

# MCSE + Linux

## Microsoft Certified Solutions Expert [MCSE] Server Infrastructure Microsoft Certified Solutions Associate [MCSA]

This course is developed for IT professionals who need to design, plan, implement, manage and support Microsoft Windows 2008 and 2012 networks or who plan to take the related MCSE and MCSA exams. The training will be given by Senior System/Network engineers with several years of field experience.

### Course Outline

- ☞ Network & Operating System Essentials
- ☞ Installing and Configuring Windows Server 2012
- ☞ Administering Windows Server 2012
- ☞ Designing and Implementing Server Infrastructure
- ☞ Configuring Windows Server 2012 Services
  - Active Directory Domain Services
  - DNS, DHCP, IIS 8.0, VPN
- ☞ Configuring File Server
  - File Server Resource Manager
  - Configuring Shared Resources
- ☞ Implementing Microsoft Virtualization Technologies.
  - Server Virtualization using Hyper-V
- ☞ Configuring Advanced Storage Solutions
  - iSCSI Target and Initiator
  - Storage Spaces and Storage Pools and RAID
- ☞ Implementing Security Restrictions
  - Group Policies
  - Group Policy Preferences



# Course Curriculum

## Network Essentials

- Networking Concepts, History of Server OS
- Introduction to windows server 2008 & 2012
- Features of Windows Server 2012
- Installation of Windows Server 2012
- Introduction and Creation of Users accounts
- Conversion of GUI to Server Core
- Conversion of Server Core to GUI

## Active Directory - Domain Services

- IP Addressing
- Logical Topologies - Peer-Peer & Domain Models
- Introduction to Directory Services
- Evolution of Active Directory Services - LDAP Protocol
- Features of Active Directory
- Installing Active Directory – Domain Controller

## Member Servers, Clients, User Configuration

- Configuring Member Servers and Clients
- Creating Users in AD-DS
- User Logon policies
- Password policies
- Account Lockout policies
- User properties

## Permissions / Access Control Lists

- File Systems
- Security and Sharing Permissions - Folders & Files
- Access Based Enumeration

## Profiles and File Server Resource Manager [FSRM]

- Types of Profiles – Local & Roaming
- Home Folder
- Configuring Quotas using FSRM
- Implementing File Screening using FSRM
- Configuring Storage Reports Management
- Introduction to Distributed File System
- Creating Organisational Unit
- Delegating Control to a User

## Logical Structure of AD - DS

- Configuring ADC
- Tree Structure - Child Domain
- Forest Structure

## FSMO Roles of AD - DS

- Roles of AD - DS
- Transferring of Roles
- Seizing of Roles

## Group Policy / System Policies

- User and Computer Policies
- Scope of Policies - OU, Domain, Sites
- Group Policy Modeling (RSOP)
- Software Deployment
- Scripts, Folder Redirection
- Group Policy Preferences
- Auditing

## Active Directory Trusts

- Introduction to Trust Relationship
- Categories, Directions & Types of Trusts
- Functional Levels
- Authentication Protocols
- Configuring Forest Trusts between 2012 Forests
- Active Directory Recycle Bin

## Physical Structure of AD-DS

- Introduction to Read-Only Domain Controller
- Sites and Global Catalog
- Replication between the Domain Controllers
- AD-DS Partitions

## Dynamic Host Configuration Protocol (DHCP)

- Introduction and Configuration of DHCP Server
- DHCP Client Configuration
- Reservations
- DHCP Backup
- Configuring DHCP Failover

## Domain Name System (DNS)

- Internet Basics, Host & LM Host Files
- DNS Naming Hierarchy
- Lookup Zones - Forward and Reverse lookup Zones
- Types of Zones – Primary, Secondary & Stub Zone
- Resource Records, Integration with ADS, SRV Records
- Forwarders, Dynamic Updates

## Internet Information Services (IIS)

- IIS 8.0 Configuration
- Hosting Websites, Virtual Directories
- Redirecting Web Sites
- Backup & Restoring Sites
- FTP Sites

## Windows Deployment Services

- Introduction and Configuration of WDS Server
- Attended and Unattended Installation

## Microsoft Hyper-V

- Installation of Hyper – V
- Configuring Virtual Machine
- Configuring Virtual Networks
- Configuring Virtual Hard disks
- Configuring Hyper-V Replica

## Remote Access Service

- Remote Access Server Configuration
- NAT and VPN - PPTP

## Remote Desktop Services

- Remote Administration Mode

## Storage Technologies

- Configuring iSCSI Target and Initiator
- Introduction to Storage spaces and Storage Pools
- Configuring Simple Volume (RAID – 0)
- Configuring Mirror Volume (RAID – 1)
- Configuring Parity Volume (RAID – 5)

## Failover Clustering

- Configuring Failover on
- Hyper-V Virtual Machines

## Advanced Topics

- Windows Server Backup
- Overview of AD-FS, LDS, RMS, CS
- Upgrading Windows Server 2008 to 2012
- Configuring NLB cluster
- Overview of NAP

# LINUX

This course will cover all aspects of Linux Certification. At the end of the course delegates will have the skills required to administer a Linux System. The course will also cover Internet application server configuration on live registered domain name with valid public IP addresses. The training will be given by Senior System / Network engineers with several years of industry experience.

## Course Outline

- Introduction to UNIX & LINUX
- Files and Directories Management
- User and Group Administration
- Basic File Permissions
- Disk Partitioning and Mounting File System
- Data Backup and Recovery
- Software Package Administration
- Dynamic Host Configuration Protocol (DHCP)
- FTP Server (vsftpd daemon)
- DNS Server
- Web Server (Apache)
- Network File System (NFS)

# LINUX

*Linux Essentials  
System Administration  
Network  
Administration*

## Course Curriculum

### Introduction to UNIX & LINUX

- History of UNIX and LINUX
- Differences between CentOS, Red Hat Enterprise Linux & Fedora
- FHS and Linux Installation

### Files and Directories Management

- Creating files using cat and touch commands
- Creating directories using mkdir command
- Modifying file content using vi / vim editors

### User and Group Administration

- Creating and deleting users from the systems
- Creating and deleting groups

### Basic File Permissions

- Verifying file permissions of existing objects
- Modifying files permissions using chmod command

### Disk Partitioning and Mounting File System

- Creating partition using fdisk command
- Formatting the partitions
- Mounting the partitions

### Data Backup and Recovery

- Taking data backup using tar command

### Software Package Administration

- Installing and deleting software packages using RPM & YUM
- Querying and updating software packages

### Dynamic Host Configuration Protocol (DHCP)

- Configuring Linux as DHCP Server
- Configuring various clients for DHCP Server (Windows & Linux)

### FTP Server (vsftpd daemon)

- Basics of File Transfer Protocol
- Configuring FTP protocol to download and upload the files

### DNS Server

- Configuration of DNS server
- Configuration of forward lookup zone
- Configuration of reverse lookup zone
- Testing tool of DNS zones

### Web Server (Apache)

- Basics of Web Service
- Introduction to Apache
- Configuring Apache to host website

### Network File System (NFS)

- Configuring NFS file sharing server
- Mounting NFS shared folder from client systems