

KOENIG SOLUTIONS • COURSE OUTLINE

Upgrading Your Skills to MCSA: Windows Server 2016

Learn to install, configure and manage core Windows Server 2016 infrastructure, from storage and Hyper-V to clustering and containers.

12

MODULES

45

TOPICS

33

HANDS-ON ACTIVITIES

COURSE OVERVIEW

This course covers installing and configuring Windows Server 2016, followed by storage, Active Directory Directory Services and AD FS deployment. It then addresses network services, Hyper-V, advanced and software-defined networking, and remote access with DirectAccess and VPN. Later modules cover deploying and managing Windows and Hyper-V containers, and implementing failover clustering, including clustering with Hyper-V virtual machines.

WHO THIS COURSE IS FOR

System Administrators

Systems Engineers

Network Administrators

Infrastructure Engineers

Server Administrators

LEARNING OBJECTIVES

- Install and configure Windows Server 2016 servers
- Configure storage options including Storage Spaces and iSCSI
- Deploy Active Directory domain controllers and service accounts
- Implement AD FS and Web Application Proxy for single sign-on
- Configure DHCP, IPAM and advanced networking features
- Configure Hyper-V virtual machines, storage and networking
- Implement software-defined networking and Network Controller
- Implement failover clustering for Hyper-V virtual machines

12 Modules, 45 Topics

01

2 Activities

Installing and Configuring Windows Server 2016

This module explains how to install and perform post-installation configuration of Windows Server 2016 servers.

LESSONS

Introducing Windows Server 2016 · Installing Windows Server 2016 · Configuring Windows Server 2016 · Preparing for upgrades and migrations · Migrating server roles and workloads · Windows Server activation models

02

2 Activities

2 Activities

Overview of Storage in Windows Server 2016

This module explains how to configure storage in Windows Server 2016.

LESSONS

- Overview of storage in Windows Server 2016
- Implementing Data Deduplication
- Configuring iSCSI storage
- Configuring the Storage Spaces feature in Windows Server 2016

03

2 Activities

Implementing Directory Services

This module explains how to implement the Directory Services feature.

LESSONS

Deploying Active Directory domain controllers · Implementing service accounts · Azure AD

04

2 Activities

Activity

Implementing AD FS

This module explains how to implement an AD FS deployment.

LESSONS

- Overview of AD FS
- Deploying AD FS
- Implementing AD FS for a single organization
- Implementing Web Application Proxy
- Implementing SSO with Microsoft Online Services

05**3 Activities**

Implementing Network Services

This module explains how to configure advanced features for Dynamic Host Configuration Protocol (DHCP) and configure IP Address Management (IPAM).

LESSONS

Overview of networking enhancements · Implementing IPAM · Managing IP address spaces with IPAM

06**3 Activities**

Implementing Hyper-V

This module explains how to install and configure Hyper-V virtual machines.

LESSONS

- Configuring the Hyper-V role in Windows Server 2016
- Configuring Hyper-V storage
- Configuring Hyper-V networking
- Configuring Hyper-V virtual machines

07**2 Activities**

Configuring Advanced Networking Features

This module explains how to implement an advanced networking infrastructure.

LESSONS

- Overview of high-performance networking features
- Configuring advanced Hyper-V networking features

08**2 Activities**

Implementing Software Defined Networking

This module explains how to implement software-defined networking.

LESSONS

Overview of SDN · Implementing network virtualization · Implementing Network Controller

09**2 Activities**

Implementing Remote Access

This module explains how to configure connectivity for remote users by using the DirectAccess feature.

LESSONS

[Remote access overview](#) · [Implementing DirectAccess](#) · [Implementing VPN](#)

10**Activity**

Deploying and Managing Windows and Hyper-V Containers

This module provides an overview of Windows Server 2016 containers. Additionally, it explains how to deploy, install, configure, and manage containers in Windows Server 2016.

