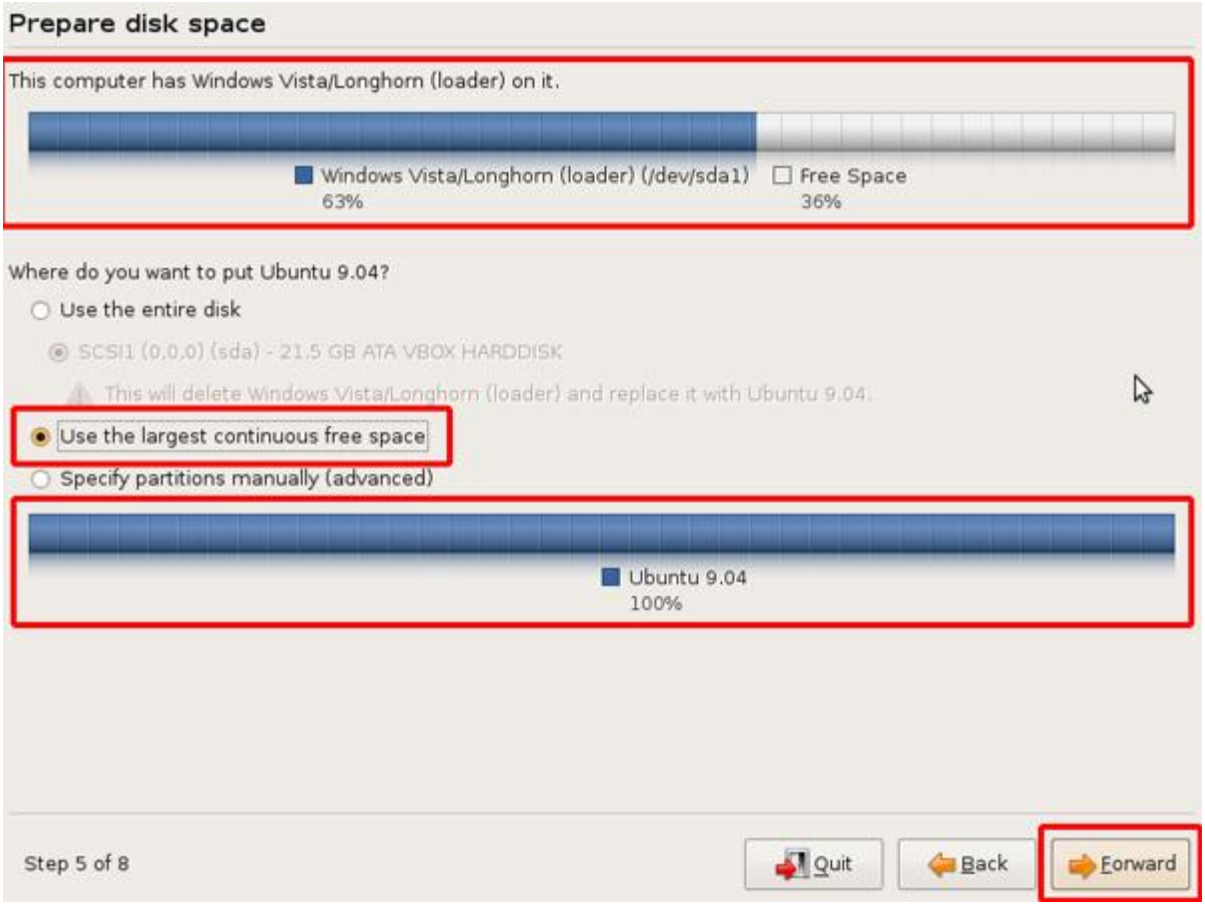
Once the Live CD has loaded, on the Welcome screen choose your language and select Forward.



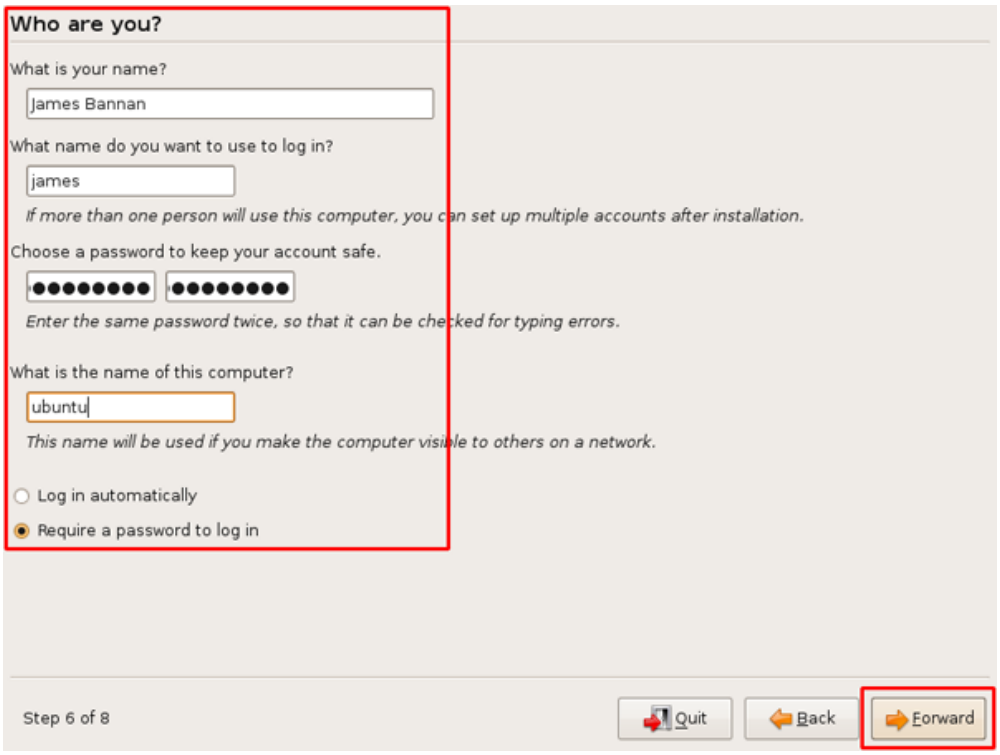
On the "Where are you" (timezone) page, select your location and then Forward.



