

MCSA Windows Server 2016 Bootcamp ATLANTA SPECIAL

Real IT

Bootcamps

An **ATG** Learning Company

Length: 9 days

Format: Bootcamp

Time: Day



About This Course

The Microsoft Certified Solutions Associate (MCSA): Windows Server 2016 certification shows that you have the primary set of Windows Server skills that are relevant across multiple solution areas in a business environment. This foundational certification validates your ability to work with Windows Server 2016 in a real-world business context.

The primary goal of this course is to help each student pass the exams required to earn the MCSA Windows Server 2016 certification. To do this, your knowledgeable instructor will blend hands-on labs with lecture and practice exams to prepare you to pass each exam. The practice exams identify knowledge gaps that the instructor will fill with customized, hands-on labs and tailored lectures.

Required Exams

70-740 : Installation, Storage, and Compute with Windows Server 2016

70-741 : Networking with Windows Server 2016

70-742 : Identity with Windows Server 2016

Audience Profile

The MCSA Windows Server 2016 certification is for IT professionals either looking to get their first job in Microsoft technology or to document their existing skill sets. This boot camp is intended for students seeking to earn the MCSA Windows Server 2016 certification and who need an expert instructor to guide them throughout the training and exam preparation process.

Course Objectives

After completing this course, students will have the knowledge to:

- * Prepare and install Nano Server, a Server Core installation, and plan a server upgrade and migration strategy.

- * Describe the various storage options, including partition table formats, basic and dynamic disks, file systems, virtual hard disks, and drive hardware, and explain how to manage disks and volumes.
- * Describe enterprise storage solutions, and select the appropriate solution for a given situation.
- * Implement and manage Storage Spaces and Data Deduplication.
- * Install and configure Microsoft Hyper-V.
- * Deploy, configure, and manage Windows and Hyper-V containers.
- * Describe the high availability and disaster recovery technologies in Windows Server 2016.
- * Plan, create, and manage a failover cluster.
- * Implement failover clustering for Hyper-V virtual machines.
- * Configure a Network Load Balancing (NLB) cluster, and plan for an NLB implementation.
- * Create and manage deployment images.
- * Manage, monitor, and maintain virtual machine installations.
- * Plan and implement an IPv4 network.
- * Implement Dynamic Host Configuration Protocol (DHCP). Implement IPv6.
- * Implement Domain Name System (DNS).
- * Implement and manage IP address management (IPAM).
- * Plan for remote access.
- * Implement DirectAccess.
- * Implement virtual private networks (VPNs).
- * Implement networking for branch offices.
- * Configure advanced networking features.
- * Implement Software Defined Networking.
- * Install and configure domain controllers.
- * Manage objects in AD DS by using graphical tools and Windows PowerShell.
- * Implement AD DS in complex environments.
- * Implement AD DS sites, and configure and manage replication.
- * Implement and manage Group Policy Objects (GPOs).
- * Manage user settings by using GPOs.
- * Secure AD DS and user accounts.
- * Implement and manage a certificate authority (CA) hierarchy with AD CS.
- * Deploy and manage certificates.
- * Implement and administer AD FS.
- * Implement and administer Active Directory Rights Management Services (AD RMS).
- * Implement synchronization between AD DS and Azure AD.
- * Monitor, troubleshoot, and establish business continuity for AD DS services.

Outline

Module 1: Installing, upgrading, and migrating servers and workloads

This module explains how to prepare and install Nano Server and Server Core. This module also explains how to upgrade and migrate server roles and workloads. Finally, this module explains how to choose an activation model based on your environment characteristics.

Lessons

- * 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

Module 2: Configuring local storage

This module explains how to manage disks and volumes in Windows Server 2016.

Lessons

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

Module 3: Implementing enterprise storage solutions

This module describes the direct-attached storage (DAS), network-attached storage (NAS), and storage area networks (SANs). It also helps you understand Microsoft Internet Storage Name Service (iSNS) Server, data center bridging, and Multipath I/O (MPIO). Additionally, this module also compares Fibre Channel, Internet Small Computer System Interface (iSCSI), and Fibre Channel Over Ethernet (FCoE), and describes how to configure sharing in Windows Server 2016.

Lessons

- * 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

Module 4: Implementing Storage Spaces and Data Deduplication

This module explains how to implement and manage Storage Spaces. This module also explains how to implement Data Deduplication.

Lessons

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

Module 5: Installing and configuring Hyper-V and virtual machines

This module provides an overview of Hyper-V. This module also explains how to configure, manage, and install Hyper-V.

Lessons

- * 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

Module 6: Deploying and managing Windows Server and Hyper-V containers

This module provides an overview of containers in Windows Server 2016. It also explains how to deploy, install, configure, and manage containers in Windows Server 2016.

Lessons

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

Module 7: Overview of high availability and disaster recovery

This module provides an overview of high availability, business continuity, and disaster recovery. It further explains how to plan high availability and disaster recovery solutions. Additionally, in this module you will know how to back up and restore the Windows Server 2016 operating system and data by using Windows Server Backup. Finally, you will learn about Windows Server 2016 high availability with failover clustering.

Lessons

- * 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 Backup

- * High availability with failover clustering in Windows Server 2016

Module 8: Implementing and managing failover clustering

This module explains how to plan, create, configure, maintain, and troubleshoot a failover cluster. This module also explains how to implement site high availability with stretch clustering.

Lessons

- * 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

Module 9: Implementing failover clustering for Hyper-V virtual machines

This module describes integrating Hyper-V virtual machines in a clustered environment. It also explains how to implement and maintain Hyper-V virtual machines on failover clusters. Additionally, this module also explains how to configure network health protection.

