

نام دوره: Hyper V : Windows Server Virtualization , Configuration

پیش نیاز : Installing Windows Server

کد دوره: I1115

مدت دوره: ۳۰ ساعت

مخاطبان دوره :

کارشناسان شبکه
دانشجویان IT

اهداف دوره:

بسیاری از سازمان ها از ساختار های مجازی سازی و راهکارهای آن برای استفاده در طرح و نقشه بازیابی از حادثه یا Disaster Recovery Plan خود استفاده می کنند . استفاده از Hyper-V مدیران شبکه براحتی می توانند سرورهای جدید را ایجاد و آنها را در مدار قرار دهند و از طرفی با توجه به اینکه VM ها در قالب فایل های VHD در سیستم ذخیره می شوند ، طراحی و گرفتن Backup از آنها بسیار ساده تر از Backup گیری از سیستم عامل ها می باشد . با این روش شما تمامی یک سرور مجازی را در قالب یک فایل Backup میگیرید و به محض بروز مشکل همین یک فایل را بازگردانی می کنید.

محتوای دوره:

- Describe the new Virtual Machine import features in Windows Server 2012
- Describe the P2V process
- Import Virtual machines without exports
- Plan for importing Virtual Machine from Windows Server 2008 R2
- Describe the virtual machine compatibility report
- Describe the PowerShell commands for importing Virtual Machines

Module 4: Configure Networking in Hyper-V

This module describes all of the new network features available in Hyper-V. Students will be able to describe Hyper-V Network Virtualization along with the Hyper-V Extensible Switch. Students will also be able to plan how to implement the new networking features available with Windows Server 2012 Hyper-V.

Lessons

- Advanced features of Virtual Network Adapters
- Hyper-V Network Virtualization
- Hyper-V Extensible Switch

Module 1: Planning for Virtualization

After completing this module students will be able to describe virtualization as it relates to server environments. Students will be able to plan for hardware requirements, storage, availability, and security.

Lessons

- Overview of Microsoft Virtualization
- Assessment of Virtualization Candidates
- Planning for Virtualization

Lab : Assessing the Environment for Virtualization

After Completing this module, students will be able to:

- Describe virtualization.
- Describe the options available for server virtualization.
- Describe requirements for Hyper-V sever role.
- Design solutions using Hyper-V disks and storage.
- Design solutions using high availability for Hyper-V.
- Assess and environment using the Microsoft Assessment and Planning (MAP) toolkit.

آدرس:

Lab : Configuring Network Settings

After completing this module, students will be able to:

- Describe Hyper-V Extensible Switch.
- Describe Hyper-V Network Virtualization.
- Implement NIC Teaming.
- Describe VLAN Tagging.
- Understand MAC and ARP spoofing protections.
- Describe SR-IOV networking
- Implement Network QoS
- Implement Network metering
- Describe Network monitor modes
- Describe IPsec task offload
- Describe VM Trunk Mode

Module 5: Scale-up Virtual Machines

This module explains how Windows Server 2012 can be used to scale-up your virtual machines. Students will learn the details around non-uniform memory access (NUMA) and the other scale-up options in Windows Server 2012. It also compares the scale-up options in Windows Server 2012 with the options that were available in previous versions of Windows Server.

Lessons

- Overview of Scale-up options in Windows Server 2012
- Non-uniform memory access (NUMA)
- Hyper-v Scale Comparison

Lab : Configuring NUMA

After completing this module, students will be able to:

- Describe the scale-up options in Windows Server 2012
- Describe Scaling in Hyper-V
- Plan for NUMA
- Plan for Hyper-V Scaling
- Describe how SQL Server supports NUMA

Module 2: Implementing Server Virtualization with Hyper-V

This module describes how to install and configure Hyper-V virtual machines, configuring virtual storage, and configuring virtual networks. Students will be able to design their Hyper-V environment and storage networks.

Lessons

- Implementing Hyper-V
- Managing Virtual Machine Storage
- Managing Virtual Networks

Lab : Installing and Configuring the Hyper-V Server Role

After completing this module, students will be able to:

- Describe the Hyper-V integration services.
- Install Hyper-V Server Role.
- Manage virtual machine storage.
- Manage virtual networks.
- Describe Hyper-V Extensible Switch.
- Describe Data Center Bridging (DCB).
- Describe Resource Metering in Hyper-V.

Module 3: Creating and Configuring Virtual Hard Disks and Virtual Machines

After completing this module students will be able to determine and configure the most appropriate virtual hard disk(s) format to use in their environment. Students also will be able to create and configure virtual machines.

Lessons

- Creating and Configuring Virtual Hard Disks
- Creating and Configuring Virtual Machines
- Managing Virtual Machine Snapshots
- Virtual Machine Import
- Virtual Machines

Lab : Creating Virtual Hard Disks and Virtual Machines

After completing this module, students will be able to:

- Describe storage options for virtual machines.
- Describe the new vhdx format.
- Attach physical disks to a virtual machine.
- Describe pass-through disks.



برگزار کننده همایش، سمینارهای تخصصی و دوره های آموزشی
فناوری اطلاعات، برق، عمران، مدیریت بازرگانی، بورس

- Describe Dynamic Memory. Startup memory, and minimum memory
- Describe Hyper-V smart paging

Module 6: Hyper-V Replica and Disaster Recovery

This module describes disaster recovery options for Hyper-V, including Hyper-V Replica and backup/restore options for Hyper-V. Students will learn how to plan and prepare for Hyper-V Replica, learn how to configure and enable replication, perform planned failovers, and how to respond to unplanned failovers. They will also learn how to backup and restore Hyper-V hosts and virtual machines.

Lessons

- Overview of Hyper-V Replica
- Configuring Hyper-V Replica
- Hyper-V Replica Failover Operations
- Hyper-V Backup

Lab : Configuring Hyper-V Replica and Backups

- Create a new virtual hard disk using the new Virtual Hard Disk Wizard.
- Describe considerations for creating new virtual machines.
- Create a new virtual machine.
- Configure virtual machine settings.
- Creating and managing virtual machine snapshots.
- Describe Virtual Fibre Channel HBAs.
- Describe Multipath I/O (MPIO) functionality for Fibre Channel storage

آدرس:

ساختمان شماره ۱: میدان آزادی، خیابان سعادت آباد، طبقه فوقانی بانک تجارت
ساختمان شماره ۲: میدان آزادی، بلوار دانشگاه، کوچه شماره ۵

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