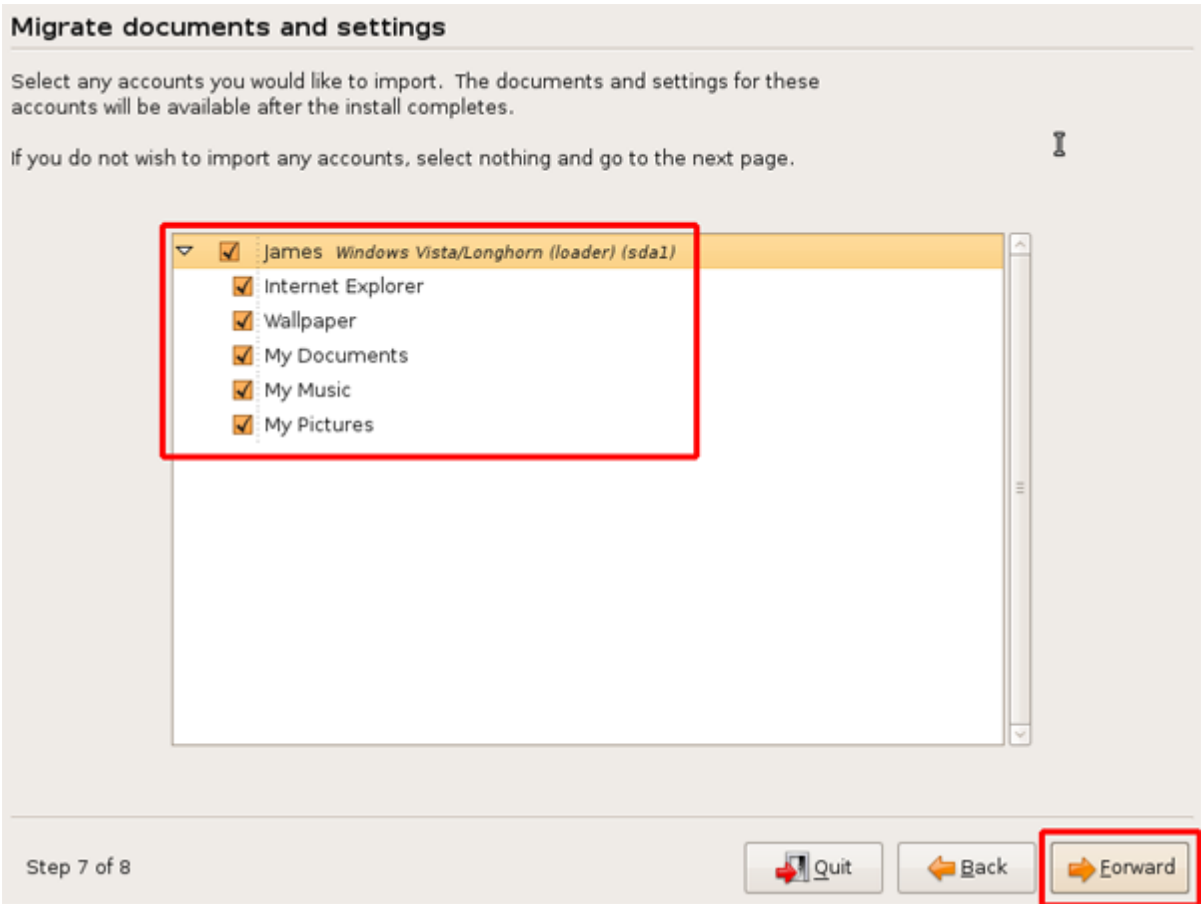
On the next screen, choose the appropriate keyboard layout and then Forward.



Ubuntu will then load the disk partitioner to determine where it's going to be installed. Choose "Manual - use the largest continuous free space". This will automatically select the unpartitioned space we created earlier using the Shrink tool. Click Forward.

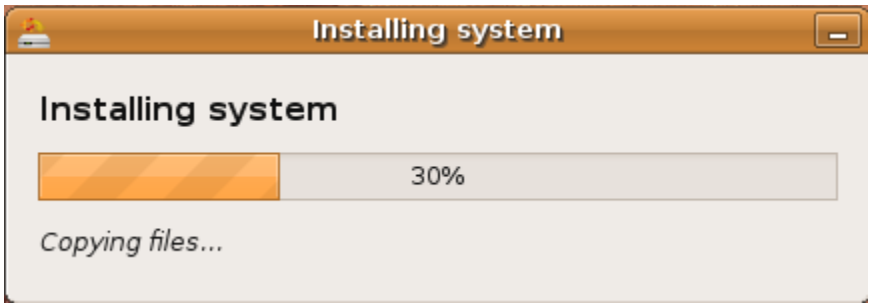


On the "Who are you?" screen, enter your username and password details, then click Forward.



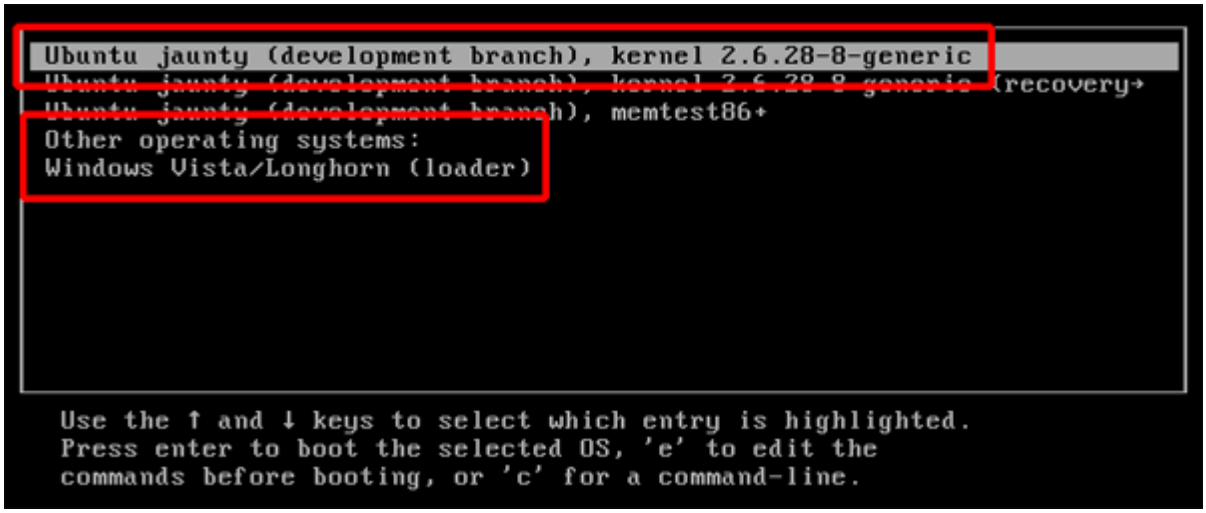
On the Migrate Documents and Settings screen, if Ubuntu finds any user accounts to migrate, feel free to import it from Vista to Ubuntu. If it doesn't find any, obviously this isn't an option. Click Forward.

On the "Ready to install" screen, you'll see that Ubuntu now has enough information to commence the installation. In the summary under Migrate Assistant, it should say "Windows Vista/Longhorn (loader)". This means that regardless of whether Ubuntu found any user account to migrate, it certainly knows that Windows Vista is installed on the other partition and is aware of it. Click Install.



See the install through and then let it boot into Ubuntu.

When the install is complete the system will reboot. When the GRUB boot menu is displayed, have a look at the last entry in the list.



After the Ubuntu boot options, there will be an entry "Other operating systems" and beneath that "Windows Vista/Longhorn loader". By default Ubuntu will load itself after 10 seconds, but you can select the Vista option and Vista will boot normally.

Here's how to install Vista and Linux (with Vista installed first). Step-by-step instructions that assume no knowledge of Linux. (Now updated for Ubuntu 9.04).

Page 4 - Choose a bootloader

If you want to use the GRUB bootloader then you don't need to do anything further. Ubuntu installs GRUB into the MBR by default and will happily dualboot itself and Vista.

