

Implement data centers with Hyper-V and SCVMM 2016

Duration: 56 hours / 7 Days

Day 01: Introduction & Hyper-V Fundamentals (8 Hours)

Module 1: Planning for Virtualization (2 Hours)

- Overview of Microsoft Virtualization
- Assessing virtualization candidates
- Planning for a virtualization infrastructure

Module 2: Implementing Server Virtualization with Hyper-V (3 Hours)

- Installing and configuring Hyper-V
- Managing virtual machine storage
- Managing virtual networks

Module 3: Creating and Configuring Virtual Hard Disks & Virtual Machines (3 Hours)

- Virtual Hard Disk (VHD/VHDX) types
- Creating and configuring virtual machines
- Virtual machine snapshots and import/export

Day 02: Advanced Hyper-V Features (8 Hours)

Module 4: Configuring Hyper-V Networking (3 Hours)

- Advanced features of virtual network adapters
- Hyper-V Network Virtualization
- Hyper-V Extensible Switch

Module 5: Hyper-V Migration (3 Hours)

- Overview of Live Migration and Storage Migration
- Live Migration security considerations
- Live Migration using SMB

Module 6: Hyper-V Host and VM Management (2 Hours)

- Hyper-V host management best practices
- VM configuration versions
- Windows Admin Center for Hyper-V management

Day 03: Hyper-V Performance & High Availability (8 Hours)

Module 7: Hyper-V Performance Optimization (3 Hours)

- Memory management in Hyper-V
- Virtual machine processor configurations
- NUMA (Non-Uniform Memory Access)

Module 8: Hyper-V Advanced Features (3 Hours)

- Discrete Device Assignment (DDA) support
- Virtual Persistent Memory (vPMEM)
- Enhanced Session Mode

Module 9: Hyper-V Failover & Clustering (2 Hours)

- Failover Clustering in Hyper-V
- Live Migration between Windows Server 2019 & 2022

Day 04: Hyper-V High Availability & Disaster Recovery (8 Hours)

Module 10: Hyper-V Cluster Advanced Features (3 Hours)

- Cross-domain cluster migrations
- Azure-aware clusters
- Stretched clusters

Module 11: Cluster Set Theory & Implementation (2 Hours)

- Understanding cluster sets
- Planning and configuring clustered environments

Module 12: Hyper-V Backup & Disaster Recovery (3 Hours)

- Implementing Hyper-V Replica
- Configuring Azure Site Recovery
- Protecting virtualization infrastructure with Data Protection Manager

Day 05: Introduction to SCVMM (8 Hours)

Module 13: Installing and Configuring SCVMM (3 Hours)

- Overview of System Center Virtual Machine Manager
- Installing and configuring SCVMM
- SCVMM console and role-based access

Module 14: Managing Storage Fabric and Updates (3 Hours)

- Storage classifications and management
- Integrating storage with SCVMM

Module 15: Configuring SCVMM Library and Templates (2 Hours)

- Managing VM templates
- Configuring and using SCVMM library objects

Day 06: SCVMM Networking & Cloud Management (8 Hours)

Module 16: Managing SCVMM Networking Fabric (3 Hours)

- Logical networks, IP pools, and VM networks
- Network isolation and SCVMM integration

Module 17: VM Deployment and Management in SCVMM (3 Hours)

- Creating and deploying VMs
- Managing VM workloads in SCVMM

Module 18: Managing Private Clouds in SCVMM (2 Hours)

- Configuring and managing private clouds
- Cloud quotas and delegated administration

Day 07: SCVMM Advanced Management & Migration (8 Hours)

Module 19: Managing Services in SCVMM (2 Hours)

- Deploying and managing service templates
- Automated deployment with SCVMM

Module 20: Monitoring Virtualization with SCOM (2 Hours)

- Integrating SCVMM with System Center Operations Manager
- Performance monitoring and alerting

Module 21: VMware to Hyper-V Migration (2 Hours)

- Planning and executing VMware-to-Hyper-V migration
- Best practices for workload conversion

Module 22: Patching and Maintenance in SCVMM (2 Hours)

- SCVMM patching strategies
- Windows Admin Center integration