

Linux System Administration (Server)

(5 Days)

Overview:

This course teaches how to administer a Linux environment. Topics include organization, control, administration, installation, patching/upgrading, performance and emergency procedures all reinforced by hands-on exercises.

This course will focus on Red Hat Linux, but is applicable for all versions of Linux. The course is taught with the Systemd boot process in addition to the System V init boot process.

Course Benefits:

Student will be able to administer a Linux system and understand how to use Linux tools to provide a stable and secure environment. This course provides the foundation to build on more advanced topics.

Audience:

This course is designed for individuals who are new to the administration of a Linux environment.

Prerequisites:

- Introduction to UNIX, or equivalent
- Knowledge of the vi editor

Topics Covered:

Your Role as a System Administrator

- Your Job and Its Challenges
- Remote root Access Issues
- Linux PAM Issues that Impact Access
- Setting Up root's Environment

The File System

- The root File System
- Linux File Systems - ext2 and ext3
- Linux Virtual File System layer
- Useful File System Commands
- The Network File System (NFS)
- Auto-mounting NFS File Systems

File Security

- Symbolic and Absolute chmod
- The umask
- Directory Permissions
- The Special bits
- Finding Files with Specific Permissions
- Using chown and chgrp

User Account Management

- Users
- Groups
- Security
- Standardization

Run Level Control (Startup and Shutdown)

- Boot Process and Initialization
- LILO and GRUB
- Controlling startup processes
- Single user mode
- Rescue mode
- PXE Booting

Partitioning

- Hard Drive Terminology
- Creating Partitions
- Making a File system
- Checking a File system
- Mounting a File system
- Logical Volume Management

System Management

- General Management Tools
- Scheduling Tools
- Reporting Tools
- Transferring Tools
- Symbolically Linking
- The sudo command

Networks

- The OSI and TCP/IP Models
- Subnets and Sub-netting
- CIDR Notation
- Network Utilities

Quick Start Applications

- Apache Quick Start
- Samba Quick Start

Printing Systems

- Old Printing Systems
- The CUPS Printing System
- Troubleshooting Printing Systems

Install

- Custom Install
- Updating/Patching