Beginning the Linux Command Line

Sander van Vugt

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APPENDIX Installing Linux

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About the Author

SANDER VAN VUGT is an independent trainer and consultant who lives in the Netherlands and works in the extended EMEA (Europe, Middle East, and Africa) area. Sander has been a speaker at major Linux conferences worldwide, such as LinuxWorld in San Francisco and Linux.conf.au in Australia. He specializes in Linux high availability, storage solutions, and performance problems, and has successfully implemented Linux clusters across the globe. Sander has written several books about Linux-related subjects, including *The Definitive Guide to SUSE Linux Enterprise Server* (Apress, 2006), *Beginning Ubuntu Server Administration* (Apress, 2008), and *Pro Ubuntu Server Administration* (Apress, 2008).

Sander's articles can be found on several international web sites and in magazines such as *SearchEnterpriseLinux.com*, *Linux Journal*, and *Linux Magazine*. He works as a volunteer for the Linux Professional Institute (LPI), contributing topics for different certification levels. Most important, Sander is the father of Alex and Franck, and is the loving husband of Florence. For more information, consult Sander's web site: www.sandervanvugt.com. Sander can be reached by e-mail at mail@sandervanvugt.com.

About the Technical Reviewer

■ **MARY ANN C. TAN** has experience in many fields, including slinging regular expressions, watching Linux servers, writing telecom billing systems, being an obsessive-compulsive spreadsheet user, and arguing about machine learning. She is learning Italian, has forgotten most of her Mandarin, trains cats using Cat-Kwan-Do, and sings videoke to survive the Manila night. She currently does GUI development for a telecom testing company as her day job.

Introduction

This book is for anyone who wants to master Linux from the command line. When writing it, I had in mind system administrators, software developers, and enthusiastic users who want to get things going from the Linux command line. For beginning users, this may be a daunting task, as Linux commands often have many options documented only in `man` pages that are not that easy to understand.

This book is distribution agnostic. That is, while writing it, I've checked all items against Ubuntu, Red Hat, and SUSE. Since most distributions are quite similar to one of these three, this book should help you with other distributions as well. There is only one item in the book that is not distribution agnostic: the Appendix, which explains how to install OpenSUSE. I've chosen to cover installation of just one distribution, because if you don't have any Linux installed yet, you probably don't care what you install. If you do care what distribution to work with, you probably have it installed already.

The book begins with an introduction to exactly what I'm talking about when discussing Linux and its different appearances: the distributions. In Chapter 1, you'll also find essential information on how to log on to the computer and how to find out more about the way a command should be used. Chapter 2 follows with some essential Linux commands. After reading this chapter, you'll already start to feel at ease on the Linux command line; among other things, it teaches you how to work with files and directories and how to communicate with other users. Chapter 3 moves the focus to one of the most important tasks you'll perform when working with Linux: working with files. In this chapter, you'll learn not only how to copy files and make directories, but also how to mount devices to your Linux system.

Working with Linux from the command line means working with text files. In Chapter 4, you'll learn about the tools that are at your disposal to do this. You'll get familiar with some of the classic tools, such as `find` and `grep`, and also with some of the more advanced tools, such as `awk` and `sed`. Following that, in Chapter 5 you'll learn more about partitions, logical volumes, and other advanced file system management tasks. After reading this chapter, you'll start feeling at ease on the Linux command line. Chapters 6 and 7 move on to two other essential subjects: the management of users and permissions.

Chapter 8 covers a topic that seems to be handled differently by all the Linux distributions: software management. This chapter teaches you about generic ways to install and manage software packages, such as `rpm` and `dpkg`, and also about some of the distribution-specific ways to deal with these tasks, such as `apt-get`, `rpm`, and `zypper`. Chapters 9 and 10 cover tasks that are important for system administration. In these chapters, you'll learn how to manage processes and how to handle logging on your computer.

By the time you reach Chapters 11 and 12, you're ready to explore network-related tasks. In these chapters, you'll learn how to configure a network interface and how to set up the Samba and NFS file services. Chapters 13 and 14 cover two advanced but useful topics: kernel

management and shell scripting. After you finish the last chapter, you'll have all the knowledge you need to work with Linux from the command line.

There are exercises available for this book as well, which you can download from www.sandervanvugt.com/exercises. These exercises provide an excellent solution for learning Linux in a classroom environment.

I hope you enjoy reading this book and that it prepares you for getting things done from the Linux command line!