LESSONS

- Overview of containers in Windows Server 2016
- Preparing to deploy containers
- Installing, configuring, and managing containers by using Docker

11**5 Activities**

Implementing Failover Clustering

This module explains how to implement failover clustering to provide high availability for network services and applications.

LESSONS

- Overview of failover clustering
- Implementing a failover cluster
- Configuring highly-available applications and services on a failover cluster
- Maintaining a failover cluster
- Implementing a stretch cluster

12**4 Activities**

Implementing Failover Clustering with Windows Server 2016 Hyper-V

This module explains how to deploy and manage Hyper-V virtual machines in a failover cluster.

LESSONS

- Overview of the integration of Hyper-V Server 2016 with failover clustering
- Implementing Hyper-V virtual machines on failover clusters
- Implementing Windows Server 2016 Hyper-V virtual machine migration
- Implementing Hyper-V Replica

Practise What You Learn

#	MODULE	ACTIVITY
01	Installing and Configuring Windows Server 2016	LAB: INSTALLING AND CONFIGURING NANO SERVER ■ Installing Nano Server ■ Completing post-installation tasks on Nano Server
02	Overview of Storage in Windows Server 2016	LAB: IMPLEMENTING AND MANAGING STORAGE ■ Implementing File Server Resource Manager (FSRM) ■ Configuring iSCSI storage LAB: IMPLEMENTING AND MANAGING ADVANCED STORAGE SOLUTIONS ■ Configuring redundant storage spaces ■ Implementing the Storage Spaces Direct feature
03	Implementing Directory Services	LAB: IMPLEMENTING AND MANAGING AD DS ■ Cloning a domain controller ■ Implementing service accounts
04	Implementing AD FS	LAB: IMPLEMENTING AD FS ■ Installing and configuring AD FS ■ Configuring an internal application for AD FS Lab: Implementing Web Application Proxy: Implementing Web Application Proxy
05	Implementing Network Services	LAB: IMPLEMENTING NETWORK SERVICES ■ Configuring DNS policies ■ Configuring DHCP failover ■ Configuring IPAM
06	Implementing Hyper-V	LAB: IMPLEMENTING SERVER VIRTUALIZATION WITH HYPER-V ■ Installing the Hyper-V server role ■ Configuring virtual networking ■ Creating and configuring a virtual machine
07	Configuring Advanced Networking Features	LAB: CONFIGURING ADVANCED HYPER-V NETWORKING FEATURES ■ Creating and using Microsoft Hyper-V virtual switches ■ Configuring and using the advanced features of a virtual switch
08	Implementing Software Defined Networking	LAB: DEPLOYING NETWORK CONTROLLER ■ Preparing to deploy Network Controller ■ Deploying Network Controller
09	Implementing Remote Access	LAB: IMPLEMENTING DIRECTACCESS ■ Configure DirectAccess using the Getting Started Wizard ■ Testing DirectAccess
10	Deploying and Managing Windows and Hyper-V Containers	Lab: Installing and configuring containers: Installing Docker

#	MODULE	ACTIVITY
11	Implementing Failover Clustering	LAB: IMPLEMENTING FAILOVER CLUSTERING ■ Configuring iSCSI storage ■ Configuring a failover cluster ■ Deploying and configuring a highly available file server ■ Validating the deployment of a highly available file server ■ Configuring CAU on the failover cluster
12	Implementing Failover Clustering with Windows Server 2016 Hyper-V	LAB: IMPLEMENTING FAILOVER CLUSTERING WITH WINDOWS SERVER 2016 HYPER-V ■ The Hyper-V Failover clustering testing environment ■ Configuring Hyper-V Replica ■ Configuring a failover cluster for Hyper-V ■ Configuring a highly available virtual machine

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

ABOUT 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.

FLEXIBLE DELIVERY

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Live Online Classes (ILO)

Fly-Me-A-Trainer (FMAT)

Flexi (Self-Paced)

1-on-1 Training

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