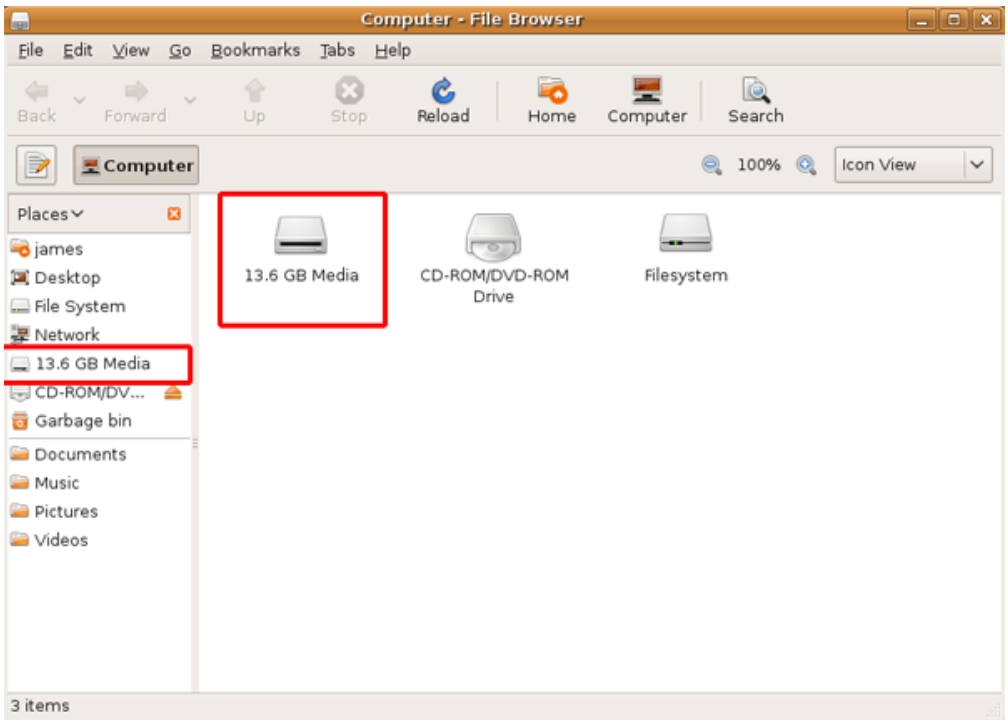
If however you prefer to keep Vista in charge of things, then you'll need to do a little bit of tweaking.

Firstly, boot into Ubuntu and go to Applications --> Accessories --> Terminal. Then, type in **sudo gedit /boot/grub/menu.lst**.

```
## ## End Default Options ##

title           Ubuntu jaunty (development branch), kernel 2.6.28-8-generic
uuid            1c9bf4f3-bd4c-4b2f-8c27-efd1e3babc7c
kernel          /boot/vmlinuz-2.6.28-8-generic root=UUID=1c9bf4f3-bd4c-4b2f-8c27-
efd1e3babc7c ro quiet splash
initrd          /boot/initrd.img-2.6.28-8-generic
quiet

title           Ubuntu jaunty (development branch), kernel 2.6.28-8-generic (recovery mode)
uuid            1c9bf4f3-bd4c-4b2f-8c27-efd1e3babc7c
kernel          /boot/vmlinuz-2.6.28-8-generic root=UUID=1c9bf4f3-bd4c-4b2f-8c27-
efd1e3babc7c ro  single
initrd          /boot/initrd.img-2.6.28-8-generic

title           Ubuntu jaunty (development branch), memtest86+
uuid            1c9bf4f3-bd4c-4b2f-8c27-efd1e3babc7c
kernel          /boot/memtest86+.bin
quiet

### END DEBIAN AUTOMAGIC KERNELS LIST

# This is a divider, added to separate the menu items below from the Debian
# ones.
title           Other operating systems:
root


# This entry automatically added by the Debian installer for a non-linux OS
# on /dev/sda1
title           Windows Vista/Longhorn (loader)
rootnoverify    (hd0,0)
savedefault
makeactive
chainloader     +1
```

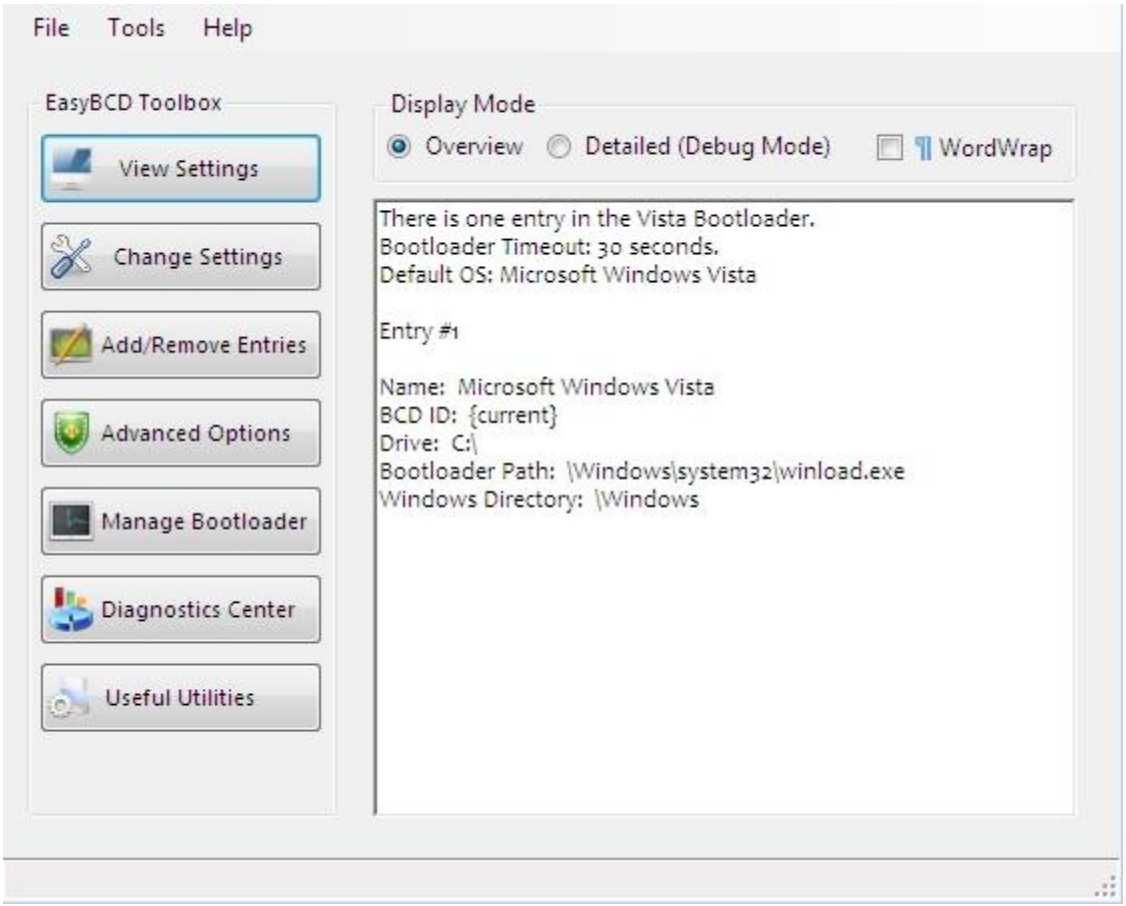
This text file contains all the information GRUB uses to configure various boot options. Scroll down and the entries between "## ## End Default Options ##" and "### END DEBIAN AUTOMATIC KERNELS LIST" are the Linux boot options. Slightly further down is the option for the Vista/Longhorn bootloader.

We'll need these entries for use later on, so dump them out to a location accessible by the Vista partition.

