

# RH033 - Training Class Covers

## Introducing Enterprise Linux

### Unit 1 - Linux Ideas and History

- · What is Open Source?
- · Linux Origins
- · Red Hat Distributions
- · The Fedora Project
- · Linux Principles

### Unit 2 - Linux Usage Basics

- · Logging into Red Hat Enterprise Linux
- · Starting X from the Console
- · Accessing the Command Line from X
- · Changing your Password
- · The root User
- · Elevating your Privileges
- · Editing Text Files
- · Hands-on lab: Linux Usage Basics

### Unit 3 - Running Commands and Getting Help

- · Running Commands
- · Getting Help
- · The whatis Command
- · The --help Option
- · Reading Usage Summaries
- · The man and info Commands
- · Documentation
- · Hands-on lab: Getting Help with Commands

### Unit 4 - Browsing the Filesystem

- · Linux File Hierarchy Concepts
- · Current Working Directory
- · File and Directory Names
- · Absolute and Relative Pathnames
- · Changing Directories
- · Listing Directory Contents
- · Copying and Moving Files and Directories
- · Creating and Removing Files and Directories
- · Using Nautilus
- · Determining File Content
- · Viewing Files
- · Hands-on lab: Browsing the Filesystem

### Unit 5 - Using the bash Shell

- · bash Introduction, Heritage, and Features
- · Command Line Shortcuts
- · History Tricks
- · Command Line Expansion
- · Command Editing Tricks
- · gnome-terminal
- · Hands-on lab: Exploring the Bash Shell

### **Unit 6 - Standard I/O and Pipes**

- · Standard Input and Output
- · Redirecting Standard Input and Output
- · Overwriting vs Appending
- · Redirecting Standard Error
- · Redirecting Both Standard Output and Error
- · Using Pipes To Connect Processes
- · Hands-on lab: Standard I/O and Pipes

### **Unit 7 - Text Processing Tools**

- · Tools for Extracting Text
- · Tools for Analysing Text
- · Tools for Manipulating Text
- · Special Characters for Matching Text
- · Hands-on lab: Text Processing Tools

## **Intermediate Tools**

### **Unit 8 - Basic System Configuration**

- · Configuring Date and Time
- · Configuring Printers
- · Configuring the Network
- · System Logs
- · Hands-on lab: Basic System Configuration

### **Unit 9 - vi and vim**

- · Introducing vim
- · vim basics
- · Opening, Modifying, and Saving Files
- · Using Command Mode
- · Undoing Changes
- · Visual Mode
- · Splitting the Screen
- · Configuring vi and vim
- · Learning More
- · Hands-on lab: vi and vim

## **Unit 10 - Configuring the bash Shell**

- · Using bash Variables
- · Local and Environment Variables
- · Configuration and Information Variables
- · Variable Expansion
- · Protecting Against Variable Expansion
- · Aliases
- · How bash Expands the Command Line
- · Types of Shells
- · bash Startup and Exit Scripts
- · Using Variables in Shell Scripts
- · Hands-on lab: Configuring the Bash Shell

## **Unit 11 - Finding and Processing Files**

- · The slocate and find Commands
- · Basic find Examples
- · find and Logical Operators
- · find and Permissions
- · find and Numeric Criteria
- · find and Access Times
- · Executing Commands with find
- · The Gnome Search Tool
- · Hands-on lab: Finding and Processing Files

## **Unit 12 - Network Applications**

- · Firefox and Other Web Browsers
- · Evolution and Other E-mail Clients
- · Email, Encryption, and Digital Signatures
- · The Gaim Messaging System
- · Encrypted Communications with ssh and scp
- · telnet and the "r" services
- · FTP Clients
- · Connecting to Windows Disk Shares
- · File Transfer with Nautilus
- · Network Diagnostic Tools
- · Hands-on lab: Network Clients

## **Essential Topics in Red Hat Enterprise Linux Administration**

### **Unit 13 - Managing Users, Groups, and Permissions**

- · The Linux Security Model
- · Users and Groups
- · Permission Types
- · Examining Permissions
- · Changing Permissions Using Symbolic and Numeric Methods
- · Changing Permissions Using Nautilus
- · Hands-on lab: File Permissions

## **Unit 14 - Advanced Topics in Users, Groups and Permissions**

- · User and Group ID Numbers
- · The /etc/passwd, /etc/shadow, and /etc/group files
- · System Users and Groups
- · Changing Your Identity
- · User Information Commands
- · Default Permissions
- · Special Permissions
- · Hands-on lab: Switching Users and Setting Default Permissions

## **Unit 15 - The Linux Filesystem In-Depth**

- · Partitions and Filesystems
- · Inodes and Directories
- · cp, mv, rm, and inodes
- · Symbolic (or Soft) Links and Hard Links
- · The Seven Fundamental Filetypes
- · Checking Free Space
- · Mounting CDs, DVDs, USB Media, and Floppy Disks
- · Why Archive Files?
- · Creating, Inspecting, and Extracting Files From File Archives
- · Why Use File Compression?
- · Compression Utilities
- · Compressing Archives
- · Hands-on lab: The Linux Filesystem

## **Unit 16 - Investigating and Managing Processes**

- · What is a Process?
- · Process States
- · Viewing Processes
- · Sending Signals to Processes
- · Terminating Processes
- · Altering Process Scheduling Priority
- · Interactive Process Management Tools
- · Running a Process in the Background
- · Suspending a Process
- · Listing Background and Suspended Jobs
- · Compound Commands
- · Scheduling a Process To Execute Later
- · Scheduling Periodic Processes
- · Crontab File Format
- · Hands-on lab: Process Controls

## **Unit 17 - Essential System Administration Tools**

- · Installation
- · Managing Services
- · Managing Packages
- · Securing the System
- · Hands-on lab: Installation, Managing Services, and Securing the System

## **Unit 18 - What Now?**

- · Some Areas to Explore
- · Development
- · Red Hat Development Classes
- · System Administrator Duties
- · RHCE/RHCT Skills Courses
- · RHCA and RHCSS Skills Courses
- · The Linux Community