



Mawlana Bhashani Science and Technology University

Lab -Report

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Experiment No: 01

Experiment Name: How to install Linux operating system

- What is Linux Operating system? 
- Different Type of Linux Distribution.
- How can we install Linux Operating System?

Linux Operating system:

Linux is the best-known and most-used open source operating system. As an operating system, Linux is software that sits underneath all of the other software on a computer, receiving requests from those programs and relaying these requests to the computer's hardware.

Most of the Linux kernel is written in the C programming language, with a little bit of assembly and other languages sprinkled in. If you're interested in writing code for the Linux kernel itself, a good place to get started is in the Kernel Newbies FAQ, which will explain some of the concepts and processes you'll want to be familiar with.

But the Linux community is much more than the kernel, and needs contributions from lots of other people besides programmers. Every distribution contains hundreds or thousands of programs that can be distributed along with it, and each of these programs, as well as the distribution itself, need a variety of people and skill sets to make them successful, including:

- Testers to make sure everything works on different configurations of hardware and software, and to report the bugs when it does not.
- Designers to create user interfaces and graphics distributed with various programs.
- Writers who can create documentation, how-tos, and other important text distributed with software.
- Translators to take programs and documentation from their native languages and make them accessible to people around the world.
- Packagers to take software programs and put all the parts together to make sure they run flawlessly in different distributions.
- Enthusiasts to spread the word about Linux and open source in general.
- And of course developers to write the software itself.

Different Type of Linux Distribution:

One of the most confusing things for the newcomer to Linux is how many distributions, or versions, of the operating system there are. Ubuntu is the one most people have heard of, but there are hundreds of others as well, each offering some variant on the basic Linux theme.

1. Ubuntu

Yes, Ubuntu has become the poster child for Linux these days, and no wonder--it's the most popular distro by far, garnering more than 2,200 hits per day on the Distrowatch site alone, compared with some 1,400 for Fedora, the No. 2 contender.

Ubuntu is actually a relatively late arrival on the Linux scene, having been announced in just 2004, but it's more than made up for that shorter history. Founded by South African millionaire Mark Shuttleworth, Canonical--the company behind Ubuntu--for many years shipped Ubuntu CDs to interested users for free, thus speeding its market penetration.

2. Fedora

Fedora is the free version of Red Hat, whose RHEL has been a commercial product since 2003. Because of that close connection, Fedora is particularly strong on enterprise features, and it often offers them before RHEL does.

Fedora also offers a six-month release schedule, and its security features are excellent. While some have viewed it as a cutting-edge distro for the Linux "hobbyist," I think improvements over the years and widespread popularity have combined to make it a good choice for newer Linux users as well.

3. Linux Mint

Currently in Distrowatch's third spot in popularity, Linux Mint is an Ubuntu-based distro that was just launched in 2006. The operating system adds to Ubuntu with its own, distinct desktop theme and a different set of applications; also unique to the distro are a variety of graphical tools for enhanced usability, such as mintDesktop for configuring the desktop environment, mintInstall for easier software installation and mintMenu for easier navigation.

4. openSUSE

With some 1,200 hits per day on Distrowatch, openSUSE holds the No. 4 spot in popularity on the site and is also the foundation for Novell's SUSE Linux Enterprise Desktop and SUSE Linux Enterprise Server products.

The package's administration utility, YaST, is widely acknowledged as one of the best, and its boxed edition comes with some of the best printed documentation you'll find for any distro. I'd say openSUSE rates a "medium" on difficulty level.

5. PCLinuxOS

Rather than GNOME, PCLinuxOS uses the KDE desktop environment and is essentially a lighter-weight version of Mandriva . With good support for graphics drivers, browser plugins and media codecs, PCLinuxOS can be a good choice for beginners. Its release cycle can be erratic, though, and there is also no 64-bit version of the software.

6. Debian

Dating back to 1993, Debian is currently known as one of the most well-tested and bug-free distros available today. Though it serves as the foundation for Ubuntu, most view Debian as a distro best-suited for those experienced with Linux. The distro uses all open-source components, which is a good thing, but means it can be more difficult to achieve compatibility with proprietary code such as wireless network drivers. Debian also has a relatively slow release cycle, with stable ones coming out every one to three years.

