



What is Linux?

Linux is a Unix-like operating system that was designed to provide personal computer users a free or very low-cost operating system comparable to traditional and usually more expensive Unix systems. Linux has a reputation as a very efficient and fast-performing system. Linux's kernel was developed by Linus Torvalds at the University of Helsinki in Finland.

Course Description

This is a 5-day course dealing with Linux System Administration. The course is designed to give an excellent understanding of Linux systems and their configurations using RedHat Enterprise Server 5. This is a highly practical course giving delegates the chance to set up their own Linux systems and networks.

Course Objectives

On completion of this course delegates will be able to:

- Plan and install Linux systems confidently
- Install software as required
- Configure and choose suitable file systems
- Work with dynamic file systems
- Create users, groups and default configurations
- Debug system problems and fix them
- Understand the start up sequence and configure it
- Set up security for the system and across the network
- Set up and configure NIS, DNS and routing
- Use networked file systems for Unix and Windows
- Configure and administer basic Apache and Sendmail systems
- Monitor and tune your Linux system
- Set up network installations

Who should attend?

Users that have a good knowledge of Linux from an end user perspective that need to learn about the administration of Linux systems.

Prerequisites

Delegates should have attended a Unix/Linux Fundamentals course followed by 3 – 6 months solid hands on use of Unix/Linux. Alternatively delegates should have 2 or more years of Unix/Linux hands on experience.

DURATION

5 DAYS

Course Content

Installing Linux

Basic installs and what to expect. Working your way around the screens, command line

Software Planning

Planning system configuration for partitioning your Linux system. Installing/Removing packages and reading the log files.

File Systems

Basic partitioning and formatting; working with the Linux LVM.

Start up & Shutdown

Looking at the process that the system goes through and how to debug a problem. Modifying services. GRUB configuration and LILO.

Firewalls & Security

Internal and external security issues and some of the tools available to you as standard with a Linux system to help make your environment more secure.

Users & Passwords

The basics of users, groups and passwords using the flat file method of configuration to start with.

NIS

Setting up NIS, what and why you should use it, what it can do. Set up of primary and secondary clients and everything that is needed to make your system robust.

Networked File Systems

NFS for UNIX file shares and interfacing with Windows systems with SAMBA.

Recovery & GRUB

Dealing with systems that have start up issues such as corrupt root file systems, problematic configuration files, recovering root passwords, and dealing with GRUB CLI.

DNS

Setting up a DNS server and maintaining it.

Routing

Using your Linux systems as routers, and configuring routes.

Useful Services

Setting up and maintaining Apache and Sendmail, from a basic approach.

Monitoring, Performance & Tuning

Maintaining Linux systems - this section will show you the tools available and what to watch out for.

Network Install Servers

Setting up a Linux system to provide installation images to other systems on your network. Attended and unattended installs over the network.

Kernel Services

kernel Modules. Using initrd. kernel configuration using sysctl.

Package Management

YUM and RPM

Virtualization with Xen

Installing and configuring the Xen Virtualization Environment