SYLLABUS

Linux Training Course

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Modules: 10 Lectures: 268 Total Duration: 38.5 Hrs

# Module - 1: Understanding Linux Concepts

* What is Linux?
* Everyday use of Linux
* Unix vs. Linux
* Quiz, Homework and Handouts

# Module - 2: Download, Install and Configure

* What is Oracle Virtual Box?
* Downloading and Installing Oracle Virtual Box
* Creating virtual machine
* Linux Distributions
* Different way to install Linux
* Downloading and Installing Linux (CentOS)
* Redhat Linux installation (Optional)
* Linux Desktop (GUI)
* Virtual Machine Management
* Linux vs. Windows
* Who Uses Linux?
* Quiz, Homework and Handouts

# Module - 3: System Access and File System

* Accessing Linux system
* Download and install Putty
* New Network Commands (ifconfig and ip)
* Connect Linux VM via Putty
* Important Things to Remember in Linux
* Introduction to File System
* File system structure description
* File system navigation commands
* File System Paths
* Directory listing overview
* Creating Files and Directories
* Linux File Types
* Finding Files and Directories (find, locate)
* Difference between find and locate command
* Changing Password
* Wildcard (\*, $, ^)
* Soft and Hard Links (ln)
* How to open image file through GUI
* Quiz, Homework and Handouts

# Module - 4: Linux Fundamentals

* Commands Syntax
* File Permissions (chmod)
* File Ownership (chown, chgrp)
* Getting Help (man, whatis etc.)
* TAB completion and up arrow keys
* Adding text to file
* Standard output to a file (tee command)
* Pipes ( | )
* File Maintenance Commands
* File Display Commands
* Filters / Text Processing Commands (cut, sort, grep, awk, uniq, wc)
* Compare Files (diff, cmp)
* Compress and un-compress files/directories (tar, gzip, gunzip)
* Truncate file size (truncate)
* Combining and Splitting Files (cat and split)
* Linux vs. Windows Commands
* Quiz, Homework and Handouts

# Module - 5: Linux System Administration

* Linux File Editors (vi text editor)
* “sed” command
* User account management
* Switch users and Sudo access
* Monitor users
* Talking to users (users, wall, write)
* Linux Directory Service - Account Authentication
* System utility commands (date, uptime, hostname, which, cal, bc etc.)
* Processes and schedules (systemctl, ps, top, kill, crontab and at)
* System Monitoring Commands (top, df, dmesg, iostat 1, netstat, free etc.)
* OS Maintenance Commands (shutdown, reboot, halt, init etc.)
* System logs monitor (/var/log)
* Changing System Hostname (hostnamectl)
* Finding System Information (uname, cat /etc/redhat-release, cat /etc/\*rel\*, dmidecode)
* System Architecture (arch)
* Terminal control keys
* Terminal Commands (clear, exit, script)
* Recover root Password (single user mode)
* SOS Report
* Environment variables
* Quiz, Homework and Handouts

# Module - 6: Shell Scripting

* Linux Kernel
* What is a Shell?
* Types of Shells
* Shell scripting
* Basic Shell scripts
* If-then scripts
* For loop scripts
* Do-while scripts
* Case statement scripts
* Aliases
* Command history

# Module - 7: Networking, Servers and System Updates

* Enabling internet in Linux VM
* Network Components
* Network files and commands (ping, ifconfig, netstat, tcpdump, networking config files)
* NIC Information (ethtool)
* NIC or port bonding
* Download files with URLs (wget)
* curl and ping commands
* File transfer commands (ftp, scp etc.)
* System updates and repositories (rpm and yum)
* System Upgrade/Patch Management
* Create Local Repository from CD/DVD
* Advance Package Management
* Rollback Patches and Updates
* SSH and Telnet
* DNS
* Hostname and IP Lookup (nslookup and dig)
* NTP
* chronyd
* Sendmail
* Apache Web Server (http)
* Central Logger (rsyslogd)
* Securing Linux Machine (OS Hardening)
* OpenLDAP Installation
* Tracing Network Traffic (traceroute)
* Quiz, Homework and Handouts

# Module - 8: Disk Management and Run Levels

* System run levels
* Linux Boot Process
* Message of the Day
* Customize Message of the Day
* Storage
* Disk partition (df, fdisk, etc.)
* Add Disk and Create Standard Partition
* Logical Volume Management (LVM)
* LVM Configuration during Installation
* Add Disk and Create LVM Partition
* Extend disk using LVM
* Adding swap space
* RAID
* File System Check (fsck and xfs\_repair)
* System Backup (dd Command)
* Network File System (NFS)
* Difference Between CentOS/Redhat 5, 6 and 7
* Quiz, Homework and Handouts

# Module - 9: All About Resume

* Resume workshop
* Cover Letter
* Linux job description or duties
* Exposure to other technologies
* Homework and Handouts

# Module - 10: All About Interview

* What is IT?
* IT Components
* Facts about IT
* Linux around us
* Linux Operating System Jobs
* IT Management Jobs
* Post resume and what to expect
* Interview workshop
* Redhat certifications
* Join Linux community
* 200+ interview questions
* Homework and handouts

# NOTES

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# ACTION ITEMS

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# NEXT WEEK’S AGENDA

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