7. Mandriva

Formerly known as Mandrake, Mandriva is notable for its cutting-edge software, excellent administration suite and 64-bit edition. It was also the first major distribution to jump on the netbook bandwagon with out-of-the box support. Nevertheless, Mandriva has been struggling lately as a result of some controversial decisions made by its French maker. It recently restructured, with the result that some view the future of its community version as uncertain.

8. Sabayon/Gentoo

Italian Sabayon is essentially a LiveCD version of Gentoo, which is known for allowing users to individually optimize each component. Both are considered advanced Linux distributions aimed primarily at experienced users.

Install Linux Operating System:

Back Up Your Existing Data:

This is highly recommended that you should take backup of your entire data before start with the installation process.

Obtaining System Installation Media:

Download latest Desktop version of Ubuntu from this link:

<http://www.ubuntu.com/download/desktop>

Booting the Installation System:

There are several ways to boot the installation system. Some of the very popular ways are ,
Booting from a

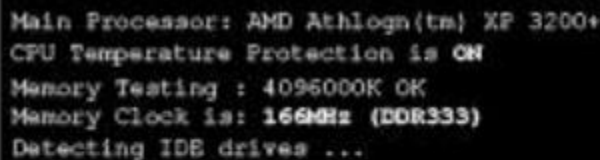
CD ROM, Booting from a USB memory stick, and Booting from TFTP.

Here we will learn how to boot installation system using a CD ROM.

Before booting the installation system, one need to change the boot order and set CD-ROM as first boot device.

Changing the Boot Order of a Computers

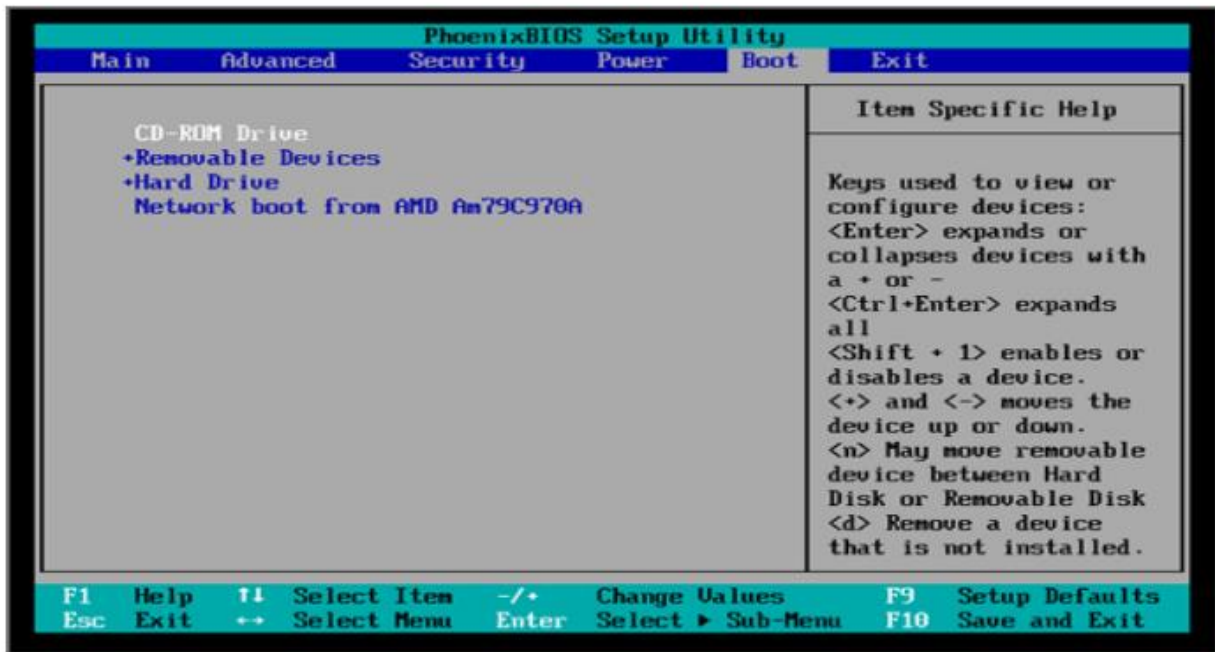
- As your computer starts, press the DEL, ESC, F1, F2, F8 or F10 during the initial startup screen.
- Depending on the BIOS manufacturer, a menu may appear. However, consult the hardware
- documentation for the exact key strokes. In my machine, its DEL key as shown in following screenshot.



```
Main Processor: AMD Athlon(tm) XP 3200+  
CPU Temperature Protection is ON  
Memory Testing : 4096000K OK  
Memory Clock is: 166MHz (DDR333)  
Detecting IDE drives ...
```

```
Press DEL to enter SETUP  
06/18/2007-KT440-1523-8E6LY7299C-00
```

