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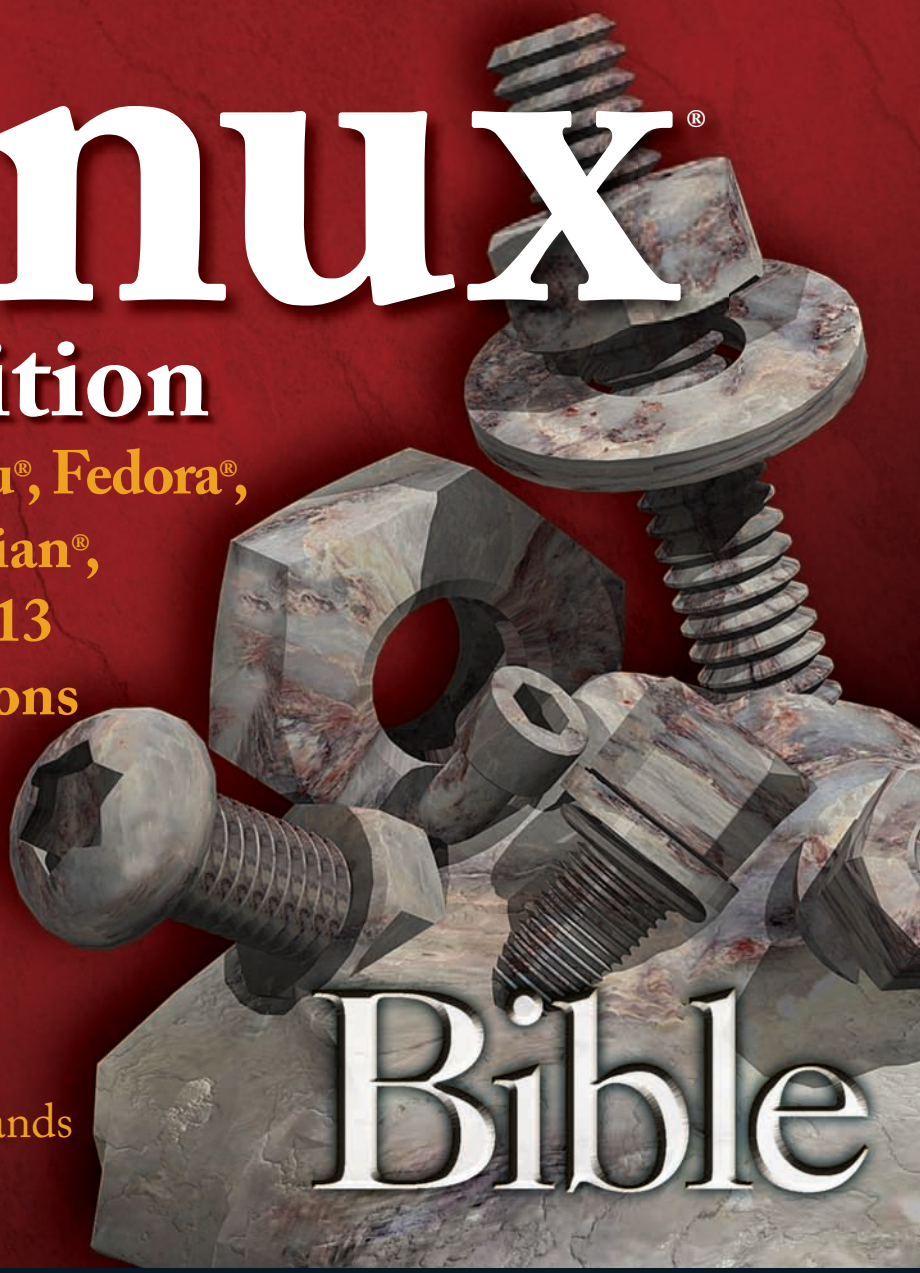

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As always, I dedicate this book to my wife, Sheree.

