

This course is focused on:

- ⇒ Server Administration
- ⇒ Server Security
- ⇒ Server Management and Monitoring

What you'll learn from this course

- Advanced SSH (Secure Shell) Service
- Firewall, NAT and Port Forwarding
- Primary DNS Server Configure
- 2nd DNS (Slave) Server Configure
- Linux FTP Server Configure
- Storage Server Administration (iSCSI)
- Samba Server with AD Authentication
- Mail Server (Postfix, Dovecot, Webmail)
- Web Server with PHP & MySQL
- System & Network Monitoring (Cacti)
- RADIUS Server Configure

Course Duration:

- **36 Hours**, 12 Classes, 3 Hours per class

Details Course Outline

Module 01: Advanced SSH (Secure Shell) Service

- Introduction to Secure Shell (SSH)?
- SSH Server and Client Concepts
- Access Remote Server with SSH and Putty
- Secure copy (SFTP) using '**scp**'
- Change default SSH port
- SSH Keys (Public and Private) Concept
- Configuring SSH Key-based Authentication
- Customizing SSH configuration files
- Restricting SSH logins

Module 02: Firewall, NAT and Port Forwarding

- Network Firewall concepts
- Understanding Linux application firewall
- Install and configure '**firewalld**' services
- Manage '**firewalld**' with GUI, **firewall-cmd**
- Understanding '**firewalld**' Zones
- Allow and deny by services & ports
- Limiting Network Communication
- Configure Port Forwarding
- Direct Interface and Rich Rules
- Linux NAT and IP Masquerading

Module 03: Primary DNS Server Configure

- The Domain Name System
- How DNS Server works
- Install and Configure BIND DNS Server
- Install & Configure Forwarder DNS Server
- Install & Recursive DNS Server
- Working with Authoritative DNS Server
- DNS Resource Record Types
- Forward zone and Reverse zone details
- DNS Lookup Utilities (nslookup, dig, host)
- Configure and Testing DNS Client
- DNS Server Debugging/ Troubleshooting

Module 04: 2nd DNS (Slave) Server Configure

- Importance of 2nd (Slave) DNS Server
- How Secondary DNS Server works
- Install and Configure BIND as a 2nd DNS Server
- Modify Master DNS Server Zone Files
- Verify master and slave replication
- View master, slave DNS log files
- Verify Master, Slave DNS From Client
- DNS testing using DNS utilities (nslookup, dig, host)
- Using **intoDNS** to check health and configuration
- Troubleshooting and debugging 2nd (Slave) DNS

Module 05: Linux FTP Server Configure

- Introduction to FTP Server
- How FTP Server Works
- Install and Configure FTP Server (vsFTPD)
- Access FTP with Filezilla
- Disable Anonymous login
- Authentication based FTP Server
- User restriction in FTP Server
- Advanced Configuration of FTP
- Install and configure secure FTP (SFTP)
- Design Streaming based FTP Server

Module 06: Storage Server Administration (iSCSI)

- Storage concept (DAS/SAN/NAS)
- Introduction to iSCSI
- iSCSI Target Overview
- Required packages and services for iSCSI target
- Preparing disk for iSCSI target
- iSCSI Target Configuration
- iSCSI Initiator Introduction
- Configure iSCSI initiator on Windows & Linux
- Accessing iSCSI Storage (Windows & Linux Client)
- Configure Storage Server OS using OpenFile/TrueNAS

Module 07: Samba Server with AD Authentication

- Concept of File and Block Based Storage system
- Introduction to NFS and CIFS
- Preparing Directories and Samba Users
- Samba User and Group Administration
- Explore Samba Configuration files
- Configure Samba Public Access
- Configure Samba Secure Access
- Configure Windows Client (Win 10/11)
- Accessing Network Storage with SMB
- Configure samba using AD Authentication

Module 08: Mail Server (Postfix, Dovecot, Webmail)

- SMTP, POP3 and POP3 IMAP theory
- How the Email Systems Works
- MTA, MDA, MUA Concept
- DNS Configure and MX Concepts
- Install and Configure Postfix Mail Server
- Installing and configuring Dovecot
- Postfix, Dovecot with SSL/TLS
- Configure e-mail Client (Outlook/Thunderbird)
- Install and Configure Webmail (Roundcube)

Module 09: Web Server with PHP & MySQL

- Introduction to Web Server
- Apache **HTTP** vs **NGINX** Web Server
- DNS configuration for Web Server
- Install and configure apache **HTTPD**
- **Apache** (httpd) Configuration files details
- Configure HTML Based Hosting
- Install **LAMP** stack on Server (Apache, PHP & MySQL)
- Configure Name-based Virtual Hosting
- Install SSL Certificate on Web Server
- WHM (cPanel) Based Web Hosting

Module 10: System & Network Monitoring (Cacti)

- Introduction to Network Management & Monitoring
- NMS Protocol and architectures
- Different types of NMS tools and its Applications
- Working with '**Cacti**' NMS tools
- **Cacti** features and its applications
- Required packages (PHP, MySQL, SNMP & httpd)
- **Cacti** installation and basic configuration
- Client site configuration for '**Cacti**'
- Configure '**Cacti**' to monitor Network Devices
- '**Cacti**' user administration and control

Module 11: RADIUS Server Configure

- Introduction about RADIUS Server
- How RADIUS Server Works
- Planning & Design a ISP Based RADIUS Server
- Install & Configure FreeRADIUS on CentOS 8
- Details about RADIUS Configuration Files
- Configure RADIUS Database (MySQL)
- Configure MikroTik Device as a RADIUS Client
- Configure Cisco Device as a RADIUS Client
- Configure Juniper Device as a RADIUS Client
- Troubleshooting RADIUS Server



