

KOENIG SOLUTIONS • COURSE OUTLINE

Implementing a Software-Defined Datacenter

Learn to implement, manage and monitor a software-defined datacenter using Hyper-V, Virtual Machine Manager and Azure.

12

MODULES

34

TOPICS

35

HANDS-ON ACTIVITIES

COURSE OVERVIEW

This course covers server virtualization concepts, the software-defined datacenter and Microsoft Azure, followed by installing and configuring Hyper-V and Virtual Machine Manager. It addresses managing storage fabric, library objects, networking fabric, virtual machines, clouds and services within Virtual Machine Manager. It also covers monitoring virtualization infrastructure with Operations Manager, implementing Hyper-V Replica and Azure Site Recovery, and protecting infrastructure with Data Protection Manager.

WHO THIS COURSE IS FOR

System Administrators

Virtualization Engineers

Datacenter Administrators

Cloud Infrastructure Engineers

IT Professionals

LEARNING OBJECTIVES

- Describe virtualization solutions and the software-defined datacenter
- Configure the Hyper-V role, virtual switches and failover clustering
- Install and configure Virtual Machine Manager and manage hosts
- Manage storage fabric, fabric updates and library objects
- Configure networking fabric including software defined networking
- Create and manage virtual machines, clouds and services
- Monitor virtualization infrastructure using Operations Manager
- Implement Hyper-V Replica, Azure Site Recovery and Data Protection Manager

12 Modules, 34 Topics

01

2 Activities

Introduction to Server Virtualization

This module explains the different virtualization solutions. It also describes the concepts of software-defined datacenter and Microsoft Azure.

LESSONS

Overview of Microsoft Virtualization · Introducing the software-defined datacenter · Extending virtualization to the cloud

02

2 Activities

2 Activities

Overview of Hyper-V Virtualization

This module explains how to install and manage Hyper-V in Windows Server 2016.

LESSONS

- Installing and configuring the Hyper-V role
- Creating and managing virtual hard disks and virtual machines
- Creating and using Hyper-V virtual switches
- Implementing failover clustering with Hyper-V

03

3 Activities

Installing and Configuring Virtual Machine Manager

This module explains how to install and configure Virtual Machine Manager for managing a virtualization environment.

LESSONS

Overview of Virtual Machine Manager · Installing Virtual Machine Manager · Adding hosts and managing host groups

04

3 Activities

Managing Storage Fabric and Fabric Updates

This module explains how to manage storage fabric and fabric updates in Virtual Machine Manager.

LESSONS

- Overview of server virtualization storage technologies
- Managing storage fabric
- Managing fabric updates

05**3 Activities**

Configuring and Managing the Virtual Machine Manager Library and Library Objects

This module describes how to configure and manage the Virtual Machine Manager library and library objects. It also describes the differences between profiles and templates and how they are used.

LESSONS

- Overview of the Virtual Machine Manager library
- Preparing Windows for deployment in Virtual Machine Manager
- Working with profiles
- Working with VM templates

06**2 Activities****2 Activities**

Managing the Networking Fabric

This module explains how to manage networking fabric in Virtual Machine Manager.

LESSONS

- Networking concepts in Virtual Machine Manager
- Managing Software Defined Networking
- Understanding network function virtualization

07**3 Activities**

Creating and Managing Virtual Machines by Using Virtual Machine Manager

This module explains how to create and manage virtual machines by using Virtual Machine Manager.

LESSONS

VM management tasks · Creating, cloning, and converting VMs

08**2 Activities**

Managing Clouds in Microsoft System Center Virtual Machine Manager

This module explains how to create and manage clouds by using Virtual Machine Manager.

LESSONS

- Introduction to clouds
- Creating and managing a cloud
- Creating user roles in Virtual Machine Manager

09**3 Activities**

Managing Services in Virtual Machine Manager

This module explains how to create and manage services in Virtual Machine Manager.

LESSONS

- Overview of services in Virtual Machine Manager
- Creating and managing services in Virtual Machine Manager

10**2 Activities**

Monitoring a Virtualization Infrastructure by Using System Center Operations Manager

This module explains how to use Operations Manager for monitoring virtualization infrastructure.

