Learn Linux in 1 Day

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Chapter 1: Introduction to the Linux Operating System

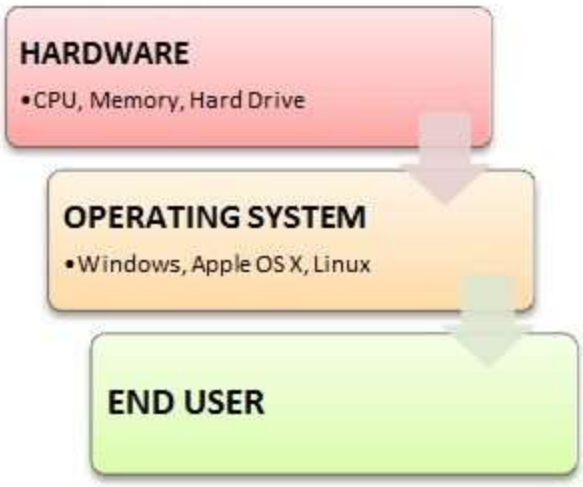
Before we learn Linux, let’s understand-

What is an Operating System?

Every time you switch on your computer, you see a screen where you can perform different activities like write, browse the internet or watch a video. What is it that makes the computer hardware work like that?
How does the processor on your computer know that you are asking it to run a mp3 file?

Well, it is the operating system or the kernel which does this work. A kernel is a program at the heart of any operating system that takes care of fundamental stuff, like letting hardware communicate with software.

So, to work on your computer, you need an Operating System(OS). In fact, you are using one as you read this on your computer. Now, you may have used popular OS's like Windows, Apple OS X but here we will learn what Linux is and what benefits it offers over other OS choices.



What is Linux?

Linux is an operating system or a kernel. It is distributed under an open source license. Its functionality list is quite like UNIX.

Who created Linux?

Linux is an operating system or a kernel which germinated as an idea in the mind of young and bright **Linus Torvalds** when he was a computer science student. He used to work on the **UNIX OS (proprietary software)** and thought that it needed improvements.

However, when his suggestions were rejected by the designers of UNIX, he thought of launching an OS which will be **receptive to**

changes, modifications suggested by its users.

The Lone Kernel & the early days

So **Linus devised a Kernel** named Linux in 1991. Though he would need programs like File Manager, Document Editors, Audio -Video programs to run on it. Something as you have a cone but no ice-cream on top.

As time passed by, he collaborated with other **programmers in places like MIT** and applications for Linux started to appear. So around 1991, a working Linux operating system with some applications was officially launched, and this was the start of one of the **most loved and open-source OS options available today**.

The earlier versions of Linux were not so user-friendly as they were in use by computer programmers and **Linus Torvalds never had it in mind to commercialize** his product.

This definitely curbed the Linux's popularity as other commercially oriented Operating System Windows got famous. Nonetheless, the open-source aspect of the Linux operating system made it more robust.

Linux gets its due attention

The main advantage of Linux was that programmers were able to use the Linux Kernel to design their own custom operating systems. With time, a new range of user-friendly OS's stormed the computer world. Now, **Linux is one of the most popular and widely used Kernel,** and it is the backbone of popular operating systems like **Debian, Knoppix, Ubuntu, and Fedora**. Nevertheless, the list does not end here as there are thousands of OS's based on Linux which offer a variety of functions to the users.

Linux Kernel is normally used in combination of GNU project by Dr. Richard Stallman. All mordern distributions of Linux are actually distributions of Linux/GNU

The benefits of using Linux

Linux now enjoys popularity at its prime, and it's famous among programmers as well as regular computer users around the world. Its main benefits are -

It offers a **free operating system**. You do not have to shell hundreds

of dollars to get the OS like Windows!