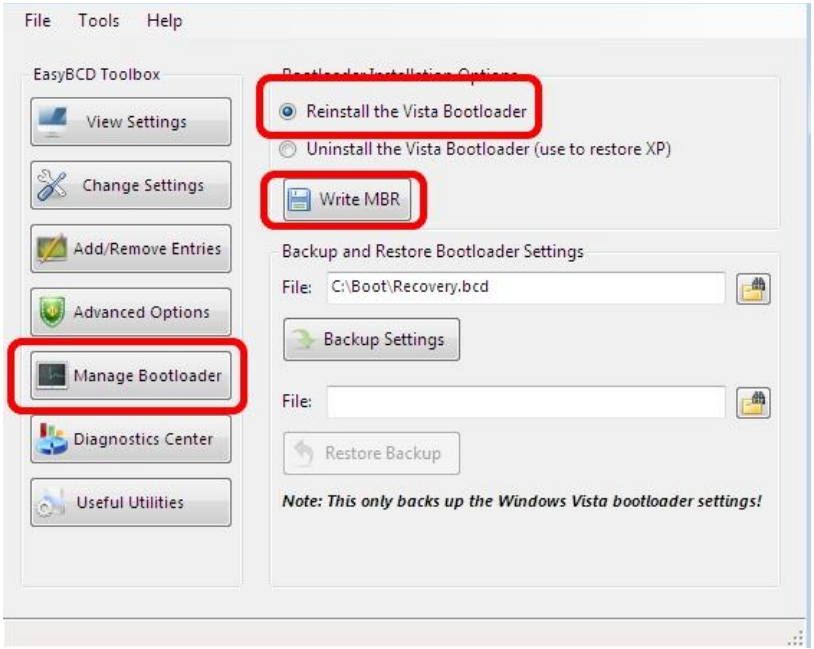


Alternatively, Ubuntu can access the Vista partition directly - go to Places --> Computer, and double-click into the option marked "xx GB Media". This is the NTFS Vista partition. Ubuntu will prompt for authentication (your Ubuntu password) and then you can either copy the entire menu.lst file into it, or create a new text file on the fly, open it with gedit and copy in the boot entries.

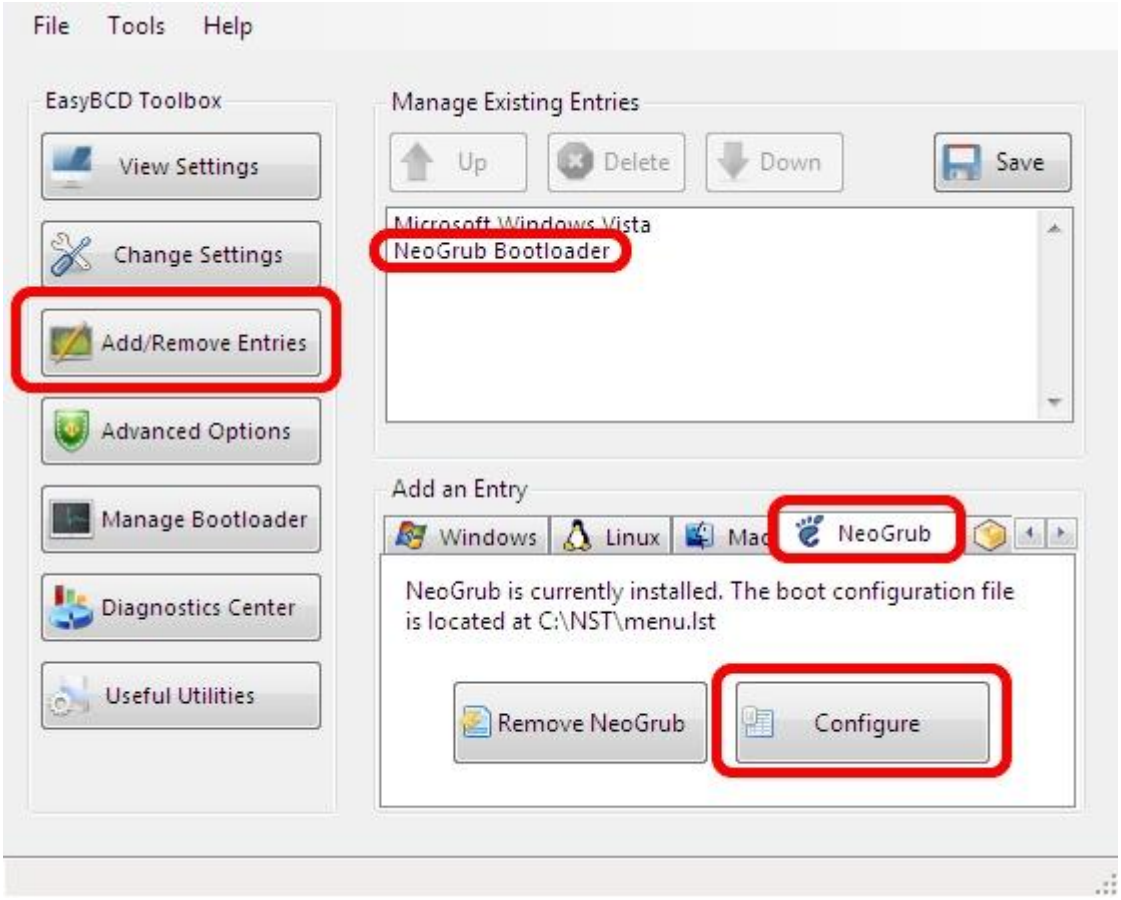
Then restart the machine and boot into Vista



Now we need the latest version of EasyBCD by Neosmart Technologies - download it here. Install the application and launch it.



First, go to "Manage Bootloader" and select "Reinstall the Vista Bootloader", then "Write MBR". This puts the Vista bootloader back into the MBR, but the machine will only boot into Vista.



To enable access to the Linux partition, the best option is to install NeoGrub. Go to "Add/Remove Entries", go the NeoGrub tab and select "Install NeoGrub". This adds the "NeoGrub Bootloader" option to the Vista bootloader.

Once that's done, choose Configure - this launches the NeoGrub menu.lst file, location at C:\NST\menu.lst. Use Notepad or Wordpad to open the file, and then paste in the boot entries. Save and exit, then reboot the machine.

The system will come up with two boot options. Select "NeoGrub Bootloader" and then the Linux boot options will load. Choose the relevant option and the system boot into Ubuntu.

How to dual-boot Vista with Linux (with Linux installed first) -- the step-by-step guide with screenshots

Scenario: You have Linux already installed but want to dual boot it with Vista on the same hard drive.

Summary of tutorial: We'll dual-boot Ubuntu 9.04 with Vista. With Ubuntu already installed and owning the entire drive, we'll use the Ubuntu Live CD to shrink the Linux partition to create space for the Vista install.

Vista's MBR will overwrite GRUB during installation, so we'll go through two scenarios. First - reinstall GRUB to the Linux partition and use EasyBCD to modify the Vista bootloader so that it will boot Ubuntu. Second, reinstall GRUB to the MBR and configure it boot both Ubuntu and Vista

This tutorial has been tested on a Sun VirtualBox 2.1.2 virtual machine.

Regardless of which bootloader you end up using, it's a very good move to first back up the GRUB bootloader. It's easy to lose it and unless you know how to re-write it from scratch then you're generally facing a full reinstallation of Ubuntu.

Firstly, boot into Ubuntu and go to Applications --> Accessories --> Terminal. Then, type in **sudo gedit /boot/grub/menu.lst**.

```
## ## End Default Options ##

title           Ubuntu jaunty (development branch), kernel 2.6.28-8-generic
uuid            ea96d92e-0ab0-4682-b2cd-c60331f8466f
kernel          /boot/vmlinuz-2.6.28-8-generic root=UUID=ea96d92e-0ab0-4682-b2cd-c60331f8466f ro
quiet splash
initrd          /boot/initrd.img-2.6.28-8-generic
quiet

title           Ubuntu jaunty (development branch), kernel 2.6.28-8-generic (recovery mode)
uuid            ea96d92e-0ab0-4682-b2cd-c60331f8466f
kernel          /boot/vmlinuz-2.6.28-8-generic root=UUID=ea96d92e-0ab0-4682-b2cd-c60331f8466f ro
single
initrd          /boot/initrd.img-2.6.28-8-generic

title           Ubuntu jaunty (development branch), memtest86+
uuid            ea96d92e-0ab0-4682-b2cd-c60331f8466f
kernel          /boot/memtest86+.bin
quiet

### END DEBIAN AUTOMAGIC KERNELS LIST
```

This text file contains all the information GRUB uses to configure various boot options. Scroll down and the entries between "## ## End Default Options ##" and "### END DEBIAN AUTOMATIC KERNELS LIST" are the Linux boot options.

