

KOENIG SOLUTIONS • COURSE OUTLINE

M55371A - Administering Windows Server

Learn to administer identity, networking, storage, compute and security in Windows Server using core tools and technologies.

5 Days

DURATION

12

MODULES

47

TOPICS

34

HANDS-ON ACTIVITIES

COURSE OVERVIEW

This five-day instructor-led course is designed primarily for IT professionals who have some experience with Windows Server. It is designed for professionals who will be responsible for managing identity, networking, storage and compute by using Windows Server, and who need to understand the scenarios, requirements, and options that are available and applicable to Windows Server. The course teaches IT professionals the fundamental administration skills required to deploy and support Windows Server in most organizations. Labs available from go deploy.

WHO THIS COURSE IS FOR

This course is intended for Information Technology (IT) Professionals who have some experience working with Windows Server and are looking for a single five-day course that covers core administration components and technologies in Windows Server

This course also helps server administrators from previous Windows Server versions to update their knowledge and skills related to Windows Server

Additionally, this course can help individuals looking for preparation materials to pass exams related to Windows Server

The course is also for individuals from a service desk role who wish to transition into server maintenance

LEARNING OBJECTIVES

- Describe Windows Server editions, Server Core and administration tools
- Configure AD DS domain controllers, Azure AD and Group Policy
- Deploy and manage DHCP, DNS, IPAM and Remote Access services
- Implement file sharing, Storage Spaces, Data Deduplication and iSCSI
- Configure Hyper-V VMs, containers and virtualization security
- Plan and configure failover clustering for high availability
- Implement Hyper-V Replica and Windows Server backup and restore
- Configure JEA, SMB security and Windows Update management

12 Modules, 47 Topics

01

2 Activities

Windows Server Administration Overview

This module describes how to distinguish different Windows Server editions and techniques for deployment, servicing and activation. The module also introduces Windows Server Core and compares it with the Desktop Experience version. The module describes tools and concepts for administering Windows Server, such as Windows Admin Center, PowerShell, and delegation of privileges.

TOPICS

- Introducing Windows Server
- Windows Server Core Overview
- Windows Server administration principles and tools overview

02

5 Activities

Identity Services in Windows Server

This module introduces identity services and describes Active Directory Domain Services (AD DS) in a Windows Server environment. The module describes how to deploy domain controllers in AD DS, as well as the Azure Active Directory (AD) and the benefits of integrating Azure AD with AD DS. The module also covers Group Policy basics and how to configure group policy objects (GPOs) in a domain environment. Finally, the modules describe the role of Active Directory certificate services and certificate usage.

TOPICS

- AD DS Overview
- Deploying Windows Server domain controllers
- Azure AD overview
- Implementing Group Policy
- Active Directory Certificate Services overview

03

3 Activities

Network Infrastructure Services in Windows Server

This module describes how to implement core network infrastructure services in Windows Server. The modules cover how to deploy, configure, and manage DNS and IPAM. The modules also describe how to use Remote Access Services.

TOPICS

Deploying and managing DHCP · Deploying and managing DNS service · Deploying and managing IPAM · Remote Access Services in Windows Server

File Servers and Storage Management in Windows Server

This module describes how to configure file servers and storage in Windows Server. The module covers file sharing and deployment of Storage Spaces technology. The module describes how to implement data deduplication, iSCSI-based storage in Windows Server, and finally, how to deploy DFS.

TOPICS

- Volumes and File Systems in Windows Server
- Implementing sharing in Windows Server
- Implementing Storage Spaces in Windows Server
- Implementing Data Deduplication
- Implementing iSCSI
- Deploying Distributed File System

Hyper-V Virtualization and Containers in Windows Server

This module describes how to implement and configure Hyper-V VMs and containers. The module covers key features of Hyper-V in Windows Server, describes VM settings, and how to configure VMs in Hyper-V. The module also covers security technologies used with virtualization, such as shielded VMs, Host Guardian Service, admin-trusted and TPM-trusted attestation, and KPS.

TOPICS

Hyper-V in Windows Server · Configuring VMs · Securing virtualization in Windows Server · Containers in Windows Server · Overview of Kubernetes

High Availability in Windows Server

This module describes current high availability technologies in Windows Server. The module describes failover clustering and considerations for implementing it, and how to create and configure failover clustering. The module also explains stretch clusters and options for achieving high availability with Hyper-V VMs.

TOPICS

- Planning for failover clustering implementation
- Creating and configuring failover cluster
- Overview of stretch clusters
- High availability and disaster recovery solutions with Hyper-V VMs

07**2 Activities**

Disaster Recovery in Windows Server

This module describes disaster recovery technologies in Windows Server and how to implement them. The module covers how to configure and use Hyper-V Replica and describes Azure Site Recovery. The module also covers how to implement Windows Server backup and describes the Azure Backup service.

