

Introduction

Welcome to the *Official Red Hat Linux Reference Guide*.

The *Official Red Hat Linux Reference Guide* contains useful information about your Red Hat Linux system. From fundamental concepts, such as the structure of the Red Hat Linux filesystem, to the finer points of system security and authentication control, we hope you will find this book to be a valuable resource.

This guide is for you if you want to learn a bit more about how your Red Hat Linux system works. Topics that you will explore include the following:

- *Booting Red Hat Linux* — Information about runlevels, `rc.d` directories, and how to start your favorite applications at boot time.
- *The /proc file system* — Provides you with the kernel's view of the system.
- *The GRUB boot loader* — A behind the scenes look at GRUB and how it boots your system.
- *The ext3 File System* — Learn how to add or remove the ext3 file system from storage devices.
- *System and network security guides* — Find out the most common methods used by attackers to compromise your system and how to prevent security problems.
- *Apache directives* — A look at the default Apache configuration and the options available.

Before reading this guide, you should be familiar with the contents of the *Official Red Hat Linux Installation Guide* concerning installation issues, the *Official Red Hat Linux Getting Started Guide* for basic Linux concepts and the *Official Red Hat Linux Customization Guide* for general customization instructions. The *Official Red Hat Linux Reference Guide* contains information about advanced topics that may not affect every user, depending upon how they use their Red Hat Linux system.

HTML and PDF versions of all Official Red Hat Linux manuals are available online at <http://www.redhat.com/docs>.



Note

Although this manual reflects the most current information possible, you should read the Red Hat Linux Release Notes for information that may not have been available prior to our documentation being finalized. The Release Notes can be found on the Red Hat Linux CD #1 and online at:

<http://www.redhat.com/docs/manuals/linux>

1. Finding Appropriate Documentation

You need documentation that is appropriate to your level of Linux expertise. Otherwise, you might feel overwhelmed or not find the necessary information to answer your questions. The *Official Red Hat Linux Reference Guide* deals with the more technical aspects and options of your Red Hat Linux system. This section will help you decide whether to look in this manual for the information you need or consider other Red Hat Linux manuals, including online sources, in your search.

Three different categories of people use Red Hat Linux, and each of these categories require different sets of documentation and informative sources. To help you figure out where you should start, determine your own experience level:

New to Linux

This type of user has never used any Linux (or Linux-like) operating system before or has had only limited exposure to Linux. They may or may not have experience using other operating systems (such as Windows). Is this you? If so, skip ahead to Section 1.1.

Some Linux Experience

This type of user has installed and successfully used Linux (but not Red Hat Linux) before or may have equivalent experience with other Linux-like operating systems. Does this describe you? If so, turn to Section 1.2.

Experienced User

This type of user has installed and successfully used Red Hat Linux before. If this describes you, turn to Section 1.3.

1.1. Documentation For First-Time Linux Users

For someone new to Linux, the amount of information available on any particular subject, such as printing, starting up the system or partitioning your hard drive, can be overwhelming. It helps to initially step back and gain a decent base of information centered around how Linux works before tackling these kinds of advanced issues.

Your first goal should be to obtain some useful documentation. This cannot be stressed enough. Without documentation, you will only become frustrated at your inability to get your Red Hat Linux system working the way you want.

You should acquire the following types of Linux documentation:

- *A brief history of Linux* — Many aspects of Linux are the way they are because of historical precedent. The Linux culture is also based on past events, needs or requirements. A basic understanding of the history of Linux will help you figure out how to solve many potential problems before you actually see them.
- *An explanation of how Linux works* — While delving into the most arcane aspects of the Linux kernel is not necessary, it is a good idea to know something about how Linux is put together. This is particularly important if you have been working with other operating systems, as some of the assumptions you currently hold about how computers work may not transfer from that operating system to Linux.
- *An introductory command overview (with examples)* — This is probably the most important thing to look for in Linux documentation. The underlying design philosophy for Linux is that it's better to use many small commands connected together in different ways than it is to have a few large (and complex) commands that do the whole job themselves. Without examples that illustrate this approach to doing things, you may find yourself intimidated by the sheer number of commands available on your Red Hat Linux system.

Keep in mind that you do not have to memorize all of the available Linux commands. Different techniques exist to help you find the specific command you need to accomplish a task. You need only know the general way in which Linux functions, what you need to accomplish, and how to access the tool that will give you the exact instructions you need to execute the command.

The *Official Red Hat Linux Installation Guide* is an excellent reference for helping you get your Red Hat Linux system successfully installed and initially configured. The *Official Red Hat Linux Getting Started Guide* covers the history of Linux, basic system commands, GNOME, KDE, RPM, and many other fundamental concepts. You should start with these two books and use them to build the base of your Red Hat Linux knowledge. Before long, more complicated concepts will begin to make sense because you already grasp the general ideas.