Lessons

- * 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

Module 10: Implementing Network Load Balancing

This module provides an overview of NLB clusters. It also explains how to plan and configure an NLB cluster implementation.

Lessons

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

Module 11: Creating and managing deployment images

This module provides an introduction to deployment images. It also explains how to create and manage deployment images by using the Microsoft Deployment Toolkit (MDT). Additionally, it explains how to evaluate an organization's requirements for server virtualization.

Lessons

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

Module 12: Managing, monitoring, and maintaining virtual machine installations

This module provides an overview on WSUS and explains the deployment options. It explains how to update management process with WSUS and also how to use Performance Monitor. Additionally, this module also provides an overview of PowerShell Desired State Configuration (DSC) and Windows Server 2016 monitoring tools. Finally, this module describes how to use Performance Monitor and monitor Event Logs.

Lessons

- * 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

Module 13: Planning and implementing an IPv4 network

This module explains how to plan and implement an IPv4 addressing scheme to support organizational needs. This module also explains how to use fundamental networking tools and techniques to configure and troubleshoot IPv4-based networks.

Lessons

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

Module 14: Implementing DHCP

This module explains how to plan and implement DHCP to support the IPv4 infrastructure.

Lessons

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

Module 15: Implementing IPv6

This module explains how to implement IPv6, and how to integrate IPv6 and IPv4 networks.

Lessons

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

Module 16: Implementing DNS

This module explains how to install, configure, and troubleshoot DNS within the organization's network.

Lessons

- * 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

Module 17: Implementing and managing IPAM

This module explains how to implement and manage the IPAM feature in Windows Server 2016. This module also explains how to use IPAM to manage services such as DHCP and DNS.

Lessons

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

Module 18: Remote access in Windows Server 2016

This module explains how to plan for remote access in Windows Server 2016 and how to implement Web Application Proxy.

Lessons

- * Overview of remote access
- * Implementing Web Application Proxy

Module 19: Implementing DirectAccess

This module explains how to implement and manage DirectAccess in Windows Server 2016.

Lessons

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

Module 20: Implementing VPNs

This module explains how to implement and manage remote access in Windows Server 2016 by using VPNs.

Lessons

- * Planning VPNs
- * Implementing VPNs

Module 21: Implementing networking for branch offices

This module explains how to implement network services for branch offices.

Lessons

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

Module 22: Configuring advanced networking features

This module explains how to implement an advanced networking infrastructure.

Lessons

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

Module 23: Implementing Software Defined Networking

This module explains how to implement software defined networking.

Lessons

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

Module 24: Installing and configuring domain controllers

This module describes features of AD DS and how to install domain controllers (DCs). It also covers the considerations for deploying DCs.

Lessons

- * Overview of AD DS
- * Overview of AD DS domain controllers
- * Deploying a domain controller
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Module 25: Managing objects in AD DS

This module describes how to use various techniques to manage objects in AD DS. This includes creating and configuring user, group, and computer objects.

Lessons

- * 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

Module 26: Advanced AD DS infrastructure management

This module describes how to plan and implement an AD DS deployment that includes multiple domains and forests. The module provides an overview of the components in an advanced AD DS deployment, the process of implementing a distributed AD DS environment, and the procedure for configuring AD DS trusts.

Lessons

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

Module 27: Implementing and administering AD DS sites and replication

This module describes how to plan and implement an AD DS deployment that includes multiple locations. The module explains how replication works in a Windows Server 2016 AD DS environment.

Lessons

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

Module 28: Implementing Group Policy

This module describes how to implement a GPO infrastructure. The module provides an overview of the

components and technologies that compose the Group Policy framework.

Lessons

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

Module 29: Managing user settings with Group Policy

This module describes how to configure Group Policy settings and Group Policy preferences. This includes implementing administrative templates, configuring folder redirection and scripts, and configuring Group Policy preferences.

Lessons

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

Module 30: Securing Active Directory Domain Services

This module describes how to configure domain controller security, account security, password security, and Group Managed Service Accounts (GMSA).

Lessons

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

Module 31: Deploying and managing AD CS

This module describes how to implement an AD CS deployment. This includes deploying, administering, and troubleshooting CAs.

Lessons

- * Deploying CAs
- * Administering CAs
- * Troubleshooting and maintaining CAs

Module 32: Deploying and managing certificates

This module describes how to deploy and manage certificates in an AD DS environment. This involves deploying and managing certificate templates, managing certificate revocation and recovery, using certificates in a business environment, and implementing smart cards.

Lessons

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

Module 33: Implementing and administering AD FS

This module describes AD FS and how to configure AD FS in a single-organization scenario and in a partner-organization scenario.

Lessons

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

Module 34: Implementing and administering AD RMS

This module describes how to implement an AD RMS deployment. The module provides an overview of AD RMS, explains how to deploy and manage an AD RMS infrastructure, and explains how to configure AD RMS content protection.

Lessons

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

Module 35: Implementing AD DS synchronization with Microsoft Azure AD

This module describes how to plan and configure directory syncing between Microsoft Azure Active Directory (Azure AD) and on-premises AD DS. The module describes various sync scenarios, such as Azure AD sync, AD FS and Azure AD, and Azure AD Connect.

Lessons

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

Module 36: Monitoring, managing, and recovering AD DS

This module describes how to monitor, manage, and maintain AD DS to help achieve high availability of AD DS.

Lessons

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