TOPICS

- Hyper-V Replica
- Backup and restore infrastructure in Windows Server

08**3 Activities**

Windows Server Security

This module describes Windows Server security features and how to implement them. The module covers credentials used in Windows Server and explains how to implement privileged access protection. In addition to describing methods and technologies for hardening Windows Server security, the module explains how to configure Just Enough Administration (JEA) and how to secure SMB traffic. Finally, the module covers Windows Update, its deployment and management options.

TOPICS

Credentials and privileged access protection · Hardening Windows Server · JEA in Windows Server · Securing and analyzing SMB traffic · Windows Server update management

09**3 Activities**

RDS in Windows Server

This module describes key Remote Desktop Protocol (RDP) and Virtual Desktop Infrastructure (VDI) features in Windows Server. The modules cover how to deploy session-based desktops and describes personal and pooled virtual desktops.

TOPICS

- Overview of RDS
- Configuring a session-based desktop deployment
- Overview of personal and pooled virtual desktops

10**2 Activities**

Remote Access and Web Services in Windows Server

This module describes how to implement virtual private networks (VPNs), Network Policy Server (NPS), and Microsoft Internet Information Services (IIS). The module describes Always On VPN functionality, as well as how to configure NPS and Web Server (IIS) in Windows Server.

TOPICS

Implementing VPNs · Implementing Always On VPN · Implementing NPS · Implementing Web Server in Windows Server

Server and Performance Monitoring in Windows Server

This module describes how to implement service and performance monitoring, and apply troubleshooting in Windows Server. The module highlights monitoring tools and describes how to monitor performance, including event logging and how to perform event logging monitoring for troubleshooting purposes.

TOPICS

Overview of Windows Server monitoring tools · Using Performance Monitor · Monitoring event logs for troubleshooting

Upgrade and Migration in Windows Server

This module describes how to perform upgrades and migrations for AD DS, Storage, and Windows Server. The module covers tools to use for AD DS migration. The module also covers the Storage Migration Service, and finally, Windows Server migration tools and usage scenarios.

TOPICS

AD DS migration · Storage Migration Service · Windows Server migration tools

HANDS-ON ACTIVITIES

Practise What You Learn

#	MODULE	ACTIVITY
01	Windows Server Administration Overview	LAB: DEPLOYING AND CONFIGURING WINDOWS SERVER - Deploying and configuring Server Core - Implementing and using remote server administration
02	Identity Services in Windows Server	LAB: IMPLEMENTING IDENTITY SERVICES AND GROUP POLICY - Deploying new domain controller on Server Core - Configuring Group Policy - Deploying and using certificate services - Explain Group Policy basics and configure GPOs in a domain environment - Describe the role of Active Directory certificate services and certificate usage
03	Network Infrastructure Services in Windows Server	LAB: IMPLEMENTING AND CONFIGURING NETWORK INFRASTRUCTURE SERVICES IN WINDOWS SERVER - Deploying and configuring DHCP - Deploying and configuring DNS - Implementing Web Application Proxy

#	MODULE	ACTIVITY
04	File Servers and Storage Management in Windows Server	LAB: IMPLEMENTING STORAGE SOLUTIONS IN WINDOWS SERVER ■ Implementing Data Deduplication ■ Configuring iSCSI storage ■ Configuring redundant storage spaces ■ Implementing Storage Spaces Direct
05	Hyper-V Virtualization and Containers in Windows Server	LAB: IMPLEMENTING AND CONFIGURING VIRTUALIZATION IN WINDOWS SERVER ■ Creating and configuring VMs ■ Installing and configuring containers
06	High Availability in Windows Server	LAB: IMPLEMENTING FAILOVER CLUSTERING ■ Configuring storage and creating a cluster ■ Deploying and configuring a highly available file server ■ Validating the deployment of the highly available file server
07	Disaster Recovery in Windows Server	LAB: IMPLEMENTING HYPER-V REPLICA AND WINDOWS SERVER BACKUP ■ Implementing Hyper-V Replica ■ Implementing backup and restore with Windows Server Backup
08	Windows Server Security	LAB: CONFIGURING SECURITY IN WINDOWS SERVER ■ Configuring Windows Defender Credential Guard ■ Locating problematic accounts ■ Implementing LAPS
09	RDS in Windows Server	LAB: IMPLEMENTING RDS IN WINDOWS SERVER ■ Implementing RDS ■ Configuring Session Collection Settings and using RDC ■ Configuring a virtual desktop template
10	Remote Access and Web Services in Windows Server	LAB: DEPLOYING NETWORK WORKLOADS ■ Implementing VPN in Windows Server ■ Deploying and Configuring Web Server
11	Server and Performance Monitoring in Windows Server	LAB: MONITORING AND TROUBLESHOOTING WINDOWS SERVER ■ Establishing a performance baseline ■ Identifying the source of a performance problem ■ Identifying the source of a performance problem ■ Identifying the source of a performance problem
12	Upgrade and Migration in Windows Server	Lab: Migrating Server workloads: Implementing Storage Migration Service

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.

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