



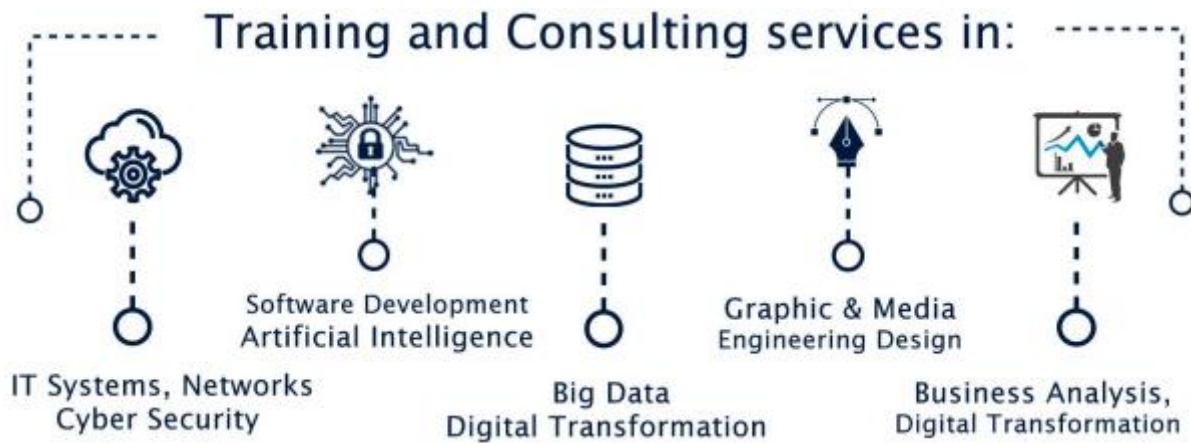
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Course Brochure

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MCSA 2016 Windows Server 2016

Duration: 120 Hours

Category: IT Networks & Security

Course Overview

This course include:

- 20740A: Installation, Storage, and Compute with Windows Server 2016.
- 20741A: Networking with Windows Server 2016.
- 20742 A: Identity with Windows Server 2016.

Course Outcomes

After taking this course, you will be able 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, and configure virtual machines.
- 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 and administer Active Directory Rights Management Services (AD RMS).
- 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 synchronization between AD DS and Azure AD.
- Monitor, troubleshoot, and establish business continuity for AD DS services.

Audience profiles

- Windows Server administrators who are relatively new to Windows Server administration and related technologies, and who want to learn more about the storage and compute features in Windows Server 2016.
- IT professionals with general IT knowledge who are looking to gain knowledge about Windows Server especially around storage and compute technologies in Windows Server 2016.
- The secondary audience for this course is IT professionals looking to take the Microsoft 70-740 certification exam, Installation, Storage and Compute with Windows Server 2016.
- Network administrators who are looking to reinforce existing skills and learn about new networking technology changes and functionality in Windows Server 2016.
- System or Infrastructure Administrators with general networking knowledge who are looking to gain core and advanced networking knowledge and skills on Windows Server 2016.
- The secondary audience for this course is those IT professionals who are looking to take the MCSA 70-741: Networking with Windows Server 2016 exam.
- AD DS administrators who are looking to train in identity and access technologies with Windows Server 2012 or Windows Server 2016.
- System or infrastructure administrators with general AD DS experience and knowledge who are looking to cross-train in core and advanced identity and access technologies in Windows Server 2012 or Windows Server 2016.
- The secondary audience for this course includes IT professionals who are looking to consolidate their knowledge about AD DS and related technologies, in addition to IT professionals who want to prepare for the 70-742 exam.

Prerequisites

Before attending this course, students must have:

- A basic understanding of networking fundamentals.

