Linux Administration Training

WHY LITZ TECH?

Learn IT Zone is a pioneer in facilitating education using breakthrough technologies. With dedicated teams academic experts, the company has been on the forefront of heralding the next advancement in learning, thus becoming a distinctive player in bridging geographical and cultural borders, we are well connected with the networks of colleges and IT solutions. LITZ TECH INDIA PVT LTD recruits well performing students of Learn IT Zone that provides an effective career.

KEY FEATURES

- Train from professionals with industry experience
- Learn theoretical concepts and gain hands-on training simultaneously
- Real time Hands-On Practical Experience Training to imbibe corporate practices
- Get certified at the end of the training
    - Receive placement support once the training is completed
    - Getting exposure to latest technology up gradations.

- Advanced lab facility and most updated syllabus and materials will be provided with learning tools for easy learning
- You will have the access to contact the trainers at any time.

Course Syllabus

Module 1

- Installation and Initialization
- Introduction
- Installation
- Linux Architecture
- Boot Process
- Kernel
- System Initialization
- GRUB (Modify the system boot loader)
- GUI
- CLI (Access a shell prompt and issue commands with correct syntax, Use input-output redirection (>, >>, |, 2>, etc.)
- Create and edit text files, delete, copy, and move files and directories

- Introduction to Bash Shell
- Basic Commands
- Editors
- Man Pages
- Boot systems into different targets manually & automatically

Module 2

- Package Management and Process MonitoringSecuring single-user mode (su login)
- Shutting down and rebooting the system
- RPM Package Manager
- Installing and Removing Software
- Rpm Queries
- Rpm Verification
- About yum
- Using yum
- Searching packages/files
- Configuring local Repositories
- What processes are?
- The properties of a process
- Parent processes and child processes
- Killing processes and sending signals to a process (kill, killall, xkill)
- How to start processes and monitor them
- Identify CPU/memory intensive processes
- Adjust process priority
- Start/stop/check the status of network services
- Configure networking and hostname resolution statically or dynamically

Module 3

- Import Files, Directories and Utilities
- Control services and Daemons
- Start and stop services and configure services to start automatically at boot, /dev & /proc directories
- System documentation under /usr/share/doc, Awk, Sed
- Use grep and regular expressions to analyze text
- Archive
- Compress, unpack, and uncompress files using tar, star, gzip, and bzip2, dump, restore, Locate and interpret log files

Module 4

- System Services
- Network Time Protocol
- X Windows
- SSH: Secure Shell (Access remote systems using ssh, SCP, Passwordless SSH, Configure key-based authentication for SSH)
- Cron
- Controlling Access to cron
- System crontab Files
- Daily Cron Jobs

- Anacron Scheduler
- Schedule tasks using at

Module 5

- User Administration
- Adding a New User Account
- User Private Groups
- Modifying / Deleting User Accounts
- Group Administration
- Password Aging Policies
- Switching Accounts
- Sudo access
- Network Users
- Authentication Configuration
- SUID and SGID Executable
- SGID Directories
- The Sticky Bit
- Default File Permissions
- Changing file ownership (chown)
- Changing file group ownership (chgrp)
- Permissions on files
- Permissions on directories
- How permissions are applied
- Changing permissions (chmod)
- Access Control Lists (ACLs)

Module 6

- File system security and management
- Device Recognition
- Disk Partitioning
- Managing Partitions
- Making Filesystems (vfat, ext4, and xfs,)
- Mount and unmount CIFS and NFS network file systems
- Filesystems and types
- Labels
- Tune2fs
- Mount Points and /etc/fstab
- Mounting Filesystems with mount
- Unmounting Filesystems
- Handling Swap Files and Partitions
- NFS server and NFS Client
- NFS share for group collaboration
- Mounting NFS Filesystems
- Use Kerberos to control access to NFS network shares
- Automounter

Module 7

- Advanced File System Management
- Special file types

- Symbolic links (ln -s)
- Inodes and directory entries, Hard links
- Preserving links while copying and archiving
- Configuring the Quota System
- Setting Quotas for Users
- Reporting Quota Status
- What is Logical Volume Manager (LVM)?
- Creating Logical Volumes
- Resizing Logical Volumes
- Network Interfaces
- IPv4 Addresses
- Dynamic IPv4 Configuration
- Static IPv4 Configuration
- Device Aliases
- Routing Table
- Default Gateway
- Verify IP Connectivity
- Defining the Local Host Name
- Local Resolver
- Remote Resolvers
- Verify DNS Connectivity
- Network Tools
- NFS server and NFS Client
- NFS share for group collaboration

Module 8

- Server configurations
- Configure BIND to function as a caching-only DNS server
- Configure a caching-only name server to forward DNS queries
- Troubleshoot DNS client issues
- Configuring BIND options
- Configuring directory location for zone files
- Apache Overview
- Apache Server Configuration
- Virtual Hosts
- Apache Access Configuration
- Deploy a basic CGI application
- Configure TLS security
- Configure private directories
- Analyze and store logs

Module 9

- Shell scripting & Kerberos Authentication
- Shell Scripting basics
- Loops
- Shell variables
- Arrays
- Writing scripts
- Kerberos authentication

Module 10

- Samba & Mail services, Virtualization
- Configure SMB to provide network share to clients
- Configure mail server to forward all emails to Central mail server
- Introduction to KVM Virtualization
- Virtual Machine installation
- Configuring Virtual Machines
- Install centos systems as virtual guests
- Configure systems to launch virtual machines at boot
- Annie's Quizzes, LAB, Q & A, Quick Recap

Module 11

- Advanced security & Networking concepts
- SELinux Overview
- SELinux Tools
- SELinux Contexts
- SELinux Booleans
- Use SELinux port labeling to allow services to use non-standard ports
- Diagnose and address selinux policy violations
- Configure firewall settings
- N/W port security
- Route IP traffic and create static routes
- Boot level security (GRUB)
- Security need for TCP wrappers
- Configure aggregated links between two systems
- Use firewalld and associated mechanisms such as rich rules
- Zones and custom rules, to implement packet filtering and configure network address translation (NAT)
- Use /proc/sys and sysctl to modify and set kernel runtime parameters
- Linux Containers

Module 12

- Database Configuration
- Install MariaDB
- Schema Creation and Writing Queries
- Backup & restore operations
- Configure a system as either an iSCSI target or initiator that persistently mounts an iSCSI target
- Annie's Quizzes, LAB, Q & A and Quick Recap

Module 13

- IPv6 configuration, Kickstart configuration
- Ipv6 configuration
- Kickstart installation using NFS
- HTTP services
- Setting Grub Password
- Setting root password for single user mode from Grub page

- Configure systems to mount file systems at boot by Universally Unique ID (UUID) or label, List, create, delete partitions on MBR and GPT disks

Module 14

- Project – Prepare for the RHCE Exam
- Include questions from all the topics covered so far
- New troubleshooting scenarios
- Writing Scripts for given use cases
- Project for Certification, Q & A and Quick Recap