

# Advanced Linux

## Practical Implementation in Real Time Environment

Zoom Technologies brings to you the all new Advanced Linux course. This course is designed for professionals to easily install and configure advanced Linux services like IPv6, IPsec VPN, iptables as well as configuration of SAN, MySQL, Oracle integration of Linux and Windows etc. The training will be conducted by senior System/Network engineers with several years of industry experience.

### Course Outline

- ☞ Introduction and configuration of LDAP Server.
- ☞ Configuration of Winbind Server.
- ☞ Integration of Active Directory Users with Linux Clients.
- ☞ Implementation of LDAP Backup Server.
- ☞ Introduction & configuration of ZIMBRA Mail Server.
- ☞ Authentication of SAMBA DOMAIN Server with WINDOWS Clients.
- ☞ Introduction & configuration of Oracle Database Server.
- ☞ Introduction & configuration of MySQL Database Server.
- ☞ Implementation of HTTPS Service.
- ☞ Implementation of Nagios Monitoring Tool Service.
- ☞ Introduction & configuration of SAN.
- ☞ Explanation & configuration of CLUSTER Servers.
- ☞ Importance & configuration of NTP Server.
- ☞ Introduction & configuration of VPN (PPTP & IPsec).
- ☞ Introduction & configuration of Apache Tomcat.
- ☞ Implementation of all Servers on IPv6 LDAP, WEB & MAIL etc.,
- ☞ Securing Network with Firewall (Iptables & SELinux)

Advanced  
**LINUX**  
*Practical Implementation  
in Real Time Environment*

# Course Curriculum

## LDAP Server

- Introduction of LDAP
- Structure of LDAP Schema & Features
- Comparison between NIS & LDAP
- Configuring LDAP Server Creating of LDAP Domain Database.
- LDAP Users and Groups
- Adding, Modifying and Deleting Users from LDAP Database.
- Configuring LDAP SLAVE Server as a Backup Server.
- Explaining the Data Replication in Between Master and Slave.

## W E B Server (A p a c h e )

- Introduction of Apache.
- Comparison between HTTP And HTTPS.
- Generating SSL keys & Creating CA.
- Configuring HTTPS Clients.

## Clustering (Web Based)

- Types of CLUSTER.
- Explanation of Load Balancing & LVS Components.
- Configuring Real and Backup Servers.
- Checking Load Balancing in CLUSTER Server.

## IPsecVPN

- Introduction of VPN.
- Types of VPN & VPN Protocols.
- Installing Graphical Tool of VPN.
- Configuring the Setup of VPN in Multiple Networks.

## S A N

- Introduction of SAN, DAS and NAS.
- Explaining Protocols.
- Configuring SAN Server by using SCSI Target.
- Making SAN Clients by using SCSI Initiator.

## SAMBA (PDC)

- Configuration to create a Samba PDC
- To create samba PDC Administrator User
- Add Windows workstation to Samba Domain
- Add & Delete users from Samba Domain
- Modify Samba passwords

## Winbind

- Introduction & Installing Samba
- Set up a basic smb.conf
- Joining a Member Server to the Active Directory domain
- Make Active Directory domain users/groups available locally through Winbind
- Starting the daemons, Testing the winbind user/group mapping
- Login Active Directory Users from Linux clients

## Zimbra Mail Server

- Configuration & Installation of Zimbra Mail Service
- Integration of Zimbra with LDAP
- Starting the Daemons
- Creating users Mail Accounts/Creating Groups
- Taking backup of Mail Accounts
- Maintaining the Logs of Mail Accounts

## Nagios Monitoring Tool

- Installation & configuring of Nagios & Plugins
- Create Nagios User & Group
- Installation & Configuration of Web Interface for Nagios
- Starting the Service
- Login with Nagios web Interface
- Adding Multiple Servers & Clients in Nagios

## NTP Server

- Configuration of NTP Server
- Starting the service
- NTP Synchronization
- Configuration of Client

## MYSQL Database

- Installation of MySQL on LINUX
- Starting the service
- Creating a MySQL root Account
- Location of MySQL Database
- Accessing MySQL Command Line

## • Creating and Deleting MySQL

## Oracle

- Installation & Configuration of Oracle 11g
- Create users & groups
- Assign the passwords
- Create Database Directory
- Provide Permission for Database
- Access Oracle Database for Web Interface
- Login with Oracle users from Web Interface

## APACHE TOMCAT

- Installation & Configuration of Tomcat & JDK
- Creating users & groups
- Assigning the Password
- Integration of Tomcat with Apache
- Access Tomcat with web Interface

## IPv6 Configuration

- Check For Ipv6 Support In the current running Kernel
- Adding, Checking and Removing IPv6, Gateway, and DNS IP
- Bringing Interface up/down

## Configuration of All Servers on IPv6

- LDAP, DNS, DHCP, APACHE, MAIL, and FTP etc.,

## Security with Iptables and SELinux

- Introduction of iptables chains and tables
- Configuration of iptables rules
- Activating the iptables rules
- Configuring iptables for servers
- Explanation of SELinux Policies
- Configuring SELinux Permanent/SELinux for servers

## Remote Installation

- Configuration of Kickstart
- Configuration of PXE

## Boot Process

- Booting Sequence
- Kernel Initialization
- INIT Process

## Backup and Recovery

- Introduction to various types of backup media
- Backup and restoring data using dump / restore commands
- Automation of Jobs (Cronjob & At Job)
- Remote Backup with SCP

## Proxy Server (Squid)

- Basics of proxy services
- Configuring proxy services
- Creating ACLs for controlling access to internet

## Samba Service

- Basics of file sharing in Windows
- Configuring Samba service for file sharing with windows systems

## Troubleshooting your system

- Recovering the super user password
- Recovering the boot loader (GRUB)
- Troubleshooting Xserver problems
- Troubleshooting network related problems

## Virtualization

- Managing Virtual machine with kvm & Qemu
- Starting & stopping virtual machine
- Virtualization troubleshooting

## Log Server

- Configuring Analysis and logs
- Configuring Rsyslog & Saving Syslog Messages
- Sending Syslog Message over the network
- Configuring Rsyslog clients & Users log files

## Kernel Upgradation

- Checking existing Kernel
- Upgrading Kernel with RPM tool

## IP Bonding

- Configuring IP Bonding.
- Nic Failover
- Maintain load balancing