- Being open-source, anyone with programming knowledge can modify it.
- The Linux operating systems now offer **millions of programs/applications to choose from**, most of them free! Once you
- have Linux installed you no longer need an antivirus! Linux is a highly secure system. More so, there is a global development community constantly looking at ways to enhance its security. With each upgrade, the OS becomes more secure and robust
- Linux is the OS of choice for Server environments due to its stability and reliability (Mega-companies like Amazon, Facebook, and Google use Linux for their Servers). A Linux based server could run non-stop without a reboot for years on end.

Is it for me?

Users, who are new to Linux, usually shun it by falsely considering it as a difficult and technical OS to operate but, to state the truth, in the last few years Linux operating systems have become a lot more user- friendly than their counterparts like Windows**,** so trying them is the best way to know whether Linux suits you or not.

There are **thousands of Linux based operating systems;** most of them offer **state-of-the-art security and applications**, **all of it for free!**

This is what Linux is all about, and now we will move on to how to install Linux and which Distribution you should choose.

I am asked to Learn Unix? Then why Linux?

UNIX is called the mother of operating systems which laid out the foundation to Linux. Unix is designed mainly for mainframes and is in enterprises and universities. While Linux is fast becoming a household name for computer users, developers, and server environment. You may have to pay for a Unix kernel while in Linux it is free.

But, the **commands used on both the operating systems are usually the same.** There is not much difference between UNIX and Linux. Though they might seem different, at the core, they are essentially the same. Since **Linux is a clone of UNIX**. So learning one is same as learning another.

Chapter 2: How to Download & Install Linux (Ubuntu) in Windows

Now that we know what Linux is, it is the time that to learn how we should install it on the computer and choose which Distribution we should use. Let us start by understanding what a Linux Distribution is.

What is a Linux Distribution?

Well, now as you know that **Linux is open-source, free to use kernel**. It is used by programmers, organizations, profit and non- profit companies around the world to **create Operating systems to suit their individual requirements**.

To prevent hacking attempts, many organizations keep their Linux operating systems private.

Many others make their variations of Linux available publicly so the whole world can benefit at large.

These versions/ types /kinds of **Linux operating system are called Distributions**.

How many distributions are out there?

There are **hundreds of Linux operating systems or Distributions** available these days. Many of them are designed with a specific purpose in mind. For example, to run a **web server or to run on network switches like routers, modems,** etc.

The latest example of one of the most popular smartphone-based **Linux Distribution is Android!**

Many of these Distributions are built to offer **excellent personal computing**.

Here, are a few popular Linux Distributions (also called Linux Distro)

Linux Distribution	Name	Description
archlinux	**Arch**	This Linux Distro is popular amongst Developers. It is an independently developed system. It is designed for users who go for a do-it-yourself approach.
CentOS	**CentOS**	It is one of the most used Linux Distribution for enterprise and web servers. It is a free enterprise class Operating system and is based heavily on Red Hat enterprise Distro.
		Debian is a stable and popular non- commercial Linux distribution. It is widely

	**Debian**	used as a desktop Linux Distro and is user-oriented. It strictly acts within the Linux protocols.
	**Fedora**	Another Linux kernel based Distro, Fedora is supported by the Fedora project, an endeavor by Red Hat. It is popular among desktop users. Its versions are known for their short life cycle.
	**Gentoo**	It is a source based Distribution which means that you need to configure the code on your system before you can install it. It is not for Linux beginners, but it is sure fun for experienced users.
	**LinuxMint**	It is one of the most popular Desktop Distributions available out there. It launched in 2006 and is now considered to be the fourth most used Operating system in the computing world.
	**OpenSUSE**	It is an easy to use and a good alternative to MS Windows. It can be easily set up and can also run on small computers with obsolete configurations.
	**RedHat enterprise**	Another popular enterprise based Linux Distribution is Red Hat Enterprise.It has evolved from Red Hat Linux which was discontinued in 2004. It is a commercial Distro and very popular among its clientele.
	**Slackware**	Slackware is one of the oldest Linux kernel based OS's. It is another easy desktop Distribution. It aims at being a 'Unix like' OS with minimal changes to its kernel.
	**Ubuntu**	This is the third most popular desktop operating system after Microsoft Windows and Apple Mac OS. It is based on the Debian Linux Distribution, and it is known as its desktop environment.

