Linux Academy: Intro to Linux – Course Notes

http://LinuxAcademy.com

- In 1991, a Finnish student named Linus Torvalds began the development of a new, free, operating system kernel. He based that kernel on a small Unix variant called Minix. In August of that year, Linux announced his efforts in a Usenet post:
    - *Hello everybody out there using minix –I'm doing a (free) operating system (just a hobby, won't be big and professional like gnu) for 386(486) AT clones. This has been brewing since april, and is starting to get ready.I'd like any feedback on things people like/dislike in minix, as my OS resembles it somewhat (same physical layout of the file-system (due to practical reasons) among other things).I've currently ported bash(1.08) and gcc(1.40), and things seem to work. This implies that I'll get something practical within a few months, and I'd like to know what features most people would want. Any suggestions are welcome, but I won't promise I'll implement them :-)*
        - *Linus (torvalds@kruuna.helsinki.fi)*
        - *PS. Yes – it's free of any minix code, and it has a multi-threaded fs. It is NOT portable (uses 386 task switching etc), and it probably never will support anything other than AT-harddisks, as that's all I have :-(.*
        - *—Linus Torvalds*
- Linux Licensing
    - Originally published under its own license, with a restriction on commercial use, once paired with software available with the GNU Project, was changed.
    - GNU GPL Copyleft Licensing was adopted.
    - In general, the Copyleft licensing model is used to make a program 'free' and require all modified and extended versions of the program to be free as well.
    - GNU states :
        - "Proprietary software developers use copyright to take away the users' freedom; we use copyright to guarantee their freedom. That's why we reverse the name, changing "copyright" into "copyleft."
- Mascot
    - When Linus announced that Linux would have a mascot in 1996, he mentioned that he had been bitten by a Little Penguin during a trip to the National Zoo and Aquarium in Australia. It seemed a natural fit for the program.
    - "Tux" was born and named as a derivative of Tovalds UniX.
- What is a Linux Distribution?

    - A distribution is one of many members of a larger set of *nix like operating systems. Each contains a large set of applications, utilities and tools that when collected together form the core of a distribution.
    - Since the kernel and many of the supporting applications and packages are 'free' or 'open source', distributions come in many forms:
        - Desktop (fully featured GUI)
        - Server (enterprise focused applications and services)
        - Media (music and video production or presentation)
        - Scientific (applications and tools targeted to scientific experimentation)
        - Recovery (tools and utilities assisting in the analysis and recovery of systems and data)
- What is Desktop Linux?
    - In general, Desktop Linux is a generic term referring to a Linux installation containing a Graphical User Interface as well as multiple 'personal use applications'. Desktop Linux is not a distribution specific term and can refer to any installation run on a personal computer.
    - Common Graphical User Interfaces
        - KDE
        - Gnome
        - Unity
        - XFCE
        - Cinammon
    - Common 'Personal User Applications'
        - Chat software (Pidgin, eMSN, XIRC)
        - Office Suite (Open Office, Star Office, Koffice)
        - Music Player (Amarok, Banshee, RhythmBox)
        - Video Player (Xine, VLC, Mplayer)
        - Integrated Development Environment (Netbeans, Eclipse, Bluefish)
- What is Server Linux?
    - Linux popularity was solidified in the Enterprise. Deployments on servers took off primarily because of the freely available 'LAMP' stack. Linux servers now represent 65% of all publicly available internet servers and over 95% of all the world's supercomputers.
    - LAMP Stack
        - **L**inux **A**pache **M**ySQL **P**HP
        - Consists of Web Services (Apache), Database (MySQL) and Presentation Language (PHP)
        - Drives Some of Most Popular Websites

- Other Server Applications
  - Game Servers (Many Online Game Servers Run Linux)
  - Source Code Control (Subversion, Mercurial, GIT)
  - Content Management (Drupal, Wordpress)
- Vendor Support
  - Dell
  - IBM
  - Oracle
  - Red Hat