

Computer Tech '10

Ubuntu Linux

Free Software
for the World

Your host: Tom Browder

[<tom.browder@gmail.com>](mailto:tom.browder@gmail.com)

Introduction

- What is Linux?
- Windows v. Linux
- Linux uses
- How to get it
- How to install it
- Free software (for Windows, too!)

What is Linux?

- An operating system (OS)
- An OS started by, and still directed by, Linus Torvalds, aided by thousands of helpers (paid and unpaid)
- What is an OS?
- Examples of other OSs?

Examples of other OSs?

- MS Windows 95, 98, NT, XP, Vista, 7
- Mac OS X
- Unix, Open BSD, Free BSD, Open Solaris, IRIX, AIX
- DOS
- VMS
- System 360

How to Pronounce Linux?

(quotation from mostlylinux.ca/pronounce)

Ever wonder how to pronounce Linux? Ever wonder why so many people pronounce it differently? Well, you can stop wondering.

There are three common pronunciations of Linux. All three are quite acceptable, because everyone knows what is being talked about when you use any of them, and that's all that is important. However, if you are wondering what truly is the "proper" way, it will be explained here.

The only proper pronunciation is the one used by Linus Torvalds himself. The name Linux is a derivative of his name, and thus is pronounced like his name. Linus pronounces his name "Lee-noos", so Linux is properly pronounced "Lee-nooks".

How to Pronounce Linux? (2)

(quotation from mostlylinux.ca/pronounce)

A linguistically acceptable pronunciation is based on the Anglicized pronunciation of Linus, which is "Lie-nus". Hence, an acceptable Anglicized pronunciation of Linux is "Lie-nuks".

However, there is a third common pronunciation of Linux, which is "Lin-icks" (or sometimes "Lin-uks"). This pronunciation has no basis as a linguistic derivative. It does, however, sound more like "Unix", which is probably the reason it came about.

In the end, it is irrelevant. You say to-mah-to, I say to-may-to. Who cares? Either way, it's still a juicy red fruit that tastes good on a hamburger. How you pronounce Linux is far less important than whether you use it or not!

Why is Linux Important?

- It's “free” and has brought the power of the computer to some of the poorest among us.
- It enables interested users to get under the hood and fix problems.
- It has a powerful CLI (command line interface)

Windows Versus Linux

- Windows
 - Expensive
 - Closed source
 - Single user
- Linux
 - Free
 - Open source
 - Multi-user

Windows Versus Linux (2)

- Windows file system
 - NTFS (journaling, CR/LF, case insensitive)
 - GUI primary
 - CLI is a desperation measure
- Linux
 - ext4 (journaling, LF, case sensitive)
 - GUI default for casual users
 - CLI power is unmatched

Windows Versus Linux (3)

- Windows installation and recovery
 - Painful (personal files not protected)
 - Catch 22 for recovery
 - REGISTRY is binary
- Linux
 - Less painful (personal files better isolated from OS)
 - More recovery options
 - System configuration files are ASCII

Windows Versus Linux (4)

- Windows
 - Latest version takes powerful hardware
- Linux
 - Can run on very old hardware

Windows Versus Linux

My View

- Windows is not going away soon, if ever, for business and government use.
- Linux is a viable Windows replacement for small business or home use.
- Linux is the OS of choice for many researchers in mathematics and the natural sciences as well as for owners of data centers of all kinds.
- I use both, but I'm fortunate to be able to use Linux primarily for work and pleasure.

Windows Versus Linux

My View (2)

- From my experience with many hardware failures over the years, Linux provides an easier recovery experience compared to Windows, and backup solutions are both cheaper and more reliable.

Linux Uses for Individuals

- E-mail, Web Browsing
- Home office, finance
- Gaming
- Software development
- Scientific research

Linux Uses for Business and Government

- E-mail, Web Browsing
- Business applications
- Software development
- Scientific research
- Clustering (many compute nodes)
- Data servers

How to Get Linux

- Download (many distributions)
 - Fedora, Centos, Ubuntu
 - Red Hat (commercial)
- Download/install
 - Wubuntu, Cygwin, MingW
- On CD/DVD with in many books
- Buy from on-line distributors, e.g.,

www.cheapbytes.com

How to Install Linux

- Dual boot or a removable hard drive (permanent)
- Virtual computer (on top of Windows)
 - See Sun's Virtual Box at www.virtualbox.org
- Cygwin, MingW (for special uses)
- Bootable USB drive (portable)
 - See www.pendrivelinux.com for instructions for creating a persistent, bootable USB jump drive with a persistent file system (your changes are saved)
- Live CD/DVD (easiest way to tour Linux)

How to Get Help

- Local Linux system
- On-line
- Books (see www.nostarchpress.com)
- Local library
- Local computer clubs

Linux for Dummies (9th Edition)

\$23.09 at Amazon (new)

Recovery Example

(Very Personal!)

- Main drive failure
- Booted with Ubuntu Live CD
- Plugged failed drive into system as USB
- Copied files onto my tertiary disk
- Install Ubuntu onto new drive
- Copy files back into place
- Up and running again

A Linux Tour

- “Logging in”
- Configuring the desktop
- Moving around
- Using applications
- Synaptic Package Manager
- A PostScript Demonstration

Some Cross-Platform Free Software

Open Office (www.openoffice.org)

utility of MS Office

GnuCash (www.gnucash.org)

better than Quicken

GimPhoto (www.gimphoto.com)

PhotoShop clone

Perl (www.perl.org)

Powerful scripting language

Thanks for Coming

Tom Browder <tom.browder@gmail.com>

ManTech International Corp. (mantech.com)

E-mail me with questions or suggestions, put “[computertech]” in the subject (without the quotes).