

Course Title: Mastering Hyper-V Virtualization



Microsoft
Hyper-V



New-VM -Name HV-VM01

Course Overview: This training course is designed to provide participants with a deep understanding of Hyper-V virtualization technology. From the fundamentals to advanced topics, participants will gain the skills and knowledge needed to effectively deploy, manage, and optimize virtualized environments using Hyper-V.

Module 1: Introduction to Virtualization and Hyper-V (2H)

- Understanding Virtualization Concepts
- Introduction to Hyper-V Architecture
- Comparison with other Virtualization Technologies

Module 2: Hyper-V Installation and Configuration (4H)

- System Requirements and Hardware Considerations
- Installing Hyper-V on Windows Server
- Configuring Hyper-V Settings

Module 3: Virtual Machines and Networking (4H)

- Creating Virtual Machines (VMs)
- Virtual Machine Settings and Best Practices
- Networking in Hyper-V: Switches, VLANs, and Integration

Module 4: Storage in Hyper-V (4H)

- Understanding Storage Types
- Managing Virtual Hard Disks (VHDs)
- Implementing Hyper-V Storage Best Practices

Module 5: Hyper-V High Availability (8H)

- Overview of High Availability in Hyper-V

- Configuring Hyper-V Replica
- Implementing Failover Clustering for Hyper-V

Module 6: Hyper-V Security (2H)

- Securing Hyper-V Hosts and Virtual Machines
- Implementing Shielded VMs
- Role-Based Access Control (RBAC)

Module 7: Performance Monitoring and Optimization (2H)

- Performance Monitoring Tools
- Resource Pools and Resource Metering
- Tips for Hyper-V Performance Optimization

Module 8: Backup and Disaster Recovery (2H)

- Hyper-V Backup Strategies
- Integration with Azure Site Recovery
- Recovering from Failures and Disasters

Module 9: Automation and Scripting with Hyper-V (4H)

- Introduction to PowerShell for Hyper-V
- Scripting Common Hyper-V Tasks
- Automation Best Practices

Module 10: Advanced Hyper-V Topics (8H)

- Nested Virtualization
- Hyper-Converged Infrastructure (HCI) with Hyper-V
- Integration with Azure Services

Hands-On Labs and Practical Exercises: Participants will have the opportunity to apply their knowledge through hands-on labs and practical exercises throughout the course. These activities will reinforce theoretical concepts and provide valuable real-world experience.

Assessment and Certification: The training will conclude with an assessment to evaluate participants' understanding of Hyper-V concepts. A certificate of completion will be awarded to participants who successfully complete the training.