Chapter 1. Introduction

It is hard to chart the rise of Linux without risking the appearance of exaggeration and hyperbole. During the past few years alone, Linux has grown from a student/hacker playground to an upstart challenger in the server market to a well-respected system taking its rightful place in educational and corporate networks. Many serious analysts claim that its trajectory has just begun, and that it will eventually become the world's most widespread operating system.

Linux was first developed by Linus Torvalds at the University of Helsinki in Finland. From his current location in Silicon Valley, Linus continues to centrally coordinate improvements. The Linux kernel continues to develop under the dedicated cultivation of a host of other programmers and hackers all over the world, joined by members of programming teams at major computer companies, all connected through the Internet.

By "kernel," we mean the core of the operating system itself, not the applications (such as the compiler, shells, and so forth) that run on it. Today, the term "Linux" is often used to mean a software environment with a Linux kernel, along with a large set of applications and other software components. In this larger meaning, many people prefer the term GNU/Linux, which acknowledges the central role played by tools from the Free Software Foundation's GNU project as complements to the development of the Linux kernel.

Linux systems cannot be technically referred to as a "version of Unix," as they have not undergone the required tests and licensing.[1] However, Linux offers all the common programming interfaces of standard Unix systems, and, as you can see from this book, all the common Unix utilities have been reimplemented on Linux. It is a powerful, robust, fully usable system.

The historical impact of Linux goes beyond its role as a challenge to all versions of Unix as well as Microsoft Windows, particularly on servers. Linux's success has also inspired countless other free software or open source (defined at http://opensource.org) projects, including Samba, GNOME, and a mind-boggling collection of innovative projects that you can browse at numerous sites like SourceForge (http://sourceforge.net) and Freshmeat (http://freshmeat.net). As both a platform for other developers and a development model, Linux gave a tremendous boost to the GNU project and has also become a popular platform for Java development. In short, Linux is a focal point in the most exciting and productive free-software movement ever seen.

If you haven't obtained Linux yet, or have it but don't know exactly how to get started using it, see Other Resources in Other Resources.

[1] Before an operating system can be called "Unix," it must be branded by The Open Group.