The Best Linux Distribution!

The term best is **relative. Each Linux distribution is built for a specific purpose-built to meet the demands of its target users.**

The desktop Distributions are **available for free** on their respective websites. You might want to try them one by one till you get to know which Distribution you like the most. Each one of them offers its own unique design, **applications**, and **security**.

We will be using Ubuntu for our learning purpose as it's easy for a beginner to understand.

Installing Linux

Let's look the various methods we can use to install Ubuntu.

Installing Linux using USB stick

This is one of the easiest methods of installing Ubuntu or any distribution on your computer. Follow the steps.

Step 1) Download the .iso or the OS files on your computer from this link.

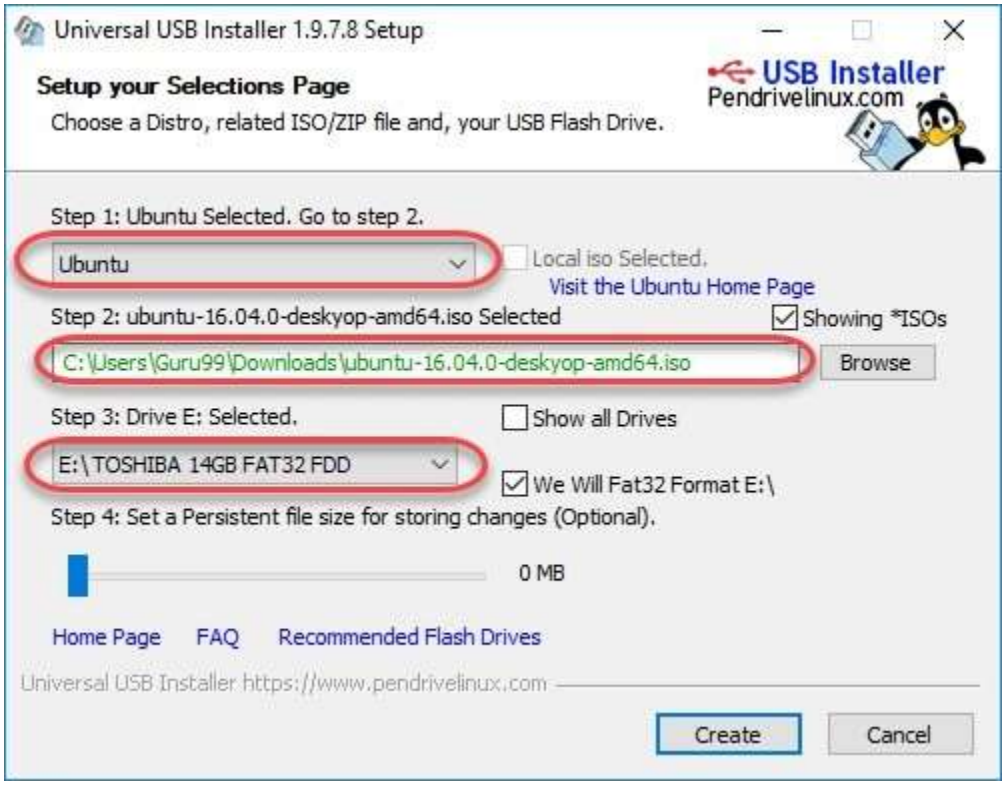
Step 2) Download free software like 'Universal USB installer to make a bootable USB stick.

