A Short Summary on Linux Chapter 1

Linux is an operating system created by a Finnish undergrad named Linus Torvalds and released in September 1991. The name was a combination of “Linus” and “UNIX” (the system that Linux grew out of). The main feature of Linux is that everything was free and open sourced, meaning that anyone could get a copy of it and modify/customize the code. This feature allowed programmers from around the globe to contribute to the development of Linux, leading to more tools (graphical, word processing, etc.) to be added to the Linux system once the hardware becomes available. These software and tools are also free and commercial.

Aside from tools, Linux also supports a wide range of peripherals, usually before any other companies do. This wide range also applies to the amount of software (prebuilt and ready to install and run) Linux supports for its users. For example, Netscape was available for Linux and included Java support before any other vendors. Many large companies (IBM, etc.) now hire programmers who are specifically meant to design and code Linux.

The Linux system is comprised of the hardware, the kernel, and the set of utility tools it supports. The kernel, likened to the heart of the Linux OS, allocates resources and schedules each user’s jobs so that everything is distributed fairly. Each program will interact with the kernel via system calls, where the kernel will interpret the call and passes on the call to the appropriate device. Linux can support multiple users (1 to >1000) each concurrently different programs. The primary objective of a multiuser operating system is to maximize the use of costly resources and minimize the cost per user. With multiple users running different programs at the same time, Linux is a fully protected multitasking operating system, processes can communicate with one another remain exclusive from each other, allowing users to be more productive.

As Linux became more and more refined, it surpassed its “predecessor” UNIX, and became a popular alternative. Many commercial software packages are able to run on Linux allowing Linux to become the optimum choice for all academic, professional, personal, etc. uses.