About the Author

Chris Negus has written or co-written dozens of books on Linux and UNIX, including Red Hat Linux Bible (all editions), CentOS Bible, Fedora and Red Hat Enterprise Linux Bible, Linux Troubleshooting Bible, Linux Toys and Linux Toys II. Recently, Chris co-authored several books for the new Toolbox series for power users: Fedora Linux Toolbox, SUSE Linux Toolbox, Ubuntu Linux Toolbox, Mac OS X, and BSD UNIX Toolbox.

For eight years Chris worked with the organization at AT&T that developed UNIX before moving to Utah to help contribute to Novell's UnixWare project in the early 1990s. When not writing about Linux, Chris enjoys playing soccer and just hanging out with his family.

Currently, Chris is employed by Red Hat, Inc. as a Linux instructor. He teaches classes and gives exams to those seeking Red Hat Certified Engineer (RHCE) and Red Hat Certified Technician (RHCT) certifications.

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Introduction

Insert the DVD or CD that comes with this book into a PC. Within five minutes, you'll be able to try out Linux with a full range of desktop applications. Within an hour, you can have a full-blown Linux desktop or server system installed on your computer. If you are like most of us who have been bitten by the Linux bug, you won't ever look back.

Linux Bible 2010 Edition is here to open your eyes to what Linux is, where it came from, and where it's going. But, most of all, the book is here to hand you Linux and help you get started. Because Linux is the operating system of free speech and free choice, ***Linux Bible*** gives you choices in selecting the Linux that is right for you.

On the DVD and CD that come with this book are 18 different Linux distributions that you are free to install, try out, and keep. You learn how those distributions are alike or different, and the book leads you through the basics of installing and setting up your Linux system as:

- **A desktop computer user—**You have a full range of office, music, gaming, graphics, and other applications to use.
- **A Linux system administrator—**Learn how to install software, use shell commands, configure system services, and secure your computers and networks.
- **A Linux server administrator—**Using some of the world's best server software, you can set up your computer to be a Web server, file server, mail server, or print server.
- **A software developer—**You can draw on thousands of open source programming tools to develop your own software applications.

The Linux systems you have in your hand don't contain trialware or otherwise-hobbled software. On the contrary, they feature software created by world-class development projects, the same teams that build the software that powers many professional businesses, schools, home desktops, and Internet service providers. In other words, this truly first-rate software is from developers who have made a commitment to producing software that can be used in the ways that you choose to use it.

Most of the Linux distributions offered on the DVD and CD that come with this book are live CDs that let you try a Linux distribution without installing. Almost all of those live CDs include features that let you install the contents of those live CDs to your hard disk. For example, you can try out Fedora, Gentoo, Ubuntu, openSUSE, PCLinuxOS, and Mandriva as live CDs, and then install those distributions permanently to your hard drive from icons on the desktops of those live CDs.

Unlike some other books on Linux, this book doesn't tie you to one Linux distribution. The book teaches you the essentials of Linux graphical desktop interfaces, shell commands, and basic system administration. Separate chapters break down many of the major Linux distributions available today. Then descriptions of the major software projects in most Linux distributions (KDE and GNOME desktops, Apache Web servers, Samba file and printer sharing, and so on) guide you in setting up and using those features, regardless of which Linux you choose.

Understanding the Linux Mystique

This book is designed to spark your imagination about what is possible with Linux, then give you the software and instruction to jump right into Linux. From there, the approach is to help you learn by using it.

In the first two chapters, you'll learn a lot of exciting ways Linux is being used today and see who many of the major players are in the free and open source software (FOSS) world. You will see how people are adapting Linux to run on handhelds, mini laptops, 32- and 64-bit PCs, Macs, mainframes, and super computers. Linux is truly everywhere!

However, if you are concerned that somehow "free" software is too good to be true, skip ahead for the moment to the brief history of Linux in Appendix B. That appendix guides you through the strange and circuitous path of free and open source software development that led to the Linux phenomenon.

