

Installation, Storage, and Compute with Windows Server 2016



Purpose of the training

This course is intended for:

- IT **professionals** who have some experience 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.
- Windows Server **administrators** who are relatively new to Windows Server administration and related technologies
 - 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.
- IT professionals looking to take the Microsoft **70-740** certification **exam**, Installation, Storage and Compute with Windows Server 2016.



Benefits of completing the training

After completing this course, students 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**
 - drive hardware
 - 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



Expected Listener Preparation

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.

An ability to use English language materials.



Training Language

- **Training:** English
- **Materials:** English



Training Includes

- manual in electronic form available on the platform: <https://www.altkomakademia.pl/>
- access to Altkom Akademia's student portal



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Training agenda

1. **Installing**, upgrading, and **migrating** servers and workloads
 - Introducing Windows Server 2016
 - Preparing and installing 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
 - Managing volumes in **Windows Server**
3. Implementing enterprise storage solutions
 - 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
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 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 by using Docker
- 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 by using Windows Server Backup
 - 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 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
- 10. Implementing Network Load Balancing
 - Overview of **NLB**
 - 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 Windows PowerShell DSC
 - Overview of Windows Server 2016 monitoring tools
 - Using Performance Monitor
 - Monitoring event logs