- 2. Find the Boot option in the setup utility. Its location depends on your BIOS.
- Select the Boot option from the menu, you can now see the options Hard Drive, CD-ROM Drive,
- Removable Devices Disk etc.
- 3. Change the boot sequence setting so that the CD-ROM is first. See the list of “Item Specific Help” in right side of the window and find keys which is used to toggle to change the boot sequence.

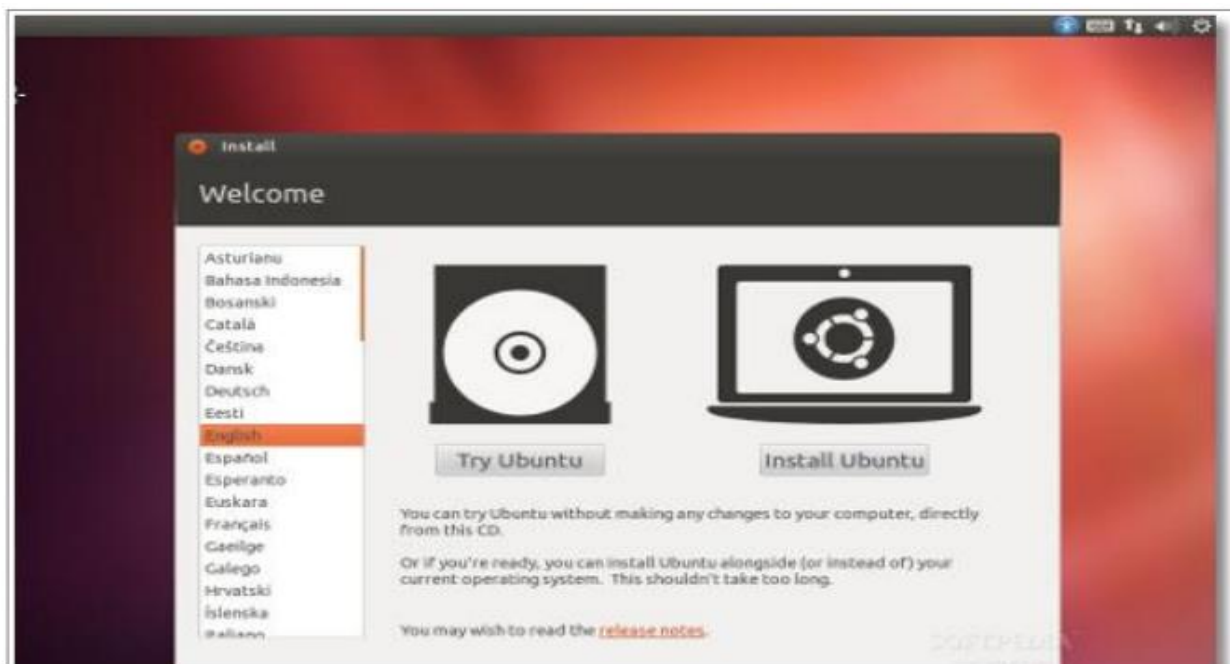


- 4. Insert the Ubuntu Disk in CD/DVD drive.
- 5. Save your changes. Instructions on the screen tell you how to save the changes on your computer.

The computer will restart with the changed settings.
Machine should boot from CD ROM, Wait for the CD to load...