Step 3) Select an Ubuntu Distribution form the dropdown to put on

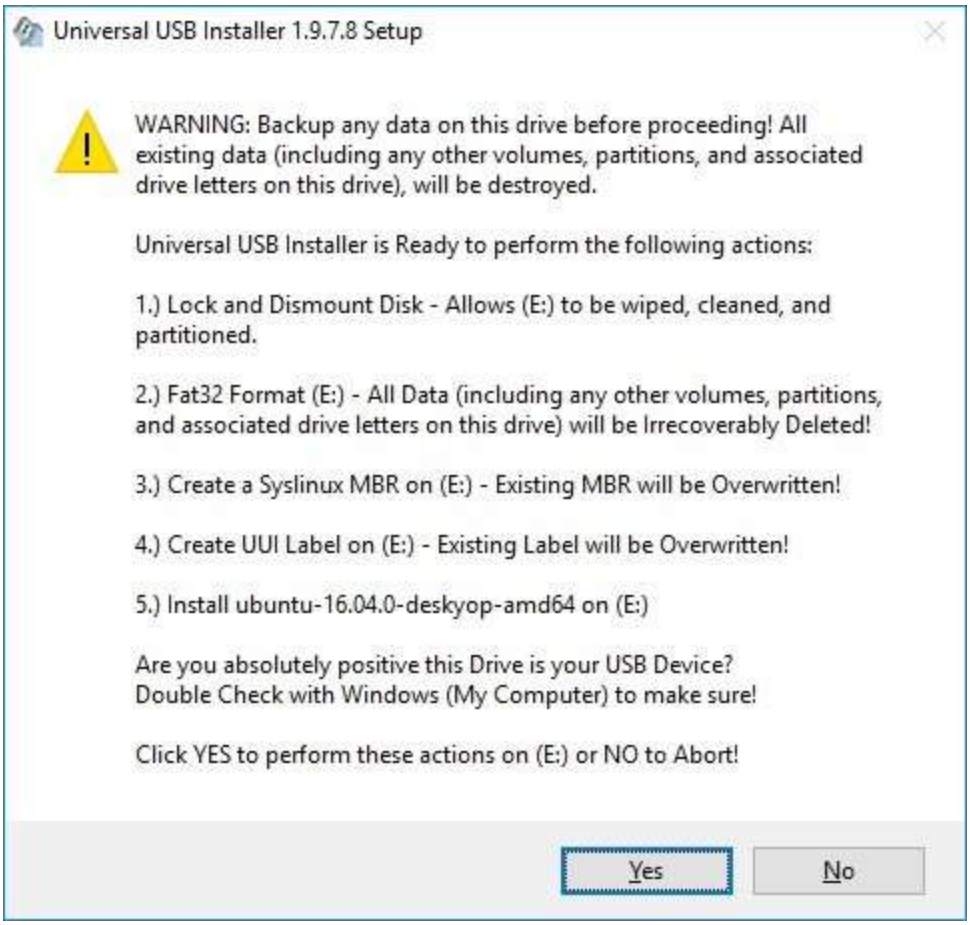
your USB

Select your Ubuntu iso file download in step 1.

Select the drive letter of USB to install Ubuntu and Press create button.



Step 4) Click YES to Install Ubuntu in USB.



Step 5) After everything has been installed and configured, a small window will appear Congratulations! You now have Ubuntu on a USB stick, bootable and ready to go.


Universal USB Installer 1.9.1.7 Setup
Installing Ubuntu 12.10 Desktop
Please wait while Universal USB Installer installs Ubuntu 12.10 Desktop on I:\
USB Installer
Pendrivelinux.com
Formatting I: as Fat32
512 Bytes Per Sector, Cluster size 4096 bytes
Volume ID is bff: 1d18
32 Reserved Sectors, 30948 Sectors per FAT, 2 fats
3961323 Total clusters
3961322 Free Clusters
Formatting drive I:...
Clearing out 61936 sectors for Reserved sectors, fats and root cluster...
Wrote 31711232 bytes in 3.05 seconds, 9.93 Megabytes/sec
Initialising reserved sectors and FATs...
Done
Universal USB Installer http://www.pendrivelinux.com
< Back
Close
Cancel