

Course Description: This course is an introduction to fundamental end-user and administrative tools in Red Hat Enterprise Linux, designed for students with little or no command-line Linux or UNIX experience.

Who Should Attend: This course is for IT professionals who want to build user-level skills before learning Linux System and Network Administration.

Prerequisites: User-level experience with any computer system, including the use of mouse, menus, and any graphical user interface, is required.

Benefits of Attendance: Upon completion of this course, students will be able to:

- Understand the Linux file system.
- Install software and configure the network.
- Configure authentication and install and configure various services using graphical tools.
- Perform common file maintenance tasks.
- Use and customize the GNOME interface.
- Open, edit, and save text documents using the vi editor.
- File access permissions.
- Customize X Window System.
- Effectively use, customize and script a Red Hat Enterprise Linux system for common command line processes.
- Use basic network utilities.

Course Outline:

Unit 1 - Linux Ideas and History

An Introduction to Linux and Open Source: what are the central ideas behind the Linux phenomenon and where do they come from?

Unit 2 - Linux Usage Basics

Logging into the system, changing users and editing text files.

Unit 3 - Running Commands and Getting Help

How to use built-in and online documentation to enhance your experience.

Unit 4 - Browsing the Filesystem

Understanding the locations of important directories on a Red Hat Enterprise Linux system and navigating them from the command line and using the graphical Nautilus browser.

Unit 5 - Users, Groups and Permissions

Reading and setting permissions on files and directories.

Unit 6 - Using the bash Shell

Basic tips and tricks to make Red Hat Enterprise Linux's default shell work for you. Topics include tab completion, history and an introduction to shell scripting.

Unit 7 - Standard I/O and Pipes

The ins-and-outs of redirecting output between programs and files.

Unit 8 - Text Processing Tools

An introduction to some of the most useful text-processing utilities in Red Hat Enterprise Linux, including grep, cut, sed, sort, diff and patch.

Unit 9 - vim: An Advanced Text Editor

How to get the most out of the powerful and flexible vim text editor.

Unit 10 - Investigating and Managing Processes

Listing, terminating and scheduling program executions on a Red Hat Enterprise Linux system.

Unit 11 - Basic System Configuration Tools

Using Red Hat Enterprise Linux's graphical and text-based configuration tools to manage networking, printing and date/time settings.

Unit 12 - Finding and Processing Files

In-depth coverage of using the find command and related utilities to locate and act upon files based on arbitrary criteria .

Unit 13 - Network Clients

An overview of network tools available in Red Hat Enterprise linux, from web browsers to email clients and diagnostic utilities.

Unit 14 - Advanced Topics in Users, Groups and Permissions

A deeper discussion of how user and group identities are stored on a Red Hat Enterprise Linux system, as well as the introduction of advanced filesystem permissions like SetUID and SetGID.

Unit 15 - The Linux Filesystem In-Depth

The nuts-and-bolts of how Red Hat Enterprise Linux deals with filesystems. Topics include partitions, inodes, linking and archiving tools.

Unit 16 - Essential System Administration Tools

An introduction to fundamental system administration topics such as installing Red Hat Enterprise Linux, managing software packages, and enhancing security with SELinux and the netfilter firewall.

Unit 17 - So... What Now?

Exposure to further options for training and involvement in the larger open-source community.