

Course Duration

5 days

Unix - Linux - Solaris - Virtualisation

Red Hat™ Enterprise Linux 5 Essentials & Administration

Course Overview

Red Hat™ Enterprise Linux (RHEL) is finding its way into business, education and government. Due to its outstanding reliability, performance and low cost, RHEL is being used extensively for file, database and web server applications. The [Red Hat™ Enterprise Linux 5 Essentials & Administration](#) course is designed to cover in detail the essential topics required to administer these systems.

The [Red Hat™ Enterprise Linux 5 Essentials & Administration](#) course assumes the delegate has no prior knowledge of a Unix or Linux system and therefore starts from the basics. The course then moves on to show delegates how to manage their RHEL systems including adding user accounts; install software and hardware; access disk devices & boot-up and shut down systems

Who should attend

Computer users who will be required to administer one or more RHEL5, Fedora™ or CentOS™ 5 systems. No previous experience with a Unix or Linux based system is required

Course Objectives

At the end of this course, delegates will be able to:

- Understand the use of Linux
- Log-in and log-out of the system
- Navigate the file system
- List files and directories
- Set ownership's and permissions
- Manipulate files and directories
- View files
- Use filters and pipes
- Use wildcards, meta-characters & regular expressions
- Use the *vi* editor for basic editing
- Install RHEL5 from DVD
- Install RHEL5 using KickStart
- Boot & shutdown RHEL and understand the boot process
- Administer the Linux file system & partition disks
- Add software & packages
- Add, delete and manage users
- Perform basic network configuration

- Add, delete & manage the print system
- Perform batch processing tasks
- Monitor and maintain log files
- Understand the kernel and how it is recompiled
- Introduction to Linux RAID & Logical Volume Management

Course Outline

1. RHEL5 Introduction

- Obtaining RHEL5
- RHEL5 versions
- Rebuild versions of RHEL
- RH Certification Program

2. Introduction to the XWindow system

- The XWindow system
- Selecting a window manager
- Logging into Linux
- The Gnome window manager
- The KDE window manager
- Using the Firefox browser to access the Internet

3. Using the Linux environment

- cat, tac, zcat, head, tail, uniq, & sort commands
- Extracting lines from files
- Replacing text
- Formatting files
- Comparing Files
- File conversion tools

4. Linux File Structure

- The file structure hierarchy
- File naming conventions
- The *pwd* & *cd* commands
- Creating & removing directories
- Copying, renaming and moving files & directories
- Using links
- Deleting files and directories

5. Text Editors

- The *vim* editor
- Graphical based editors

6. The Linux shell environment

- Special & meta-characters
- Local & environmental variables
- History mechanism

7. File System Security

- Access Permissions
- Access Rights
- Changing permissions
- Permission masks

8. Advanced Shell Functionality

- File descriptors
- Shell redirection
- File & devices
- Using pipes
- Using shell aliases

9. Unix Filters & Tools

- Tools & pipelines
- Using *tr*, *cut*, *sort*, & *uniq*
- Command substitutions

10. Advanced Text Manipulation Tools

- Using the *find* command
- Comparing files
- Pattern matching
- Using *grep*, *sed* & *awk*

11. Network Access to Linux

- Introduction to Linux networking
- The *ping* command
- Using *telnet* & *ftp*
- Using the secure shell package

12. Hardware & Installation

- Hardware compatibility
- CPU, RAM, Hotswap Buses
- RHEL5 installation
- Post install steps
- Network based installation

13. The Boot Process

- BIOS initialisation
- The GRUB boot loader
- Kernel initialisation
- The *init* process and *inittab* file
- Controlling services
- System configuration files

14. The Linux Filesystem

- Partitioning hard disks
- Managing filesystems
- The *automounter*

- Access control lists

15. Package Management

- The Red Hat package manager
- The Red Hat Network
- Using *pup*, *pirut* and *yum*
- Using KickStart to automate installation

16. User Administration

- User account Management
- Basic user environment
- Shell configuration files
- Disk quotas
- Special groups
- Pluggable Authentication Module
- NIS & LDAP clients

17. System Administration Tools

- Network configuration
- The CUPS print system
- Using *cron* & *at*
- Managing log files

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