



Course 603: Red Hat Linux Workstation: Installing, Customizing, and Securing (5 days)

Course Description...

Five intensive days designed to make attendees experts at managing the hardware, operating system, and software of a Red Hat Linux system. Specifically, you will know how to design a disk storage system using LVM and RAID; know when to use ext2, ext3, vfat and ntfs as the file system type; know the options and best methods for installing Linux. Understand and use the peripherals available under Red Hat Linux including USB and Firewire. Know how to install, update, delete, and patch software, this includes knowing how to manage kernel modules; how to setup CUPS; understand and use the logging facilities of Red Hat Linux to solve problems; how to correctly add and delete users including customizing their environment; how to join a network, protect your host with iptables, and use network services; and how to get the best out of your X system.

Suggested Prerequisites...

A through knowledge of how to use the Linux system in day-to-day work. This must include understanding pipelines, the ability to read shell scripts, manipulate file and directories, read and understand man and info pages.

Who should attend...

Individuals requiring expert knowledge of hardware, operating system, and software of Linux. This intensive 5-day course is for those in need of detailed administration knowledge of the hardware, operations, and software of Red Hat Linux

Learning Objectives...

- Understanding, designing and manipulating disk storage systems
- Understanding, and using the peripheral of Linux
- Installing, upgrading and removing software thru RPMs, FSF tarballs
- Setup and manage local printer
- Task automation with at, cron and anacron
- How to manage and customize user accounts
- How to join a network including client side NIS, NFS, DNS, DHCP, LDAP, and ssh
- How to use iptables to protect your host
- How to configure X windows and an introduction to gnome configuration
- How to solve problems and trace software startup from initial boot
- An introduction to performance management
- How to install Red Hat Linux with and without Kickstart



Course Outline...

Unit 1: Introduction to Red Hat Linux Workstation

- Understanding distributions
- Hardware primer
- Software availability
- Documentation support

Unit 2: Boot, Initialization, Run Levels, and Shutdown

- Tracing the booting process
- Setting up GRUB
- Kernel initialization
- Run levels, Daemons, and init
- Managing Daemons
- Shutdown

Unit 3: Disk Storage

- Storage architecture
- Disk characteristics: ATA, SCSI, firewire
- Understand and building RAID
- The file system standard
- Logical file system design
- File system types: ext2, ext3
- File system integrity, security and mounting
- File system management: Space and quota
- Logical volume management (LVM)

Unit 4: Other File System Types

- Using tmpfs
- Understanding /proc
- Using Win32 file systems: VFAT, NTFS
- NFS and Automounter

Unit 5: Backup and Recovery

- Management considerations
- Using traditional tools
- Non-traditional tools (LVM snapshots)
- System recovery techniques
- File recovery techniques
- Using Recovery disk

Unit 6: Other Peripherals

- USB ports
- Serial ports
- IEEE 1394 (Firewire) ports
- Sound cards
- Floppy disks
- CDRoms, DVDs, and burning



Unit 7: Understanding Kernels

- Naming conventions
- Patching the kernel
- Managing modules
- Managing shared libraries
- /proc and sysctl

Unit 8: Software Maintenance

- Correct download procedures
- Managing with RPMs
- How to incorporate a deb
- How to incorporate an FSF Tarball
- How to incorporate commercial software
- Documentation: whatis, info, man

Unit 9: Printing

- Setup and management of local printers
- Setup and management of remote printers
- Accessing network attached printers

Unit 10: Mail

- The mail process
- Interacting with a POP, IMAP server
- Mail filtering on the host
- Mailers for Hosts: Sendmail, Postfix

Unit 11: Managing Users and Groups

- Adding an user
- Deleting an user
- Using PAM
- User setup
- Adding to LDAP
- Historical NIS

Unit 12: Watching the System

- Working with syslogd
- Other log files
- Using log files
- Managing log files: logrotate
- tmpwatch
- Automating tasks with at, cron, and anacron

Unit 13: Networking

- Overview of TCP/IP: Address, DNS
- Basics of routing
- Network configuration: Static and DHCP
- Multiple NIC cards
- Managing network access
- Client side services
- Personal firewalls: iptables



Unit 14: GUI Interfaces

- Overview of X
- Desktops and Window managers
- Configuring Xfree86
- Managing fonts
- Introduction to gnome management

Unit 15: Introduction to SELinux

- What does SELinux Do?
- Policy Overview
- Tools of SELinux
- Setting up SELinux

Unit 16: Installing a Linux Distribution

- Before you begin
- Installing options
- RAID and LVM at installation
- Network and Firewall at Installation
- Doing an install
- Doing multiple installations: Kickstart

Please contact your ROI representative to discuss course tailoring!!!