In a few minutes installation wizard will be started. Select your language and click the "Install Ubuntu" button to continue...

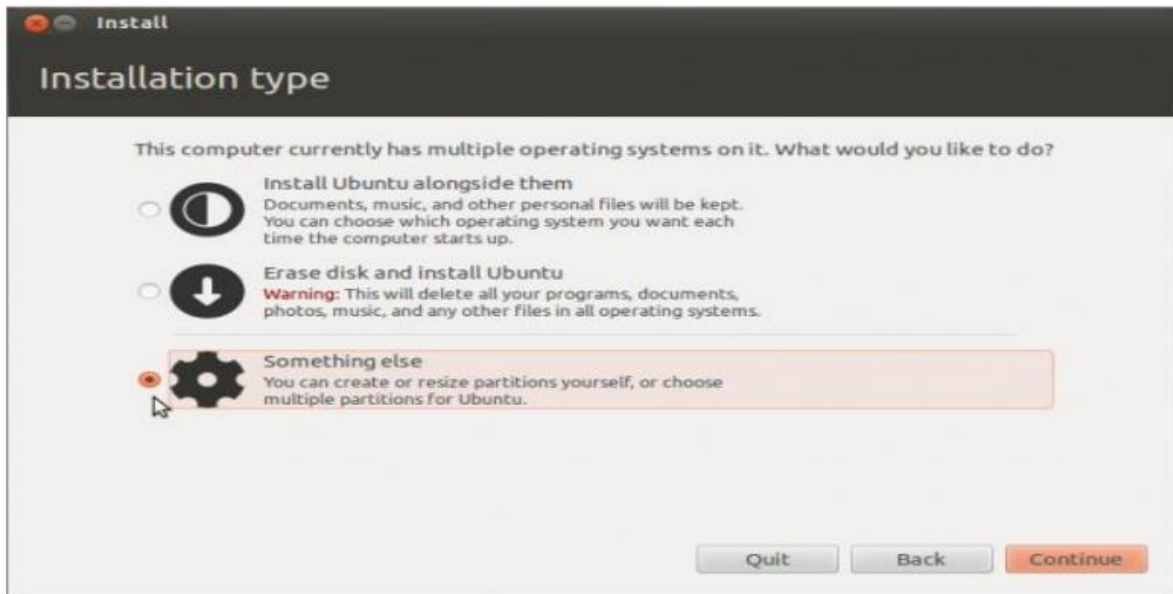


Optionally, you can choose to download updates while installing and/or install third party software, such as

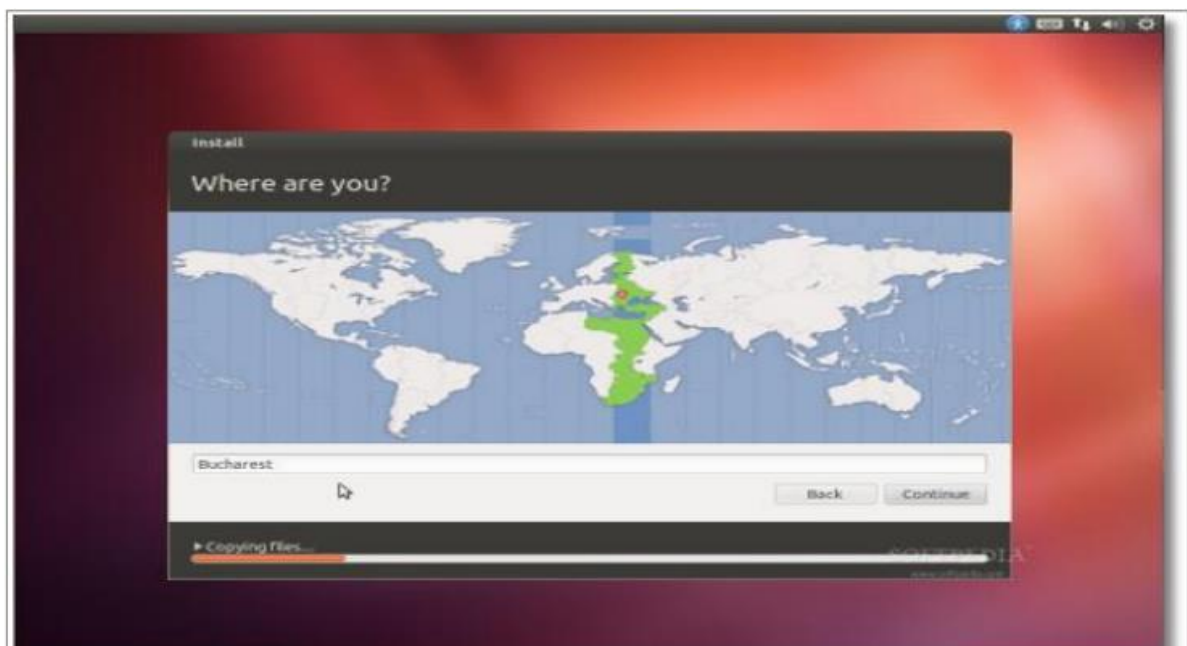
MP3 support. Be aware, though, that if you select those options, the entire installation process will be longer!