Make a backup of the file by going to File, Save As and selecting a different location. Or take a full copy of the contents and place it into a new text file. If you can, create the backup on a removable disk or networked location.

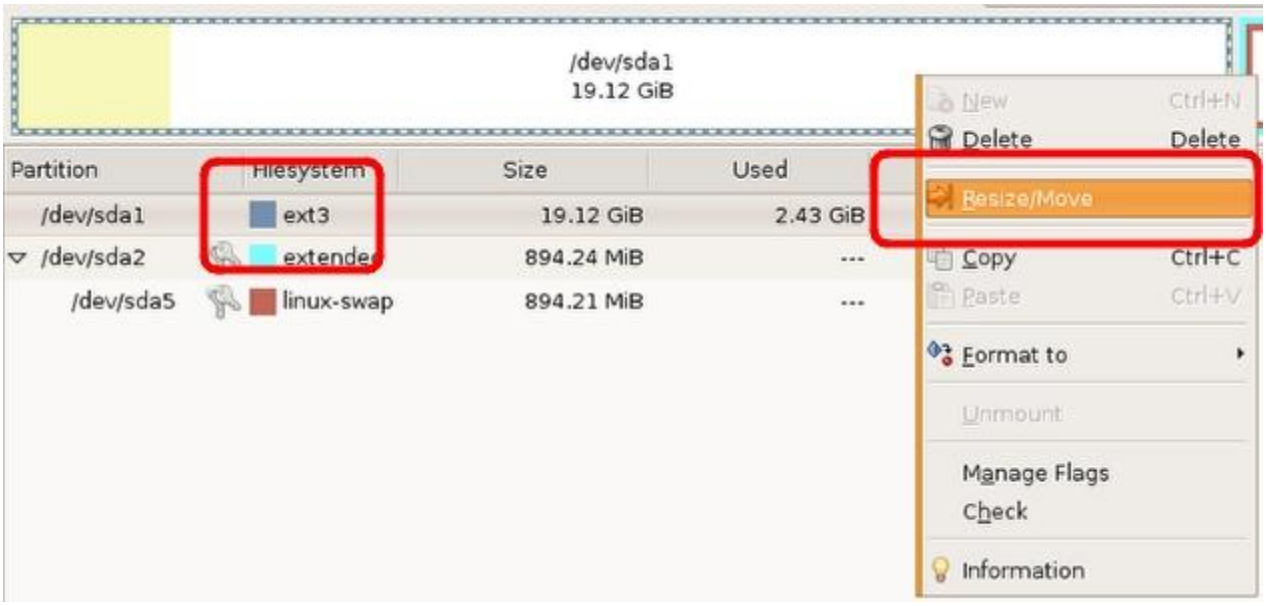
So you want to install Linux and Vista on the same drive? This UPDATED dual booting tutorial shows you how to do it even if Vista SP1 scorches your bootloader.

Page 3 - Make space for Vista

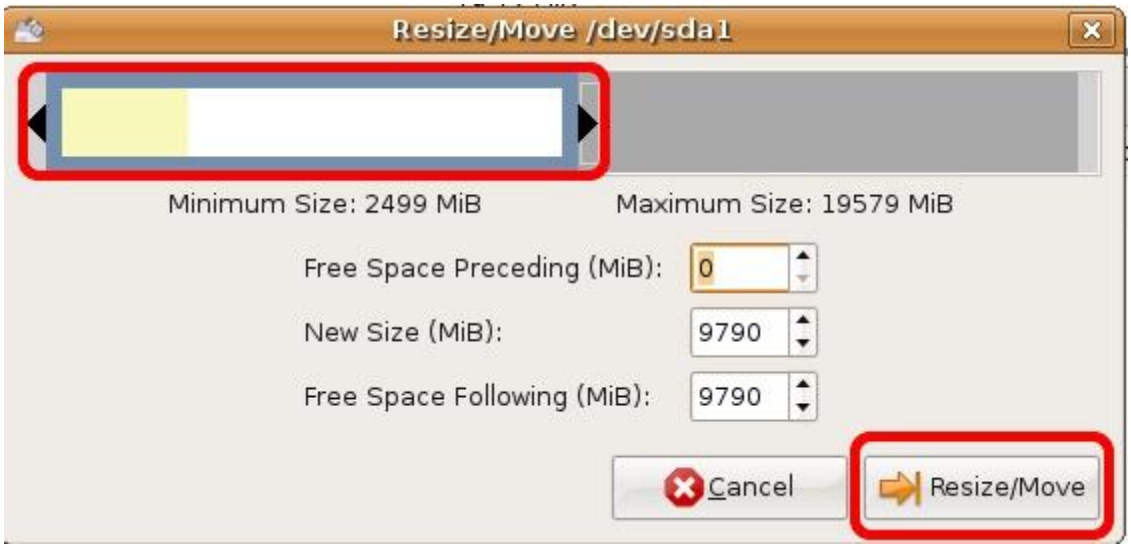
Now we need to create space on the hard drive for Vista, so this will involve resizing the main Ubuntu partition. Restart the system using the Ubuntu Live CD as this gives you access to GNOME Partition Editor. When the CD loads, select "Try Ubuntu without any change to your computer".

Once the CD loads, go to System, Administration, Partition Editor.

Right-click on the main data partition which has been formatted with ext3 - it should be /dev/sda1 - and select "Resize/Move"



Move the slider from the right to shrink the ext3 partition and create free space on the hard drive, which will take the NTFS Vista partition. Make sure that the free space is sufficient to hold Vista (at least 6GB - preferably 10GB). Then click "Resize/Move" to confirm the selection, and "Apply" back in the main screen to carry out the pending change.

