

Linux System Administration Part I & II

(MIE-LINUX-SA1 @ 2 days ; MIE-LINUX-SA2 @ 3 days)



Course Description

System Administration Part I

Prepares a person with no or little command-line knowledge ground up from scratch on Linux SA essential skill. It goes through from essential Linux commands needed as a foundation for the Part II course. It even includes the important & much neglected part of automating Linux commands using Shell Programming.

This course serves as a pre-requisite to Part II. A person could skip Part I and proceed to Part II should he/she have the skill set as described in the outline for Part I or attended other UNIX system administration training.

System Administration Part II

In this course you will learn to build skills in CORE system administration on Linux, to a level when you can setup, configure and troubleshoot a Linux system on an existing network. This course provides comprehensive hands-on training on Linux, and also **prepares you to take the famous Red Hat Certified Technician (RHCT)** and part of Comptia Linux+ certification.

Who Can Benefit

Students who can benefit from this course are individuals who are preparing to perform system administration duties where Linux OS are within their environment.

Participants could choose to attend the Part I and Part II separately.

Prerequisites

To succeed fully for Part I, students should be able to:

- Use basic computer hardware (monitor, keyboard, and mouse)
- Input commands and control characters from a keyboard

To succeed fully for Part II, students should be able to:

- Perform all in the areas as described in Part I course outline
- Or have completed any other UNIX System Administration courses (eg. Sun/HP/IBM)

Bonus

For MIE-LINUX-SA2, it also comes with a Red Hat Certified Study Guide from McGrawHill.

Course Content

Linux System Administration Part I

Essentials for Linux

- History of Linux
- Distribution of Linux
- Introduction to GUI & virtual consoles
- Introduction to Command line Interface

Hands-On LAB

- Moving around Linux GUI (GNOME AND KDE)
- Command Line Login and Moving around Runlevels.

Basic Commands and file operation

- Using command line , Ls , grep, cat , ps... etc
- file operation- using text editors(Vi Editor)
- File System paths

Hands-On LAB

- Creating file using Vi editor (Vi basic commands)
- Creating directories from command line.
- Copying and moving files within the file system.

Shell Programming

- Reading Shell Scripts
- Describe shell scripts
- Run shell scripts
- Pass values to shell scripts
- Use the test command
- Perform conditional commands

Hands-On LAB

- Understanding Simple Scripts
- Creating and executing simple Shell scripts
- Passing parameters to a script.
- File input, output operation using scripts
- Using if then else statements

Linux System Administration Part II

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REGISTRATION AND INFORMATION

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Course Content

Linux System Administration Part II

Boot Process

- The BIOS sequence
- GRUB and LILO Loader
- Kernel Initialization
- Runlevels.
- Startup services

Hands-On LAB

- Editing /etc/inittab
- GRUB Command Line
- Runlevel scripts, Booting into Runlevel of your choice

Linux File System Administration.

- Partitioning Hard Disk.
- Managing file system EXT 2 and EXT3
- Mounting and unmounting file systems FSTAB
- Access Control Lists.
- File security using Umask

Hands-On LAB

- Managing /etc/fstab
- Configuring Automounter
- Setting file permission using chown and chmod
- Changing 'umask' value

Package Management

- Red Hat package Management
- Installing RPMS using command line interface.
- Kickstart Installation

Hands-On LAB

- Installing Packages
- More RPM commands
- Adding and removing RPM packages with 'Yum' And 'Pirut'

User and group Administration

- User Account Management
- Creating and managing users and groups from GUI/CLI
- Shell Configuration file
- Disk quotas.
- Pluggable authentication Modules

Hands-On LAB

- Adding users and groups from command line
- Switching users
- Editing /etc/bashrc , /etc/profile
- Configuring disk quotas

System Administration

- Network Configuration
- DNS client configuration
- Network file system
- CUPS printing system
- Automating System administration with 'cron' Jobs
- Maintaining and monitoring system logs
- Backing up and restore
- Kernel Services

Hands-On LAB

- Network configuration using 'neat' and sysconfig file
- DNS Client
- Setting Up 'NFS' server and Client
- Automating process using 'Cron' Tab
- Backup and restore using 'tar'
- Understanding /bootand /proc
- Mirroring partition with software Raid

X window system

- X with client and server
- X.org server configuration
- Running remote X application

Hands-On LAB

- Running multiple X server
- Starting display from a remote client

Troubleshooting and system rescue.

- Troubleshooting strategies
- File system corruption
- Rescue utilities

Hands-On LAB

- RHCT hands-on trouble shooting skills

Final task half day:

- RHCT prep
- Sample test

Installation

- Hardware Compatibility
- CPU and RAM.
- Installation from CD

Hands-On LAB

- Fresh Installation

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