LESSONS

- Operations Manager architecture and security
- Using Operations Manager for monitoring and reporting
- Integrating Operations Manager with Virtual Machine Manager and Data Protection Manager

11**2 Activities**

Implementing and Managing Hyper-V Replica and Azure Site Recovery

This module explains how to implement and manage Hyper-V Replica and Azure Site Recovery.

LESSONS

Implementing and managing Hyper-V Replica · Implementing and managing Azure Site Recovery

12**4 Activities**

Protecting a Virtualization Infrastructure by Using Data Protection Manager

This module explains how to use Data Protection Manager for protecting virtualization infrastructure.

LESSONS

- Overview of backup and restore options for VMs
- Configuring and managing Data Protection Manager for virtualization infrastructure protection

Practise What You Learn

#	MODULE	ACTIVITY
01	Introduction to Server Virtualization	LAB : EVALUATING VIRTUALIZATION OPTIONS ■ Selecting the appropriate virtualization method ■ Creating Azure virtual machines
02	Overview of Hyper-V Virtualization	LAB : CREATING AND MANAGING VIRTUAL HARD DISKS AND VIRTUAL MACHINES ■ Installing and configuring the Hyper-V server role ■ Configuring virtual machines and virtual hard disks LAB : IMPLEMENTING FAILOVER CLUSTERING WITH HYPER-V ■ Creating a Hyper-V failover cluster ■ Managing a Hyper-V failover cluster
03	Installing and Configuring Virtual Machine Manager	LAB : INSTALLING AND CONFIGURING VIRTUAL MACHINE MANAGER ■ Installing and configuring Virtual Machine Manager ■ Managing hosts and host groups ■ Managing an Azure subscription by using Virtual Machine Manager
04	Managing Storage Fabric and Fabric Updates	LAB : MANAGING STORAGE FABRIC AND FABRIC UPDATES ■ Implementing a storage infrastructure ■ Creating a file server cluster and a storage QoS policy ■ Managing fabric updates
05	Configuring and Managing the Virtual Machine Manager Library and Library Objects	LAB : CONFIGURING AND MANAGING THE VIRTUAL MACHINE MANAGER LIBRARY AND LIBRARY OBJECTS ■ Configuring and managing a Virtual Machine Manager library ■ Creating a Windows image for the Virtual Machine Manager library ■ Creating and managing profiles and templates
06	Managing the Networking Fabric	LAB : CREATING AND CONFIGURING THE NETWORKING FABRIC ■ Associating virtual network adapters of Hyper-V hosts with the management logical network ■ Deploying Network Controller LAB : CONFIGURING AND TESTING HYPER-V NETWORK VIRTUALIZATION ■ Configuring Hyper-V Network Virtualization ■ Provisioning and testing tenant VM networks
07	Creating and Managing Virtual Machines by Using Virtual Machine Manager	LAB : CREATING AND MANAGING VMS BY USING SYSTEM CENTER VM MANAGER ■ Creating a VM and modifying its properties ■ Creating and managing checkpoints ■ Cloning and migrating a VM
08	Managing Clouds in Microsoft System Center Virtual Machine Manager	LAB : MANAGING CLOUDS IN VIRTUAL MACHINE MANAGER ■ Creating a private cloud ■ Creating user roles

#	MODULE	ACTIVITY
09	Managing Services in Virtual Machine Manager	LAB : MANAGING SERVICES IN VIRTUAL MACHINE MANAGER ■ Creating a service template ■ Deploying a service and updating service template ■ Scaling out a service and updating the service
10	Monitoring a Virtualization Infrastructure by Using System Center Operations Manager	LAB : MONITORING A VIRTUALIZATION INFRASTRUCTURE BY USING OPERATIONS MANAGER ■ Implementing Operations Manager agents ■ Integrating Operations Manager with Virtual Machine Manager
11	Implementing and Managing Hyper-V Replica and Azure Site Recovery	LAB : IMPLEMENTING AND MANAGING HYPER-V REPLICA AND AZURE SITE RECOVERY ■ Configuring and managing Hyper-V Replica ■ Configuring and managing Azure Site Recovery
12	Protecting a Virtualization Infrastructure by Using Data Protection Manager	LAB : PROTECTING VIRTUALIZATION INFRASTRUCTURE BY USING DATA PROTECTION MANAGER ■ Configuring a DPM server and installing DPM protection agents ■ Creating and configuring protection groups ■ Recovering VMs and other data ■ Providing online protection with DPM

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

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