

Starting with Linux

The best place to get reviews, information, and downloads of linux is 'LINUX Questions' at www.linuxquestions.org You will need to create an account, which only requires setting up a username, password, and a valid e-mail address for a confirmation e-mail.

Once you get on the site, you can download your choice of Linux distributions (Called "Distro's). There are over 200 of them, and they are all free.

If you have never used Linux before, you will probably want to use a Live CD version first. These allow you to boot up your computer with Linux without making any changes to your current operating system. This will also let you know if your computer has the hardware needed to run Linux.

While Linux supports more hardware than any other OS, many hardware manufacturers are still reluctant to release drivers or documentation from which drivers could be written. It's wise to make sure your hardware is Linux-compatible before you try and install.

Knoppix LiveCD is a good one to use since it has the best automatic hardware detection. Keep in mind that you need a CD writer, not just reader, to download and install it, and if you go with the larger version, at 3GB, you will need a DVD writer and a broadband connection. Even the CD version runs over 600 mbs, and is just small enough to fit on a single CD, so dial-up will not do either way. If you don't have a CD writer, NNCUG will be happy to supply you with a copy of a Live CD.

The Knoppix Distro can be downloaded at <http://www.knopper.net/knoppix/index-en.html>

If you decide you do like Linux enough to devote a partition on your hard drive to it, here's how to go about it:

- (1) Devote a computer to Linux: You can kick the Microsoft habit entirely, and run Linux exclusively. OK, I hear you, on to option 2
- (2) You can dual boot from a single hard drive. This consists of splitting a single disk into three partitions, a small boot partition that is accessible from operating systems, one partition for Windows, and one partition from Linux. You probably should leave unallocated space on the drive too, since you really don't know which system is going to grow and need more space. With today's Terabyte and bigger drives, that shouldn't be too much of a hardship.
- (3) You can use two hard drives, one for each operating system, and change the boot order on startup. Make the boot order default to the one you are going to use the most.

Now I realize that there was a lot of gibberish in those last two options if you aren't into how your computer actually goes about things. Most commercial operating systems have install processes that take care of all that for you. But if you are dual booting operating systems, you have to do some of that yourself, or know somebody who can do that for you. So anyway, in English, here is what is going on:

Every computer has a set of routines the runs when you turn them on. These routines check the condition of your machine (whether the memory works, how much is available, whether a keyboard is present, what devices are capable of holding an operating system, and what order to try them in). Most of the configuration data is held in an area called CMOS which is a small amount of memory that is maintained by a battery on the motherboard.

Once the computer sorts itself out, it checks for where you want it to load an operating system from, be it a hard drive, floppy, CD-ROM, or other device. These options can be changed by pressing a key on the keyboard during the boot-up sequence, which key depends on which BIOS you have installed (Basic Input Output System). Some usual suspects are Esc, F12, and Del, but your screen should tell you when the machine is booting.

Even if you put a bootable CD in the drive before start-up, if your boot-order says check the hard drive first, it will boot up from the hard drive. If it says check the CD first, it will check the CD, boot from there if it can, and if it doesn't find an operating system there, goes to the next item in the boot order which is usually your hard drive. If it gets through the whole list without finding something to boot from, then you get an error message.

On machines with multiple disk drives, you can tell it which drive to check first (try the D:, if that doesn't work, try the C:, if that doesn't work, try the CD-ROM). By changing the order of how it checks things before you boot, you can change the operating system it uses.

You can also divide one physical Hard Drive into multiple sections which is option 2. In this case, a small program called a bootstrap loader will do just enough to find out what OS you want to run from your single hard drive.

Giving you explicit instructions for doing all that would rapidly turn this handout into a book, but here are some useful links:

Changing the boot order of your computer:

<http://pcsupport.about.com/od/fixtheproblem/ss/bootorderchange.htm>

Dual booting

Windows 7

<http://lifehacker.com/5403100/dual+boot-windows-7-and-ubuntu-in-perfect-harmony>

Windows XP

http://apcmag.com/how_to_dual_boot_windows_xp_and_linux_xp_installed_first.htm

Choosing a Distro To install

Linux is a community created and maintained operating system. Technically any distro can do the same thing any other distro can if configured and maintained correctly. Unlike Windows though, you have to do the maintenance. The chief problem is in finding drivers for specialized or older devices you may have. When an OEM (Original Equipment Manufacturer) is shopping for components for a new machine, the first question it asks a vendor is “are there windows 7 drivers for this thing?” If the answer is ‘no’, you can be sure that the OEM (such as Dell) doesn’t use them. What Dell doesn’t do is ask them if there are Linux drivers for the device, and that is where the problem comes in.

That said, different distro’s highlight different aspects of Linux, and one may suit your needs without much work on your part if you don’t have a particular peripheral that HAS to run for you to be satisfied. And keep in mind that if you are dual booting, there is no reason you can’t use that peripheral in Windows when you need it.

When picking a distro the best strategy is:

- 1) **Stick with what you know** - If you use Firefox in Windows, there is also a version for Linux. If you use WinAMP XMMS is a near-perfect clone. There are Open Office versions for both Windows and Linux. In fact, almost all Open source software comes in both Windows and Linux flavors these days.
- 2) **Stick with the defaults** - Not everything that you've used on Windows has a direct equivalent. Where this is the case, there will probably be a number of different choices. Until you know enough to make an intelligent choice, stick with whatever seems to be the default. *It's better to use something that does the job, than not use anything because there might be something better*
- 3) Start exploring the choices - There's no reason to be reluctant about trying out each of the available choices. Try everything you've got installed, search for other software that isn't installed but that's available. *It doesn't cost anything to try out Free Software.*

Getting Help

With Windows you have a direct phone line to Microsoft, who, if they can’t resolve a problem sends someone straight out at no expense to you who resolves your issue for you. Oh, you haven’t had any luck trying that either, I thought it was just me. Actually most Windows support is done through the manufacturer of your computer who has outsourced their helpdesk to some guy in India. So you usually give up and take your machine to some place like Best Buy where they charge you a lot not to fix it. Sound more familiar?

But that is the first thing people think of when they are told about Linux, “How do I get support?”

Well, about the same way you do now, except cheaper. There are multitudes of other people out there resolving the exact same issues you run into, and their mindset is to help you because someone helped them. Of course you are not a paying customer, so you have to be respectful of their time and talent.

Before I go into further details of that, you can also get paid support for Linux exactly the same way you get paid support for Windows. You find a company that supports it and you pay them to fix your problem.

OK, now the community help part. The one thing you do have to know when using Linux is more about your machine than you need to know when using Windows because you need to be able to express your problems in terms that will allow someone to walk you through fixing them.

The simplest way to find help for Linux is to enter the search term "Linux help" in your favorite search engine. This will bring up countless forums devoted to solving Linux problems. Remember, the more detail you can provide about your problem, the more (and likely better) help you can get in resolving it.

Last Thoughts

Free software is about being free to do what you want to with the source code. It's not about not costing anything. It's nice for us end-users that it tends to be both. But do remember that the software that was given to you for free wasn't provided for free: Somebody had to invest their time; somebody had to pay for it to be hosted. If you find a product you like & use a lot, consider making a donation to the project. I'm sure you agree that it'd be a real shame if your favorite app. went away because the developer couldn't afford to keep it going.