



Microsoft Windows Server-2016

Course Overview:

This 84 Hours course is designed primarily for IT professionals who have some experience with Windows Server, provides the fundamental networking skills required to deploy and support Windows Server 2016 in most organizations, and course teaches IT Pros how to deploy and configure Active Directory Domain Services (AD DS) in a distributed environment, how to implement Group Policy, how to perform backup and restore, and how to monitor and troubleshoot Active Directory-related issues with Windows Server 2016. It is designed for professionals who will be responsible for managing storage and compute by using Windows Server 2016, and who need to understand the scenarios, requirements, and storage and compute options that are available and applicable to Windows Server 2016. It covers IP fundamentals, remote access technologies, and more advanced content including Software Defined Networking. Additionally, this course teaches how to deploy other Active Directory server roles such as Active Directory Federation Services (AD FS) and Active Directory Certificate Services (AD CS).

Audience profile

This course is intended for IT professionals who have some experiencing working with Windows Server, and who are looking for a single five-day course that covers storage and compute technologies in Windows Server 2016. This course will help them update their knowledge and skills related to storage and compute for Windows Server 2016.

Candidates suitable for this course would be:

- 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.

Prerequisites:

Before attending this course, students must have:

- A basic understanding of networking fundamentals.
- An awareness and understanding of security best practices.
- An understanding of basic AD DS concepts.
- Basic knowledge of server hardware.
- Experience supporting and configuring Windows client operating systems such as Windows 8 or Windows 10.

Additionally, students would benefit from having some previous Windows Server operating system experience, such as experience as a Windows Server systems administrator.

This Course Includes Delivery of the Following Certification Exams:

- (Exam -70-740): Installation, Storage, and Compute with Windows Server 2016
- (Exam 70-741): Networking with Windows Server 2016
- (Exam 70-742): Identity with Windows Server 2016

Course Duration

- **84 hours**, 28 Classes, 3 Hours per class
- **84 Hours**, 21 Classes, 4 Hours per class

Details Course Outline

Installation, Storage, and Compute with Windows Server 2016 (Exam-70-740)

<p>Module 1: Installing, upgrading, and migrating servers and workloads</p> <ul style="list-style-type: none"> • 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 <p>Module 2: Configuring local storage</p> <ul style="list-style-type: none"> • Managing disks in Windows Server • Managing volumes in Windows Server <p>Module 3: Implementing enterprise storage solutions</p> <ul style="list-style-type: none"> • Overview of DAS, NAS, and SANs • Comparing Fibre Channel, iSCSI, and Fibre Channel over Ethernet • Understanding iSNS, DCB, and MPIO • Configuring sharing in Windows Server 2016 <p>Module 4: Implementing Storage Spaces and Data Deduplication</p> <ul style="list-style-type: none"> • Implementing Storage Spaces • Managing Storage Spaces • Implementing Data Deduplication <p>Module 5: Installing and configuring Hyper-V and virtual machines</p> <ul style="list-style-type: none"> • Overview of Hyper-V • Installing Hyper-V • Configuring storage on Hyper-V host servers • Configuring networking on Hyper-V host servers 	<p>Module 7: Overview of high availability and disaster recovery</p> <ul style="list-style-type: none"> • Defining levels of availability • Planning high availability and disaster recovery solutions with Hyper-V virtual machines • Backing up and restoring by using Windows Server Backup • High availability with failover clustering in Windows Server 2016 <p>Module 8: Implementing failover clustering</p> <ul style="list-style-type: none"> • 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 <p>Module 9: Implementing failover clustering with Windows Server 2016 Hyper-V</p> <ul style="list-style-type: none"> • Overview of the integration of Hyper-V Server 2016 with failover clustering • Implementing Hyper-V VMs on failover clusters • Key features for VMs in a clustered environment <p>Module 10: Implementing Network Load Balancing</p> <ul style="list-style-type: none"> • Overview of NLB • Configuring an NLB cluster • Planning an NLB implementation <p>Module 11: Creating and managing deployment</p>
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<ul style="list-style-type: none"> • <i>Configuring Hyper-V virtual machines</i> • <i>Managing virtual machines</i> <p>Module 6: Deploying and managing Windows and Hyper-V containers</p> <ul style="list-style-type: none"> • <i>Overview of containers in Windows Server 2016</i> • <i>Deploying Windows Server and Hyper-V containers</i> • <i>Installing, configuring, and managing containers by using Docker</i> 	<p>images</p> <ul style="list-style-type: none"> • <i>Introduction to deployment images</i> • <i>Creating and managing deployment images by using MDT</i> • <i>Virtual machine environments for different workloads</i> <p>Module 12: Managing, monitoring, and maintaining virtual machine installations</p> <ul style="list-style-type: none"> • <i>WSUS overview and deployment options</i> • <i>Update management process with WSUS</i> • <i>Overview of Windows PowerShell DSC</i> • <i>Overview of Windows Server 2016 monitoring tools</i> • <i>Using Performance Monitor</i> • <i>Monitoring event logs</i>
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Networking with Windows Server 2016 (Exam -70-741)