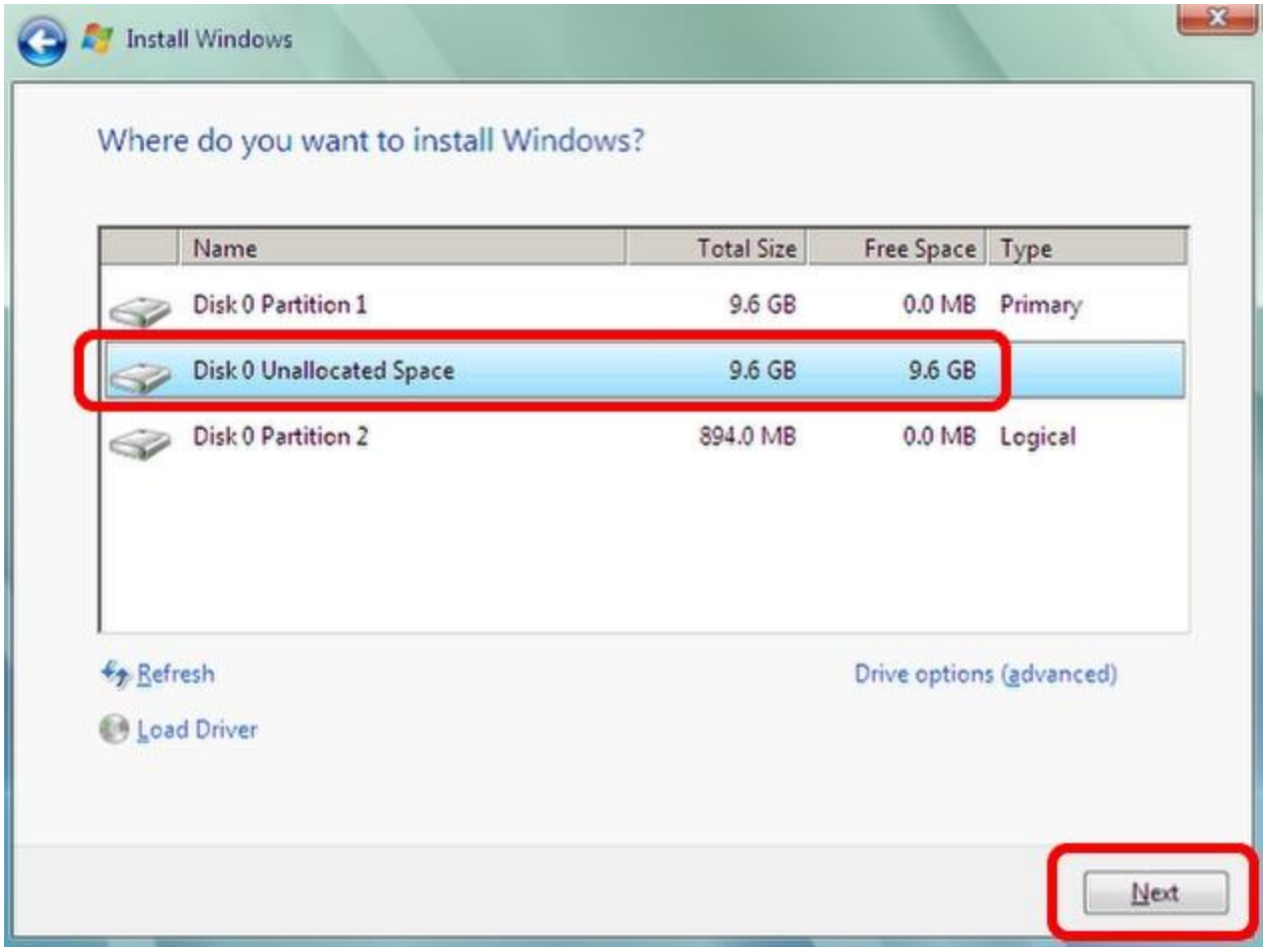


Restart the system with the Vista DVD, and select "Press any key to boot from CD or DVD" to commence the installation.

Select your installation language and then "Install now".

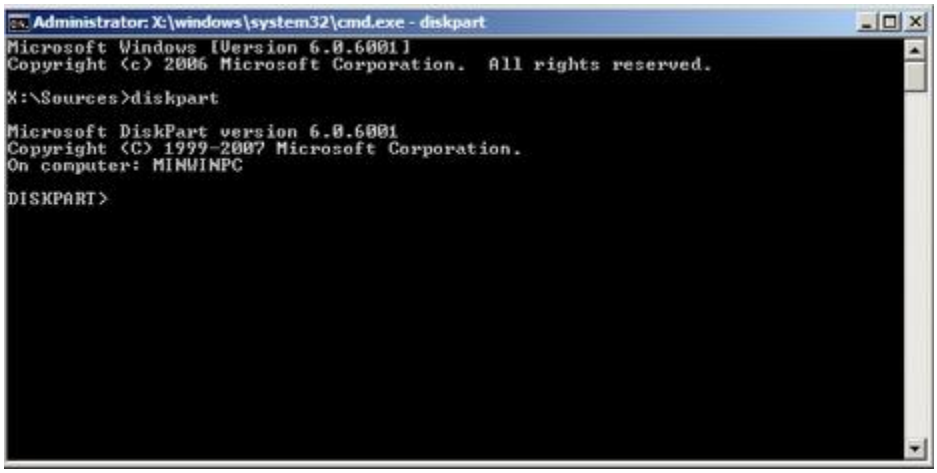
When prompted for an installation type, select "Custom" and click Next.

On the "Where do you want to install Windows?" page, there will be an option like "Disk 0 Unallocated Space". This is the space we created with GNOME Partition Editor.



At this point, Vista can't install to this space, so we need to make a new partition and mark it active so that Vista can use it.

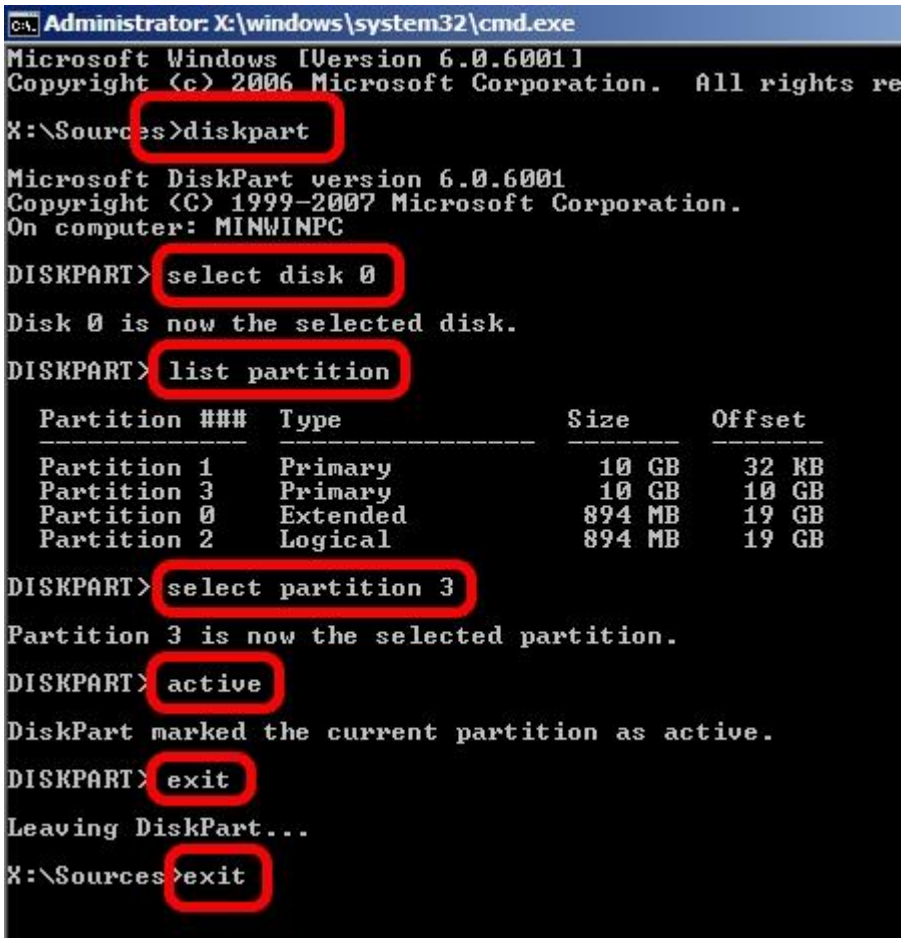
Press SHIFT + F10 to launch a command window, then type in DISKPART and press Enter.



Select the active disk by typing in "SELECT DISK 0".

List the partitions by typing in "LIST PARTITION". The newly-created NTFS partition is PARTITION 3.

Select this partition by typing in "SELECT PARTITION 3", and then type in "ACTIVE".



This marks the partition as active. Then type "EXIT" and "EXIT" again to go back to the installation screen. Select the NTFS partition and click Next, and Vista will install.

Once it's done, Vista will boot but there's no sign of Ubuntu, so we need to set up dualbooting.

