



## Windows Server 2016 MCSA Bootcamp

This course will provide experienced IT professionals who wish to either upgrade their skills for the purpose of certifying on Microsoft Windows Server 2016 or who wish to gain information on Windows Server 2016 in an accelerated fashion.

Length Days: 5

### TARGET AUDIENCE

Experienced Systems Administrator with extensive hands-on working knowledge of Windows Server 2003 and/or 2008/2008 R2 and/or 2012.

### COURSE OBJECTIVES

The Microsoft Certified Solutions Associate (MCSA) certification for Windows 2012 is ideal for IT workers wanting to establish a solid foundation and understanding of Windows Server 2016. Exam Topics covered include: Installation & configuration of Windows Server 2016, Managing and understanding Active Directory Domain Services, Implementing networking services, file and print services, Implementing local storage, Administering Group Policy, Implementing Server virtualization with Hyper-V, Configure and troubleshoot DNS, Remote Access and file system security, and more...

### COURSE OUTLINE

#### 1 - INSTALLING, UPGRADING, AND MIGRATING SERVERS AND WORKLOADS

- Introducing Windows Server 2016
- Preparing and installing Nano Server and Server Core
- Preparing for upgrades and migrations
- Migrating server roles and workloads
- Windows Server activation models

## 2 - CONFIGURING LOCAL STORAGE

- Managing disks in Windows Server 2016
- Managing volumes in Windows Server 2016

## 3 - IMPLEMENTING ENTERPRISE STORAGE SOLUTIONS

- Overview of direct-attached storage, network-attached storage, and storage area networks
- Comparing Fibre Channel, iSCSI, and FCoE
- Understanding iSNS, data centre bridging, and MPIO
- Configuring sharing in Windows Server 2016

## 4 - IMPLEMENTING STORAGE SPACES AND DATA DEDUPLICATION

- Implementing Storage Spaces
- Managing Storage Spaces
- Implementing Data Deduplication

## 5 - INSTALLING AND CONFIGURING HYPER-V AND VIRTUAL MACHINES

- Overview of Hyper-V
- Installing Hyper-V
- Configuring storage on Hyper-V host servers
- Configuring networking on Hyper-V host servers
- Configuring Hyper-V virtual machines
- Managing Hyper-V virtual machines

## 6 - DEPLOYING AND MANAGING WINDOWS AND HYPER-V CONTAINERS

- Overview of containers in Windows Server 2016
- Deploying Windows Server and Hyper-V containers
- Installing, configuring, and managing containers

## 7 - OVERVIEW OF HIGH AVAILABILITY AND DISASTER RECOVERY

- Defining levels of availability
- Planning high availability and disaster recovery solutions with Hyper-V virtual machines
- Backing up and restoring the Windows Server 2016 operating system and data by using Windows Server B
- High availability with failover clustering in Windows Server 2016

## 8 - IMPLEMENTING FAILOVER CLUSTERING

- Planning a failover cluster
- Creating and configuring a new failover cluster
- Maintaining a failover cluster
- Troubleshooting a failover cluster
- Implementing site high availability with stretch clustering

## 9 - IMPLEMENTING FAILOVER CLUSTERING WITH WINDOWS SERVER 2016 HYPER-V

- Overview of integrating Hyper-V in Windows Server 2016 with failover clustering
- Implementing and maintaining Hyper-V virtual machines on failover clusters
- Key features for virtual machines in a clustered environment

## 10 - IMPLEMENTING NETWORK LOAD BALANCING

- Overview of NLB clusters
- Configuring an NLB cluster
- Planning an NLB implementation

## 11 - CREATING AND MANAGING DEPLOYMENT IMAGES

- Introduction to deployment images
- Creating and managing deployment images by using MDT
- Virtual machine environments for different workloads

## 12 - MANAGING, MONITORING, AND MAINTAINING VIRTUAL MACHINE INSTALLATIONS

- WSUS overview and deployment options
- Update management process with WSUS
- Overview of PowerShell DSC
- Overview of Windows Server 2016 monitoring tools
- Using Performance Monitor
- Monitoring Event Logs

## 13 - PLANNING AND IMPLEMENTING AN IPV4 NETWORK

- Planning IPv4 addressing
- Configuring an IPv4 host
- Managing and troubleshooting IPv4 network connectivity