Since we are going to create partitions manually, select Something else, then click Continue. Keep in mind that even if you do not want to create partitions manually, it is better to select the same option as indicated here. This would insure that the installer will not overwrite your Windows , which will destroy your data. The assumption here is that sdb will be used just for Ubuntu 12.04, and that there are no valuable data on it.



Select your location and Click the "Continue" button .



Keyboard layout:

Select your keyboard layout and UK (English) and Click on “Continue” button

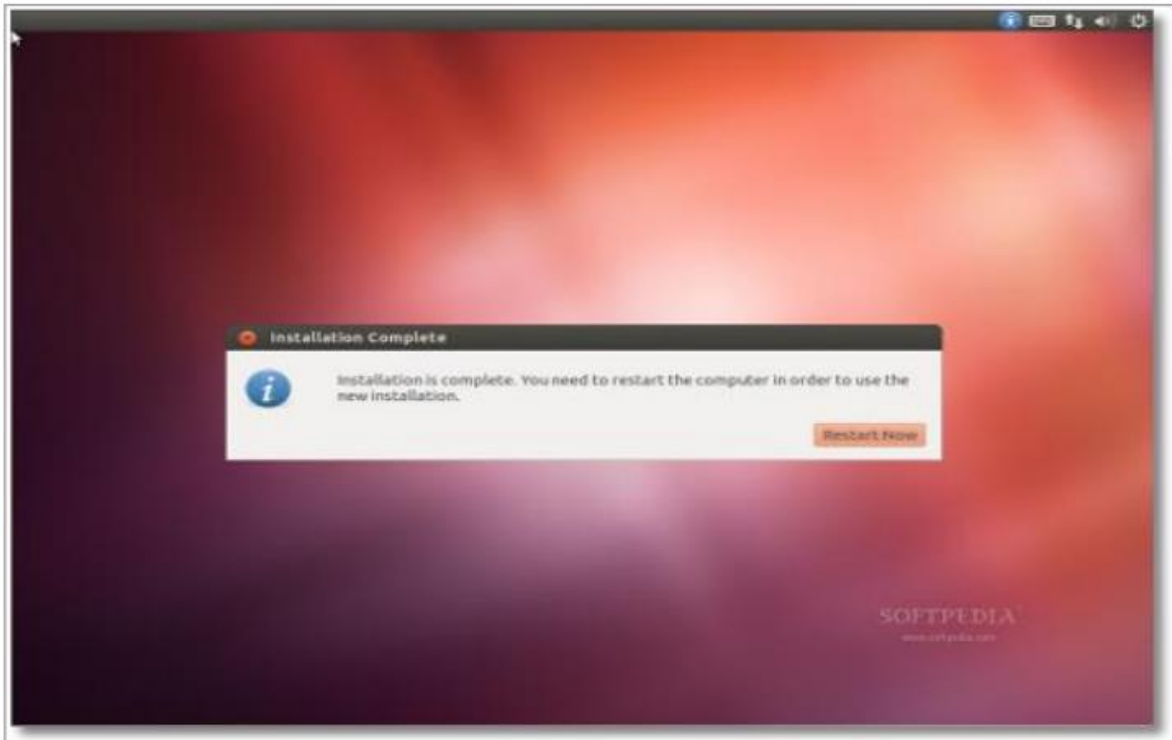


Who are you?