If you are intrigued by what you learn here, I'll tell you how you can become part of the open source and free software communities, whose stars are known by a single name (such as Linus) or a few initials (such as rms). You'll find a staggering number of open source projects, forums, and mailing lists that are thriving today (and always looking for more people to get involved).

How This Book Is Organized

Learn the basics of what goes into Linux and you will be able to use all sorts of devices and computers in the future. The book is organized in a way that enables you to start off at the very beginning with Linux, but still grow to the point where you can get going with some powerful server and programming features, if you care to.

Part I includes two short chapters designed to open your eyes to what you can do with Linux, then get your hands on it quickly. Those two chapters describe

- How others use Linux, how to transition to Linux from Windows, and how to start with Linux using the CD and DVD inside this book (Chapter 1)
- What you can do, what you can make, and what you can become with Linux (Chapter 2)

In **Part II**, you start in with details on how to use Linux desktops and associated applications. Chapters 3–7 describe

- The KDE, GNOME, and other desktop interfaces (Chapter 3)
- Tools for playing music and video (Chapter 4)
- Desktop publishing and Web publishing using word processing, layout, drawing, and image manipulation tools, plus tools such as wikis, blogs, and content management systems for managing content online (Chapter 5)
- Applications for e-mail and Web browsing (Chapter 6)
- Desktop gaming applications (Chapter 7)

In **Part III**, you learn how to administer Linux systems, including

- Installing Linux systems (Chapter 8)
- Using the shell (Chapter 9)
- Doing basic administration (Chapter 10)
- Connecting to the Internet (Chapter 11)
- Securing your Linux system (Chapter 12)

Linux creates powerful servers, and in **Part IV** you learn to

- Set up a Web server using Apache, MySQL, and PHP in Linux (Chapter 13)
- Run a mail server (Chapter 14)
- Share printers with a CUPS print server (Chapter 15)
- Share files with a Samba or NFS file server (Chapter 16)

If you don't have Linux installed yet, this book helps you understand differences in Linux distribution, then install the systems you want from the DVD and CD included in this book. **Part V** (Chapters 17 through 28) describes each of those distributions and how to run them live or install them.

If you are coming to Linux for its programming environment, **Part VI** provides chapters that describe

- Programming environments and interfaces (Chapter 29)
- Programming tools and utilities (Chapter 30)

In addition, Appendix A tells you what's on the DVD and CD, how to install from the DVD or CD, and how to burn additional installation CDs from the software that comes with this book. Appendix B provides history and background information about Linux.

What You Will Get from This Book

By the time you finish this book, you'll have a good basic understanding of many of the major features in Linux and how you can use them. If you decide then that you want to go a bit deeper, try the *Fedora 12 Bible* or the *Red Hat Enterprise Linux Bible* (both from Wiley, 2010), with content that includes how to set up many different types of Linux servers. You can find similar books for other distributions.

If you are more technically oriented, ***Linux Troubleshooting Bible*** (Wiley, 2004) can be a good way to learn more advanced skills for securing and troubleshooting Linux systems. Or a ***Linux Toolbox*** book for Fedora, Ubuntu, BSD, or SUSE (Wiley, 2007 and 2008) can provide you with more than 1,000 Linux command lines to help you become a Linux power user.

If you are looking for some fun, try out some projects with an old PC and free software from ***Linux Toys II*** (Wiley, 2006).

Conventions Used in This Book

Throughout the book, special typography indicates code and commands. Commands and code are shown in a monospaced font:

```
This is how code looks.
```

In the event that an example includes both input and output, the monospaced font is still used, but input is presented in bold type to distinguish the two. Here's an example:

```
$ ftp ftp.handsonhistory.com
Name (home:jake): jake
Password: ******
```

As for styles in the text:

- New terms and important words appear in italics when introduced.
- Keyboard strokes appear like this: Ctrl+A.
- Filenames, URLs, and code within the text appear like so: `persistence.properties`.

The following items call your attention to points that are particularly important.

Note

A Note box provides extra information to which you need to pay special attention. ■

Tip

A Tip box shows a special way of performing a particular task. ■