## 14 - IMPLEMENTING DHCP

- Overview of the DHCP server role
- Deploying DHCP
- Managing and troubleshooting DHCP

## 16 - IMPLEMENTING DNS

- Implementing DNS servers
- Configuring zones in DNS
- Configuring name resolution between DNS zones
- Configuring DNS integration with Active Directory Domain Services (AD DS)
- Configuring advanced DNS settings

## 16 - IMPLEMENTING IPV6

- Overview of IPv6 addressing
- Configuring an IPv6 host
- Implementing IPv6 and IPv4 coexistence
- Transitioning from IPv4 to IPv6

## 17 - IMPLEMENTING AND MANAGING IPAM

- Overview of IPAM
- Deploying IPAM
- Managing IP address spaces by using IPAM

## 18 - REMOTE ACCESS IN WINDOWS SERVER 2016

- Overview of remote access
- Implementing Web Application Proxy

## 19 - IMPLEMENTING DIRECTACCESS

- Overview of DirectAccess
- Implementing DirectAccess by using the Getting Started Wizard
- Implementing and managing an advanced DirectAccess infrastructure

## 20 - IMPLEMENTING VPNS

- Planning VPNs
- Implementing VPNs

## 21 - IMPLEMENTING NETWORKING FOR BRANCH OFFICES

- Networking features and considerations for branch offices
- Implementing Distributed File System (DFS) for branch offices
- Implementing BranchCache for branch offices

## 22 - CONFIGURING ADVANCED NETWORKING FEATURES

- Overview of high performance networking features
- Configuring advanced Microsoft Hyper-V networking features

## 23 - IMPLEMENTING SOFTWARE DEFINED NETWORKING

- Overview of Software Defined Networking
- Implementing network virtualization
- Implementing Network Controller

## 24 - INSTALLING AND CONFIGURING DOMAIN CONTROLLERS

- Overview of AD DS
- Overview of AD DS domain controllers
- Deploying a domain controller

## 25 - MANAGING OBJECTS IN AD DS

- Managing user accounts
- Managing groups in AD DS
- Managing computer objects in AD DS
- Using Windows PowerShell for AD DS administration
- Implementing and managing OUs

## 26 - ADVANCED AD DS INFRASTRUCTURE MANAGEMENT

- Overview of advanced AD DS deployments
- Deploying a distributed AD DS environment
- Configuring AD DS trusts

## 27 - IMPLEMENTING AND ADMINISTERING AD DS SITES AND REPLICATION

- Overview of AD DS replication
- Configuring AD DS sites
- Configuring and monitoring AD DS replication

## 28 - IMPLEMENTING GROUP POLICY

- Introducing Group Policy
- Implementing and administering GPOs
- Group Policy scope and Group Policy processing
- Troubleshooting the application of GPOs

## 29 - MANAGING USER SETTINGS WITH GROUP POLICY

- Implementing administrative templates
- Configuring Folder Redirection, Software Installation, and Scripts
- Configuring Group Policy preferences

## 30 - SECURING ACTIVE DIRECTORY DOMAIN SERVICES

- Securing domain controllers
- Implementing account security
- Implementing audit authentication
- Configuring managed service accounts

## 31 - DEPLOYING AND MANAGING AD CS

- Deploying CAs
- Administering CAs
- Troubleshooting and maintaining CAs

## 32 - DEPLOYING AND MANAGING CERTIFICATES

- Deploying and managing certificate templates
- Managing certificate deployment, revocation, and recovery
- Using certificates in a business environment
- Implementing and managing smart cards

### 33 - IMPLEMENTING AND ADMINISTERING AD FS

- Overview of AD FS
- AD FS requirements and planning
- Deploying and configuring AD FS
- Overview of Web Application Proxy

### 34 - IMPLEMENTING AND ADMINISTERING AD RMS

- Overview of AD RMS
- Deploying and managing an AD RMS infrastructure
- Configuring AD RMS content protection

### 35 - IMPLEMENTING AD DS SYNCHRONIZATION WITH MICROSOFT AZURE AD

- Planning and preparing for directory synchronization
- Implementing directory synchronization by using Azure AD Connect
- Managing identities with directory synchronization

### 36 - MONITORING, MANAGING, AND RECOVERING AD DS

- Monitoring AD DS
- Managing the Active Directory database
- Active Directory backup and recovery options for AD DS and other identity and access solutions