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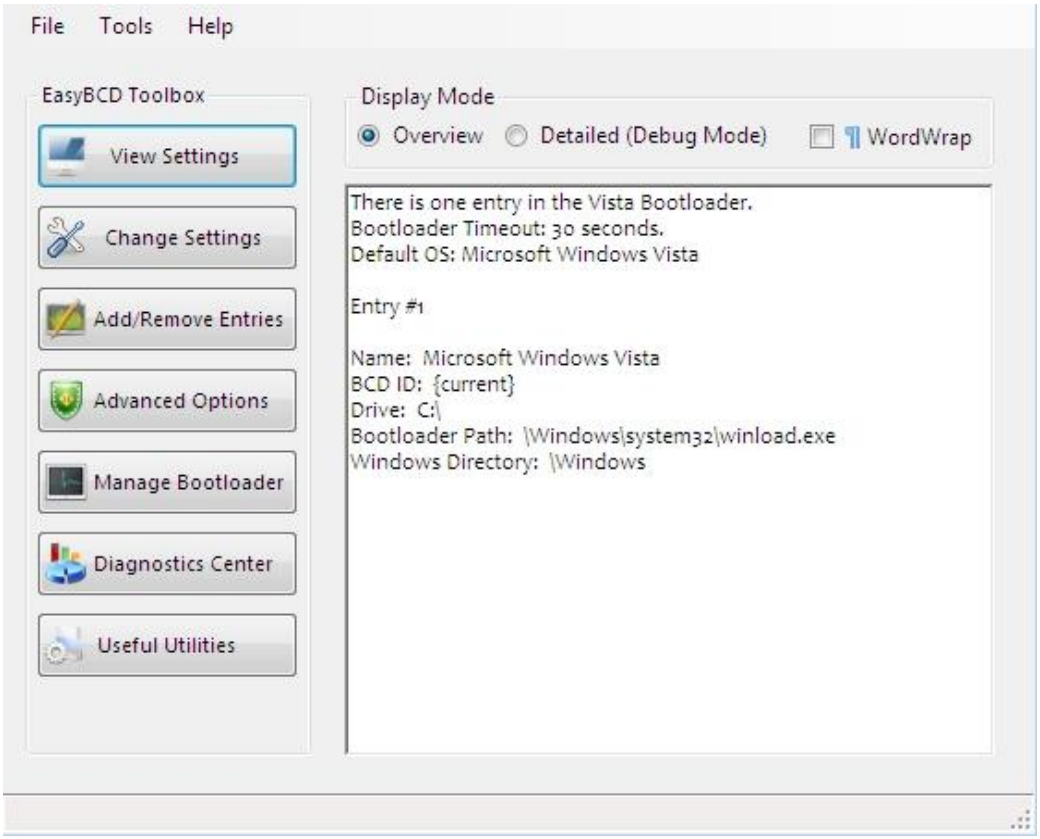

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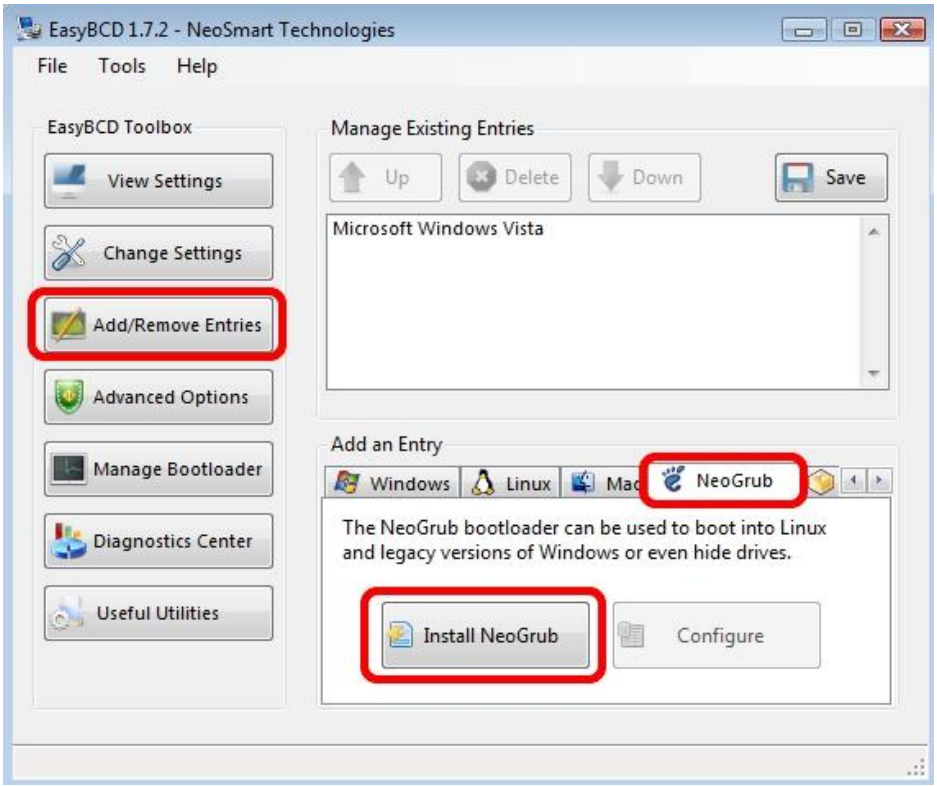
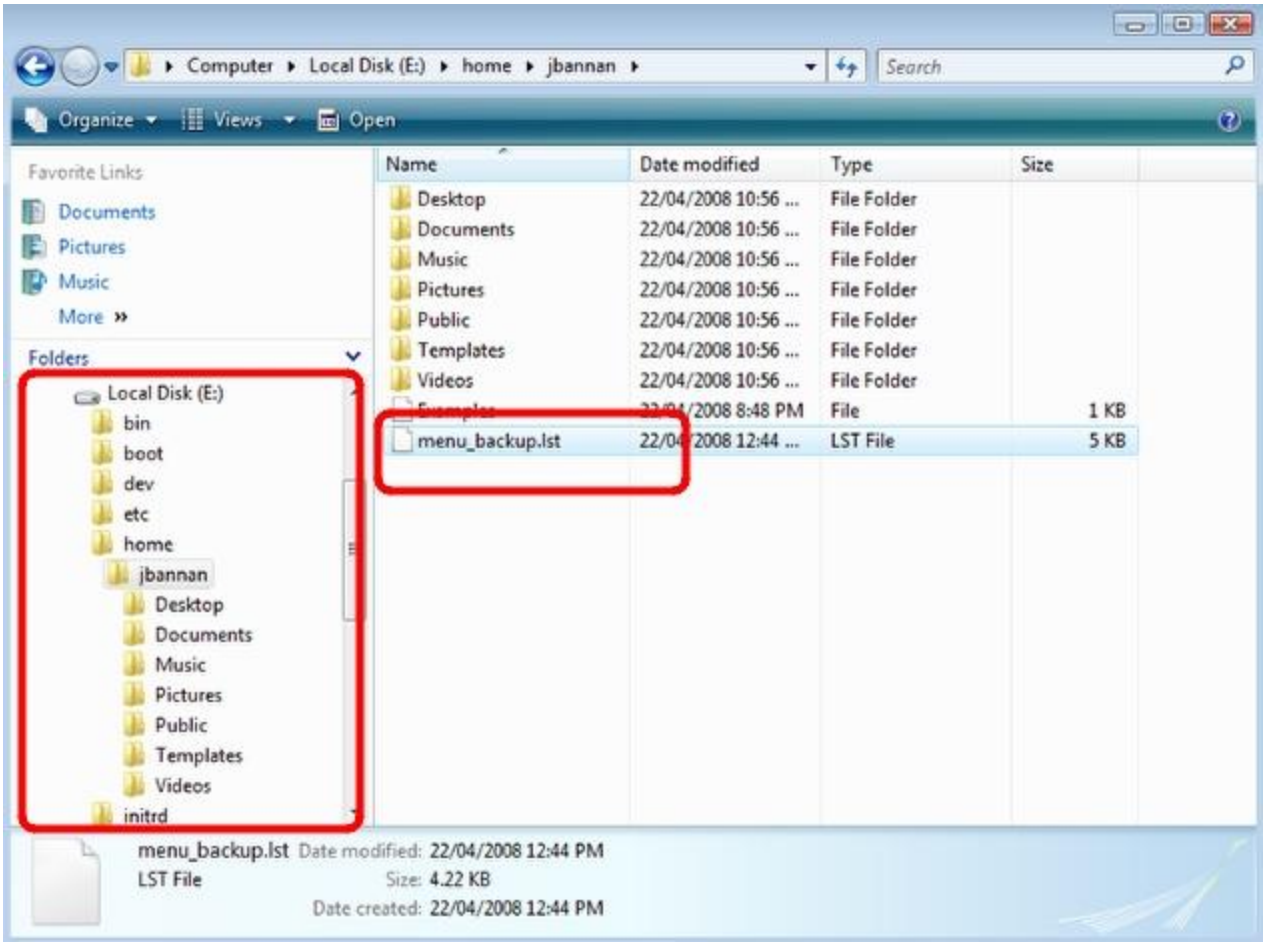