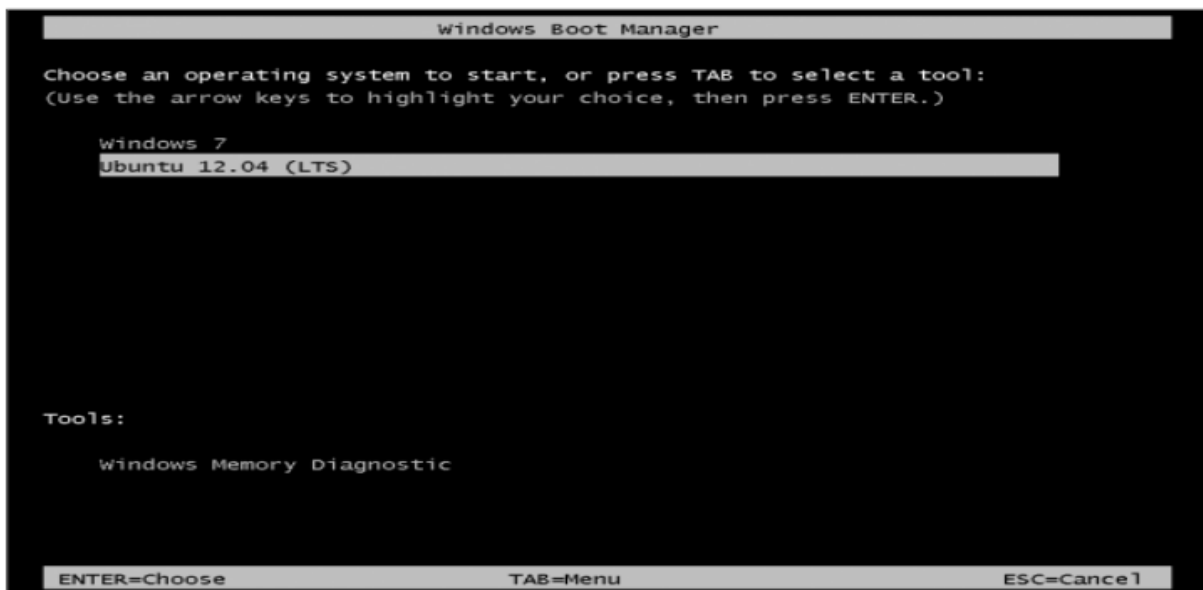
Fill in the fields with your real name, the name of the computer username, and the password. Also at this step, there's an option called "Log in automatically." If you check it, you will automatically be logged in to the Ubuntu desktop without giving the password. Click on the "Continue" button to continue...

Now Ubuntu 19.04 a LTS operating system will be installed.

It will take approximately 10-12 minutes (depending on computer's speed), a pop-up window will appear, notifying you that the installation is complete, and you'll need to restart the computer in order to use the newly installed Ubuntu operating system. Click the "Restart Now" button.



Please remove the CD and press the "Enter" key to reboot. The computer will be restarted. In a few seconds, you should see Windows 7's boot menu with two entries listed – Windows 7 and Ubuntu 12.04 (LTS). Then you may choose to boot into Windows 7 or Ubuntu 12.04 a LTS using the UP/Down arrow key.



Please select Ubuntu 12.04 (LTS) and press Enter to boot the machine in Ubuntu 12.04 Linux.



Here you can see the users on the machine, Click on the user name and enter the password and press Enter key to login.

We have successfully install and login to Ubuntu 12.04 LTS.

Discussion:

Finally i install the linux from the help of online video and different blog . Actually it is Ubuntu 12.04 LTS.I learn about the linux operating system ,different type of linux distribution like Ubuntu,Fedora.Linux Mint,openSUSE,PCLinuxOS,Debian,Mandriva. In future i can install any linux operation system.