

Course Outline



Tel: +44 (0) 118 979 4000 Fax: +44 (0) 118 979 4000

Email: training@ptr.co.uk Web: www.ptr.co.uk

Red Hat Linux Essentials

Course Description:

This course is designed for system administrators and end-users that are new to the Linux or UNIX operating systems. On this course delegates will learn the basic skills required to use their own Red Hat Linux systems. This course shows delegates how to accomplish basic tasks such as creating, organising and removing files, using the GNOME interface and text editors, printing and setting file/directory permissions. Delegates learn to accomplish these tasks through the command line and graphical interfaces.

For students studying towards Red Hat Certified Engineer (RHCE) certification, this introductory level course provides the pre-requisite knowledge for courses RH133GB (Red Hat Linux System Administration I, II) and RH253GB (Red Hat Linux Networking and Security Administration).

Pre-requisites:

Delegates should be familiar with basic information technology (IT) concepts and the role of an operating system. Experience of another operating system would also be beneficial.

Course Content:

- **Introduction**
 - UNIX
 - GNU
 - Linux Origins
 - Why Linux
 - Red Hat Linux
 - Linux GUI Environments

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- **Quick Tour**
 - Local Logins
 - Examining the File System
 - Device Files
 - Linux Processes
 - Command-line Shells
 - Running Commands
 - Determining Options for Commands
 - Shell Variables
 - Users
 - Changing Your Password
 - Getting Online Help - man
 - Other Help Utilities
 - Virtual Consoles

- **File and Shell Basics**
 - Current Working Directory
 - Changing Directories
 - File Names
 - System Directories
 - Checking Free Space
 - File Manipulation
 - Directory Manipulation
 - Viewing Files
 - Pico - A simple File Editor
 - File Globbing
 - The Home Directory

- **Users and Groups**
 - Users and Groups
 - The Linux Security Model
 - The root User
 - System Users and Groups
 - User Information Commands
 - Changing your identity

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- **Users and Groups**
- **File Access Permissions**
 - Linux File Security
 - User Categories
 - File Permission Types
 - Examining Permissions
 - Examining Directories
 - Changing Access Permissions
 - Changing Permissions
 - Default File Permissions
- **The Linux File System**
 - Linux System Directories
 - Ext2 File System Details
 - Hard Links
 - Soft (or Symbolic) Links
 - Mounting Removable Media
 - Mtools Package/Commands
 - Locating Files
 - The find Command
 - Finding and Processing Files
 - Creating an Archive
 - Extracting an Archive
 - Compression Utilities
 - Using gzip
 - Compressing Archives
- **String Processing**
 - Commands: head, tail, wc
 - The grep Command and Regular Expressions
 - The sort, diff, cut, uniq, paste and tr Commands
- **Standard I/O and Pipes**
 - Standard Input and Output
 - Redirecting Input

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- **Standard I/O and Pipes**
 - Redirecting Standard Output
 - Redirecting Standard Error
 - Using Pipes to connect Processes

- **Introduction to Processes**
 - Linux Processes
 - Process States
 - Viewing/Monitoring Processes
 - Sending Signals to Processes
 - Process Scheduling Priority
 - Foreground Processes
 - Background Processes
 - Suspending a Process
 - Listing Background and Suspended Jobs
 - Resuming Suspended Jobs

- **The bash Shell**
 - Bash Introduction
 - Bash Heritage
 - Shell Variables
 - Shell vs. Environment Variables
 - Common Variables
 - Using which
 - Command-Line Expansion
 - Using nohup
 - History - Command Recall
 - Command Return Values
 - Compound Commands
 - Aliases
 - Shell Functions
 - Startup Scripts
 - Login Shells
 - Creating Shell Scripts
 - Making Scripts Executable

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- **The bash Shell**
 - Generating Output
 - Handling Input
 - Conditional Execution Using the if Statement
 - Conditional Execution Using the case Statement
 - The for, while and until Loops
 - Using Positional Parameters

- **X/GNOME/KDE**
 - The X Window System
 - The X Protocol
 - Window Managers
 - Sawfish
 - GNOME
 - KDE
 - NextStep
 - Switchdesk
 - Mouse Configuration
 - Copy and Paste
 - Xfree86 Startup
 - Display Managers
 - GUI Terminals and Editors
 - GNU Midnight Commander
 - Web Browsers
 - Utilities and Applications
 - X Customization

- **Printing and Mailing**
 - Printing in Linux
 - Printing Commands
 - Printing From Applications
 - Printing Utilities
 - Email Clients
 - POP and IMAP

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- **Printing and Mailing**
 - **Basic Networking**
 - **Using the vi Editor**
 - **Sed, awk and perl**
 - **System Tools**
- Email Filtering
 - Basic Commands (ping, host, telnet, ftp)
 - Network Browsers
 - The R-commands
 - Secure Shell
 - Overview of vi
 - Starting vi
 - Editor Modes
 - Cursor Movement
 - Saving and Exiting vi
 - Cut, Copy and Paste
 - Undoing Changes
 - Searching For Text
 - Using Regular Expressions
 - The sed Command
 - Addresses
 - Scripting
 - The awk Command
 - Programs and Rules
 - Perl Basics
 - Terminal Configuration
 - Getting System Information
 - Scheduling Periodic Processes
 - Using cron
 - The crontab File Format
 - RPM Package Manager
 - RPM queries
 - GnoRPM

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- **System Tools**
- **Installation**
- System Administration Duties
- The Red Hat Installer
- Red Hat Linux Installation
- Partitioning Hard Drives
- Software RAID
- Network Configuration
- Package Selection
- Validating the Installation
- Post-Install Configuration
- System Configuration

Course Duration:

5 Days