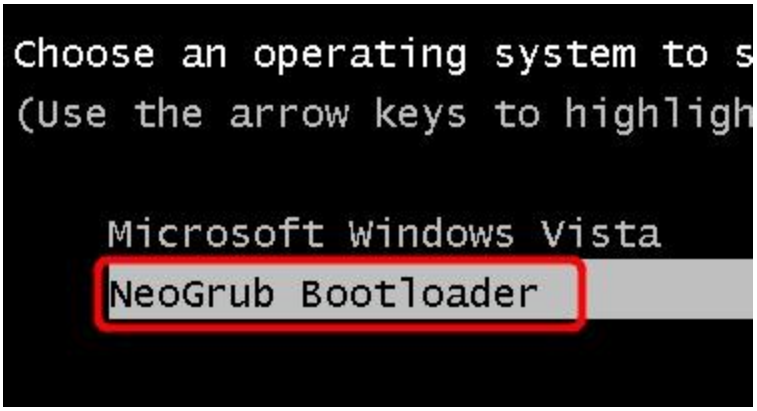
Once that's done, choose Configure - this launches the NeoGrub menu.lst file, location at C:\NST\menu.lst. Use Notepad or Wordpad to open the file, and then paste in the boot entries from the backup copy of MENU.LST you

made earlier. These entries occur between "## ## End Default Options ##" and "### END DEBIAN AUTOMATIC KERNELS LIST". Save and exit, then reboot the machine.



NOTE - if you didn't make a backup of MENU.LST or you did but it's on the Ubuntu EXT3 partition, don't despair. Download and install EXT2IFS, which allows you to mount EXT2/EXT3 partitions within WIndows. This will let you browse the contents of the EXT3 partition and extract the MENU.LST file. Word of warning though - either enable the read-only option during installation OR copy the file to the Vista filesystem rather than opening it directly from the EXT3 partition. EXT2IFS bypasses the Linux permissions so there's a chance of damaging the filesystem.

The system will come up with two boot options. Select "NeoGrub Bootloader" and then the Linux boot options will load. Choose the relevant option and the system boot into Ubuntu.

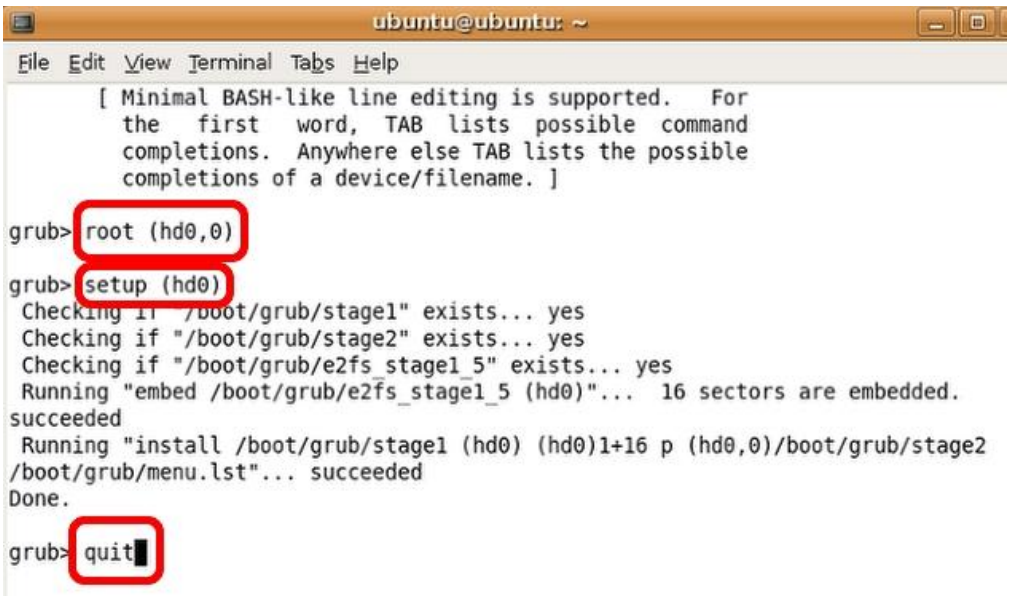


To reinstate GRUB as the system bootloader it needs to be reinstalled into the MBR.

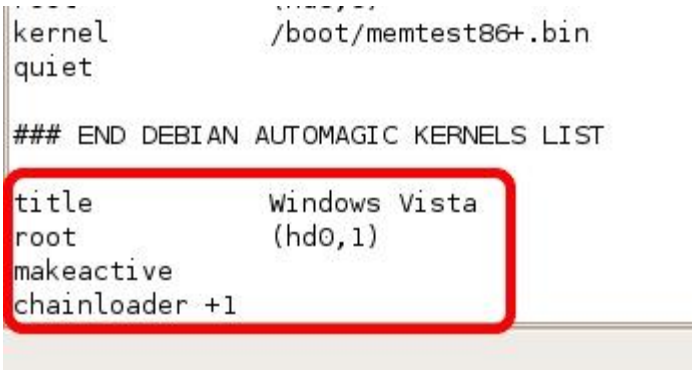
Boot the system from the Ubuntu Live CD and select "Try Ubuntu without any change to your computer".

Open a Terminal session - Applications, Accessories, Terminal

To enter the GRUB configuration mode, type in "sudo grub" and press Enter. Then type in the following commands in sequence:
root (hd0,0)
setup (hd0)
quit
exit



Reboot the system. You'll get the GRUB bootloader but Vista won't be an option - we need to add this to the boot options.



Boot into Ubuntu and open up another Terminal session. Then, type in **sudo gedit /boot/grub/menu.lst**

Scroll down to the bottom of the file and type in the following text strings:

title Windows Vista
root (hd0,1)
makeactive
chainloader +1

Save the file and reboot. When the GRUB loader launches hit ESC for the boot menu. Windows Vista is the last option - select it and Vista will load.

If you want to make the GRUB menu always available, boot back into Ubuntu and edit the MENU.LST file. Find the **hiddenmenu** text string and change it to **#hiddenmenu**.

To increase the menu timeout, change the default **timeout 3** to something more appropriate.