Saradhi Infotech ®

Linux System Administration Training Program

This course helps you handle system software, hardware and build connections between the software and physical resources. It has extensive coverage on Linux fundamentals and advanced administration, including troubleshooting and monitoring. Our project assistance and hands-on assignments give deep knowledge of mount techniques, filter commands, partition techniques, logical volume manager, password parameters, access control list, quota database creation and advanced file permissions. Apart from these concepts, you will also master Apache Web Server, DNS Services, MariaDB and Server Configurations.

Course Content

Introduction to Linux

- Introduction to Linux
- Basics of Shell
- Basics of Kernel
- CentOS 8 installation and VBox additions
- Basic Linux Commands
- ECHO and EXPR command
- Set and unset a variable
- Header of a shell script (#!)
- Labs: Executing basic Linux commands, Installing CentOS 8 on VirtualBox and adding guest additions to the installed OS

File Management

- Text editors and file creation
- Users, Groups and Processes
- Root and Linux file hierarchy
- Understanding file hierarchy
- Understanding file permissions
- chmod and chown commands
- the LS command
- Metacharacters
- Editing a file using VIM
- Displaying contents of a file
- Copy, Move and Remove files

• Labs: Using VIM, Creating users and groups, Creating files and directories, Assigning file permissions and ownership using chmod and chown, Editing files in VIM

Files and Processes

• Everything is a file in UNIX/Linux (files, directories, executables, processes)
• Process control commands (ps and kill)
• Other process control tools (top, nice, renice)
• Labs: Executing ps and kill commands on running services, Monitoring the OS using top

Introduction to Shell Scripting

• What is shell scripting
• Types of shell
• Creating and writing a shell script
• Changing the permission of the shell script
• Executing the script
• Environment variables
• Defining a local and a global variable
• User input in a shell script
• Labs: Creating a shell script, Writing and executing the shell script, creating a local and a global variable, taking input from the user in a shell script

Automating Programs

• Run Levels
• /etc/rc.d Files
• Customization of Run Levels
• cron and anacron
• at and batch
• Login Options
• Console Logon
• Controlling Console Login
• Virtual Consoles
• Serial Login
• Remote Login
• ssh Login

Building a Custom Linux Kernel

• Kernel Versions
• Kernel Source Files
• Kernel Patch Files
• Kernel Configuration
• Kernel Building
• Testing a New Kernel

The GNU/Linux Filesystem

• Partition Types
• Filesystem Types

- Mounting
- Automount
- File Types
- File Security
- Key Filesystem Locations
- Boot Files
- User Files
- Administrator Files
- Configuration Files
- Log Files

/proc Pseudo Filesystem

- Process Info
- Kernel Config Info
- Hardware Info
- Changing /proc Info
- Sysctl

BASH – Borne Again Shell

- Key /bin Commands
- Key /sbin Commands
- History
- man and info
- vi
- Using Shell Scripts

User Management

- Users and Groups
- Home Directories
- Password Files
- PAM
- Quotas
- NIS Intro

Software Management

- tar Files
- Patch Files
- RPM

Hardware Management

- Types of Devices
- /dev Namespace
- Modules

Database Connectivity

- Installing and configuring MySQL
- Securing MySQL
- Running Queries from terminal
- Running Queries from a shell script
- Labs: Downloading and installing MySQL, Connecting to MySQL from terminal, Querying directly from the terminal, Pushing the query result inside a file, CRUD operations from a shell script

Network Management

- Types of Network Devices
- Monitoring Network Devices
- Controlling Network Services
- xinted
- iptables

Network Services – Part I

- DHCP
- DNS
- SSH

Network Services – Part II

- FTP
- NFS
- Samba

Network Services – Part III

- Sendmail
- Apache
- Squid Proxy Server

The X Window System

- X Servers and X Clients
- XFree86
- X Fonts
- GTK and KDE

Exam Practice

- Installation Challenges
- Configuration Challenges
- Troubleshooting Challenges

Course Prerequisites

Basic technical user skills with computer applications on some operating systems.

Who Can Attend

This course is geared toward Windows system administrators, network administrators, database administrators, and other system administrators who are interested in supplementing current skills or supporting other team members. It is also designed for Linux system administrators responsible for installing, configuring, upgrading and maintaining Linux systems, providing operational support, monitoring system performance and availability, and writing automation scripts.

Number of Hours

40 Hours

Certification

RHCE & RHCSA

Key Features

One to One Training

Online Training

Fastrack & Normal Track

Resume Modification

Mock Interviews

Video Tutorials

Materials

Real Time Projects

Virtual Live Experience

Preparing for Certification