Windows Server Virtualization Technologies Training

Duration: **5 Day**

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This five-day course provides IT professionals with the practical knowledge and skills needed to implement, configure, and manage virtualization technologies in **Windows Server 2025**.

The main focus of the programme is **Hyper-V**, while enterprise-scale management is addressed through **System Center Virtual Machine Manager (SCVMM)**. Participants learn how to design, deploy, and manage virtual machines, storage, and networking across modern server environments, with particular attention to availability, resilience, and scalability.

The course also introduces container technologies available in Windows Server 2025. Learners explore how to deploy and manage containers using command-line tools, PowerShell, and Windows Admin Center.

In addition, the programme covers **Remote Desktop Services (RDS)**, including both session-based desktop environments and Virtual Desktop Infrastructure (VDI). This enables participants to understand how virtual desktop solutions can be designed and supported according to organisational requirements.

Prerequisites

Participants should have practical experience working with Windows Server in an enterprise environment.

Recommended experience includes:

- Administration of Windows Server and Windows Client systems
- Server maintenance and troubleshooting
- User management
- Basic networking
- Server configuration

Previous Windows PowerShell experience is not mandatory, but it is beneficial because PowerShell is used throughout the course to support automation and management activities.

Who Should Attend

This course is suitable for:

- Windows Server administrators who are new to virtualization and want to develop practical skills with Hyper-V, containers, and Remote Desktop Services
- IT professionals with general system administration experience who want to develop their careers in virtualization technologies
- Administrators with experience in platforms such as VMware, Proxmox, XenServer, or Red Hat Virtualization who want to transfer their skills to Windows Server 2025

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What You Will Learn

By the end of the course, participants will be able to:

- Install and configure the Hyper-V role in Windows Server 2025
- Design and configure Hyper-V virtual networking for enterprise workloads
- Compare virtual hard disk types and select suitable options according to performance and availability requirements
- Create, configure, and manage virtual machines on Hyper-V hosts
- Configure Hyper-V for high availability and disaster recovery scenarios
- Centrally manage Hyper-V hosts and virtual machines using System Center Virtual Machine Manager
- Deploy, configure, and manage Windows Server and Hyper-V containers
- Install and configure Remote Desktop Services for session-based desktops and Virtual Desktop Infrastructure

Training Outline

1. Hyper-V Virtualization Fundamentals

This module introduces server virtualization concepts and the Hyper-V role in Windows Server 2025.

Participants explore the benefits of virtualization and how Hyper-V fits into modern infrastructure designs.

Topics Include

- Server virtualization concepts
- The Hyper-V role in Windows Server 2025
- Installing Hyper-V
- Configuring host storage
- Designing virtual networking
- Creating and managing virtual machines
- Planning for availability
- Disaster recovery with Hyper-V Replica

2. Hyper-V Failover Clustering

This module explains how Hyper-V can be integrated with Windows Server Failover Clustering to provide high availability.

Topics Include

- Hyper-V failover cluster architecture
- Shared storage options
- Virtual machine placement in clustered environments
- Virtual machine features available in failover clusters
- High availability configuration

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3. System Center Virtual Machine Manager Overview

This section introduces **System Center Virtual Machine Manager** and its role in centrally managing Hyper-V environments.

Topics Include

- SCVMM concepts
- Enterprise virtualization management
- Adding virtualization hosts to VMM
- Organising hosts
- Managing host groups
- Applying consistent configuration across the environment

4. SCVMM Networking and Storage

This module focuses on managing networking and storage through System Center Virtual Machine Manager.

Topics Include

- VMM networking concepts
- Configuring logical networks
- Managing storage infrastructure
- SAN
- Disk arrays
- iSCSI
- File-based storage solutions
- Storage visibility and control across the virtualized environment

5. SCVMM Library, Objects, and Virtual Machines

This section explains how the VMM Library supports standardized deployment processes.

Topics Include

- Configuring the VMM Library
- Managing library resources
- Profiles
- Templates
- Standardized virtual machine deployment
- Service deployment
- Managing virtual machine objects within VMM

6. Containers in Windows Server 2025

This module introduces container technologies available in Windows Server 2025.

Topics Include

- Windows Server Containers
- Hyper-V Containers

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- Differences between the two container models
- Appropriate use cases
- Installing containers
- Configuring containers
- Managing containers with Windows PowerShell
- Managing containers with Docker

7. Remote Desktop Services Session-Based Desktops

This module introduces the core components of Remote Desktop Services and explains how to implement session-based desktop environments.

Topics Include

- Introduction to Remote Desktop Services
- Core RDS components
- RDS Session Host
- Implementing session-based desktop environments
- Features that affect the remote user experience
- Configuring user experience settings

8. Remote Desktop Services Virtual Desktop Infrastructure

This module focuses on implementing Virtual Desktop Infrastructure with Remote Desktop Services.

Topics Include

- Virtual Desktop Infrastructure
- Pooled virtual desktops
- Personal virtual desktops
- Comparing pooled and personal desktop models
- Operating system support
- Image management
- High availability for pooled virtual desktops
- High availability for personal virtual desktops