<p>Module 1: Planning and implementing an IPv4 network</p> <ul style="list-style-type: none"> • <i>Planning IPv4 addressing</i> • <i>Configuring an IPv4 host</i> • <i>Managing and troubleshooting IPv4 network connectivity</i> <p>Module 2: Implementing DHCP</p> <ul style="list-style-type: none"> • <i>Overview of the DHCP server role</i> • <i>Deploying DHCP</i> • <i>Managing and troubleshooting DHCP</i> <p>Module 3: Implementing IPv6</p> <ul style="list-style-type: none"> • <i>Overview of IPv6 addressing</i> • <i>Configuring an IPv6 host</i> • <i>Implementing IPv6 and IPv4 coexistence</i> • <i>Transitioning from IPv4 to IPv6</i> <p>Module 4: Implementing DNS</p> <ul style="list-style-type: none"> • <i>Implementing DNS servers</i> • <i>Configuring zones in DNS</i> • <i>Configuring name resolution between DNS zones</i> • <i>Configuring DNS integration with Active Directory Domain Services (AD DS)</i> • <i>Configuring advanced DNS settings</i> <p>Module 5: Implementing and managing IPAM</p> <ul style="list-style-type: none"> • <i>Overview of IPAM</i> • <i>Deploying IPAM</i> • <i>Managing IP address spaces by using IPAM</i> 	<p>Module 6: Remote access in Windows Server 2016</p> <ul style="list-style-type: none"> • <i>Overview of remote access</i> • <i>Implementing the Web Application Proxy</i> <p>Module 7: Implementing DirectAccess</p> <ul style="list-style-type: none"> • <i>Overview of DirectAccess</i> • <i>Implementing DirectAccess by using the Getting Started Wizard</i> • <i>Implementing and managing an advanced DirectAccess infrastructure</i> <p>Module 8: Implementing VPNs</p> <ul style="list-style-type: none"> • <i>Planning VPNs</i> • <i>Implementing VPNs</i> <p>Module 9: Implementing networking for branch offices</p> <ul style="list-style-type: none"> • <i>Networking features and considerations for branch offices</i> • <i>Implementing Distributed File System (DFS) for branch offices</i> • <i>Implementing BranchCache for branch offices</i> <p>Module 10: Configuring advanced networking features</p> <ul style="list-style-type: none"> • <i>Overview of high performance networking features</i> • <i>Configuring advanced Microsoft Hyper-V networking features</i> <p>Module 11: Implementing Software Defined Networking</p> <ul style="list-style-type: none"> • <i>Overview of SDN.</i> • <i>Implementing network virtualization</i> • <i>Implementing Network Controller</i>
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Identity with Windows Server 2016 (Exam-70-742)

Module 1: Installing and configuring domain controllers

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

Module 2: 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

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 Group Policy

- Implementing administrative templates
- Configuring Folder Redirection, software installation, and scripts
- Configuring Group Policy preferences

Module 7: Securing Active Directory Domain Services

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

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 Microsoft 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 Active Directory database
- Active Directory backup and recovery options for AD DS and other identity and access solutions