

# MCSE (Microsoft Certified System Engineer)

The MCSE certification is a globally recognized benchmark for IT professionals. Our MCSE-mapped course equips you with practical, hands-on training in Microsoft technologies, covering server infrastructure, cloud computing, network design, and data management. Delivered 100% live with interactive sessions, the program is led by industry experts and supported by world-class labs and courseware. Gain real-world skills, not just theory, and fast-track your career in one of the most in-demand IT fields. Join us and ZOOM into your networking career!

## Course Outline

- Network & Operating System Essentials
- Installing and Configuring Windows Server 2012 R2 / 2016 / 2019 / 2022
- Administering Windows Server 2012 R2 / 2016 / 2019 / 2022
- Designing and Implementing Server Infrastructure
- Configuring Windows Server 2012 R2 / 2016 / 2019 / 2022 Services
  - Active Directory Domain Services
  - DNS, DHCP, IIS 10.0, 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 2012 R2 / 2016 / 2019 / 2022
- Features of Windows Server 2019/2022
- Installation of Windows Server 2019
- Installation of Windows Server 2022
- Installation of Windows 10
- Introduction and Creation of Users accounts
- Conversion of GUI to Server Core
- Conversion of Server Core to GUI

### Active Directory - Domain Services

- IP Addressing Course Curriculum

### Physical Structure of AD-DS

- Introduction to Read-Only Domain
- 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
- Configuring Map Network Drive
- 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 Controller
- Sites and Global Catalog
- Replication between the Domain Controllers
- AD-DS Partitions
- Active Directory Recycle Bin

## **Dynamic Host Configuration Protocol (DHCP)**

- Introduction and Configuration of DHCP Server
- DHCP Client Configuration
- Reservations
- DHCP Backup and Configuring DHCP Failover
- Configuring Forest Trusts between 2022 Forests

## **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 10.0 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 2016 to 2019/2022
- Configuring NLB cluster
- Overview of NAP