

M55601-1A - Implementing and Managing Microsoft Virtualization Platforms

Duration: 3 Days

Level: 300 - Advanced

Vendor: Microsoft, Virtualization

Legacy MOC Code: M20409

Course

Overview

This three-day course provides students with the fundamental knowledge and skills to implement, configure and manage Microsoft Windows Server Hyper-V. Additionally, this course provides an overview of implementing and managing Containers using CLI, PowerShell and Windows Admin Center.

This course is intended to help provide pre-requisite skills for Administrators who manage and implement Server Virtualisation technologies within their network.

This course is based on Microsoft Windows Server 2025 but it backwards compatible to previous versions of Hyper-V and Windows Server.

Audience

Profile

This course is intended for IT Professionals already experienced in general Windows Server and Windows Client administration. No prior experience of virtualisation is assumed. This course will help them update their knowledge and skills of virtualisation using Hyper-V related to Windows Server 2016, Windows Server 2019, Windows Server 2022 and Windows Server 2025.

Before attending this course, students must have:

- Knowledge and real-world experience working day-to-day with Windows Servers in an enterprise environment.
- Knowledge of and experience of Windows Server and Windows Client administration, maintenance and troubleshooting.

Additionally, students would benefit from having some previous experience of Windows PowerShell.

Course

Outline

Module 1 – Introduction to Microsoft Virtualization Technologies

This module provides an overview of Microsoft virtualization technologies and the various components. The module also explains how to evaluate the current environment for virtualization and extend virtualization to the cloud.

- Microsoft Virtualization Overview
- Components and versions of Hyper-V and Microsoft Virtualization solutions
- Assess current context for virtualization
- Extend virtualization to cloud environment

Module 2 – Install and Configure the Hyper-V Role

This module describes how to install and manage the Hyper-V role. The module also explains how to configure Hyper-V settings, storage, and networking.

- Hyper-V Role installation
- Hyper-V management
- Configure Hyper-V Settings
- Hyper-V Host storage and networking

Module 3 – Creating and Managing Virtual Hard Disks, Virtual Machines, and Checkpoints

This module explains how to create and configure virtual hard disks and virtual machines. The module then describes how to install, import, monitor, and manage virtual machines.

- Virtual hard disks creation and configure
- Virtual machines creation and configuration
- Install and import virtual machines
- Manage virtual machine checkpoints
- Monitoring Hyper-V
- Design Virtual Machines for Server Roles and Services

Module 4 – Creating and Configuring Virtual Machine Networks

This module explains how to create and use Hyper-V virtual switches and Hyper-V networking features. The module also describes how to configure and implement Hyper-V network virtualization:

- Set up and use Hyper-V Virtual Switches
- Advanced features of Hyper-V Networking
- Configure and use Hyper-V Network Virtualization

Module 5 – Virtual Machine Movement and Hyper-V Replica

This module describes how to provide high availability and redundancy for virtualization. The module also explains how to implement virtual machine movement and Hyper-V Replica.

- Provide high availability and redundancy for Virtualization
- Implement virtual machine movement and Hyper-V replica
- Manage Hyper-V replica

Module 6 – Implementing Failover Clustering with Hyper-V

This module provides an overview of failover clustering. The module also describes how to configure shared storage, and how to implement failover clustering with Hyper-V.

- Failover clustering overview
- Failover clustering with Hyper-V implementation and management

Module 7 – Implementing Containers

This module provides an overview of containers in Windows Server. Additionally, this module explains how to deploy Windows Server and Hyper-V containers. It also explains how to install, configure, and manage containers by using Windows PowerShell and Docker..

- Overview of Windows Server and Hyper-V containers
- Install, configure, and manage containers