training code: AA_20745 / ENG DL 5d / EN

Implementing a Software-Defined DataCenter Using System Center Virtual Machine Manager

Training recipients

This course is intended for IT professionals and administrators who are responsible for designing, implementing, and managing virtualization infrastructure in a software-defined datacenter by using System Center 2016 Virtual Machine Manager. The main focus of this course is on managing Hyper-V virtualization infrastructure in Windows Server 2016, although the course also covers other virtualization platforms that can be managed by using Virtual Machine Manager 2016.
This course is also intended for IT decision makers who want to determine which virtualization product to implement in their software-defined datacenters and who want to become familiar with the System Center 2016 solution for managing virtualization infrastructure.

Benefits

After completing this course, students will be able to:

- Explain the different virtualization options.
- Install and manage Hyper-V on Windows Server 2016.
- Install and configure System Center 2016 Virtual Machine Manager.
- Manage storage fabric and fabric updates.
- Configure and manage the Virtual Machine Manager library and library objects.
- Manage the networking fabric.
- Create and manage virtual machines by using Virtual Machine Manager.
- Manage clouds in Virtual Machine Manager.
- Manage services in Virtual Machine Manager.
- Monitor a virtualization infrastructure by using System Center Operations Manager.
- Implement and manage Microsoft Hyper-V Replica and Microsoft Azure Site Recovery.

- Protect virtualization infrastructure by using Data Protection Manager.

Training program

1. Introduction to server virtualization
   - Overview of Microsoft Virtualization
   - Introducing the software-defined datacenter
   - Extending virtualization to the cloud
2. Overview of Hyper-V virtualization
   - Installing and configuring the Hyper-V role
   - Creating and managing virtual hard disks and virtual machines
   - Creating and using Hyper-V virtual switches
   - Implementing failover clustering with Hyper-V
3. Installing and configuring Virtual Machine Manager
   - Overview of Virtual Machine Manager
   - Installing Virtual Machine Manager
   - Adding hosts and managing host groups
4. Managing storage fabric and fabric updates
   - Overview of server virtualization storage technologies
   - Managing storage fabric
   - Managing fabric updates
5. Configuring and managing the Virtual Machine Manager library and library objects
   - Overview of the Virtual Machine Manager library
   - Preparing Windows for deployment in Virtual Machine Manager
   - Working with profiles
   - Working with VM templates
6. Managing the networking fabric
   - Networking concepts in Virtual Machine Manager
   - Managing Software Defined Networking
   - Understanding network function virtualization
7. Creating and managing virtual machines by using Virtual Machine Manager
   - VM management tasks
   - Creating, cloning, and converting VMs
8. Managing clouds in Microsoft System Center Virtual Machine Manager
   - Introduction to clouds
   - Creating and managing a cloud
   - Creating user roles in Virtual Machine Manager
9. Managing services in Virtual Machine Manager

- Overview of services in Virtual Machine Manager
- Creating and managing services in Virtual Machine Manager

10. Monitoring a virtualization infrastructure by using System Center Operations Manager
    - Operations Manager architecture and security
    - Using Operations Manager for monitoring and reporting
    - Integrating Operations Manager with Virtual Machine Manager and Data Protection Manager
11. Implementing and managing Hyper-V Replica and Azure Site Recovery
    - Implementing and managing Hyper-V Replica
    - Implementing and managing Azure Site Recovery
12. Protecting a virtualization infrastructure by using Data Protection Manager
    - Overview of backup and restore options for VMs
    - Configuring and managing Data Protection Manager for virtualization infrastructure protection

Expected preparation of the participant

In addition to their professional experience, students who attend this training should already have the following technical knowledge:

- An understanding of TCP/IP and networking concepts
- An understanding of different storage technologies and concepts
- Familiarity with different types of virtualizations
- Familiarity with Windows Server and Windows Server administration
- An understanding of Windows PowerShell

Students should have the ability to work in a team/virtual team and possess good documentation and communication skills.

Students who attend this training can meet the prerequisites by attending the following courses, or obtaining equivalent knowledge and skills:

- 20740 – Storage & Compute with Windows Server 2016
- 20741 – Networking with Windows Server 2016

To increase the comfort of work and training’s effectiveness we suggest using an additional monitor. The lack of additional monitor does not exclude participation in the training, however, it significantly influences the comfort of work during classes.

Training Includes

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

Duration

5 days / 35 hours

Language

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