Course Outline

Course 20740A: Installation, Storage, and Compute with Windows Server 2016 Course Outline

- **Module 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
- **Module 2: Configuring local storage**
 - Managing disks in Windows Server 2016
 - Managing volumes in Windows Server 2016
- **Module 3: Implementing enterprise storage solutions**
 - Overview of direct-attached storage, network-attached storage, and storage area networks
 - Comparing Fiber Channel, iSCSI, and FCoE
 - Understanding iSNS, data center bridging, and MPIO
 - Configuring sharing in Windows Server 2016
- **Module 4: Implementing Storage Spaces and Data Deduplication**
 - Managing Storage Spaces
 - Implementing Data Deduplication
- **Module 5: Installing and configuring Hyper-V and virtual machines**
 - Overview of Hyper-V
 - Installing Hyper-V
 - Configuring storage on Hyper-V host servers
- **Module 6: Deploying and managing Windows Server and Hyper-V containers**
 - 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**
 - 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
- **Module 8: Implementing and managing 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

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

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**

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

- **Module 11: Creating and managing deployment images**

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**

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

Course: 20741A: Networking with Windows Server 2016

Course Outline

- **Module 1: Planning and implementing an IPv4 network**
 - Planning IPv4 addressing
 - Configuring an IPv4 host
 - Managing and troubleshooting IPv4 network connectivity
- **Module 2: Implementing DHCP**
 - Overview of the DHCP server role
 - Deploying DHCP
 - Managing and troubleshooting DHCP
- **Module 3: Implementing IPv6**
 - Overview of IPv6 addressing
 - Configuring an IPv6 host
 - Implementing IPv6 and IPv4 coexistence
 - Transitioning from IPv4 to IPv6
- **Module 4: 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
- **Module 5: Implementing and managing IPAM**
 - IPAM overview
 - Deploying IPAM
 - Managing IP address spaces by using IPAM
- **Module 6: Remote access in Windows Server 2016**
 - Remote access overview
 - Implementing Web Application Proxy
- **Module 7: Implementing DirectAccess**
 - Overview of DirectAccess
 - Implementing DirectAccess by using the Getting Started Wizard
 - Implementing and managing an advanced DirectAccess infrastructure
- **Module 8: Implementing VPNs**
 - Planning VPNs
 - Implementing VPNs
- **Module 9: 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
- **Module 10: Configuring advanced networking features**

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

- **Module 11: Implementing software defined networking**

Overview of software defined networking
Implementing network virtualization
Implementing Network Controller

Course 20742 A: Identity with Windows Server 2016

Course Outline

- **Module 1: Installing and configuring DCs**
 - Overview of AD DS
 - Overview of AD DS DCs
 - Deploying DCs
- **Module 2: Managing objects in AD DS**
 - Managing user accounts
 - Managing groups in AD DS
 - Managing computer accounts
 - Using Windows PowerShell for AD DS administration
 - Implementing and managing organizational units
- **Module 3: Advanced AD DS infrastructure management**
 - Overview of advanced AD DS deployments
 - Deploying a distributed AD DS environment
 - Configuring AD DS trusts
- **Module 4: Implementing and administering AD DS sites and replication**
 - Overview of AD DS replication
 - Configuring AD DS sites
 - Configuring and monitoring AD DS replication
- **Module 5: Implementing Group Policy**
 - Introducing Group Policy
 - Implementing and administering GPOs
 - Group Policy scope and Group Policy processing
 - Troubleshooting the application of GPOs
- **Module 6: Managing user settings with GPOs**
 - Implementing administrative templates
 - Configuring Folder Redirection and scripts
 - Configuring Group Policy preferences
- **Module 7: Securing AD DS**
 - Securing domain controllers
 - Implementing account security
 - Audit authentication
 - Configuring managed service accounts (MSAs)
- **Module 8: Deploying and managing AD CS**
 - Deploying CAs
 - Administering CAs
 - Troubleshooting and maintaining CAs
- **Module 9: 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

- **Module 10: Implementing and administering AD FS**

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

- **Module 11: Implementing and administering AD RMS**

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

- **Module 12: Implementing AD DS synchronization with Azure AD**

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

- **Module 13: Monitoring, managing, and recovering AD DS**

Monitoring AD DS
Managing the AD DS database
Recovering AD DS objects.