

KOENIG SOLUTIONS • COURSE OUTLINE

WS-011T00-A: Windows Server 2019 Administration

Learn to deploy, configure and secure Windows Server 2019, from Active Directory and storage to Hyper-V and disaster recovery.

5 Days

40 HOURS

12

MODULES

47

TOPICS

30

HANDS-ON ACTIVITIES

COURSE OVERVIEW

The WS-011T00-A: Windows Server 2019 Administration course offers a comprehensive guide for IT professionals to learn about the administration and advanced features of Windows Server 2019. Through its 12-module structure, the course covers a variety of topics such as core Windows Server 2019 administration principles, identity services with Active Directory Domain Services (AD DS), network infrastructure services, file servers and storage management, virtualization with Hyper-V, high availability, disaster recovery, security enhancements, Remote Desktop Services (RDS), remote access and web services, performance monitoring, and server migration strategies. Learners will gain skills in deploying, managing, and maintaining servers, as well as implementing security measures to protect the infrastructure. The course is practical in nature, providing hands-on experience with real-world scenarios. By the end of the course, participants will have a solid foundation to effectively administer Windows Server 2019 environments, ensuring they can handle the various aspects of server management and troubleshooting. This knowledge will pave the way for enhanced job performance and career advancement opportunities in the IT field.

Who Should Attend

The WS-011T00-A course offers comprehensive Windows Server 2019 administration training, ideal for IT professionals seeking to enhance their skills. Target Audience:

Systems Administrators

IT Professionals with experience in Windows Server

Network Administrators

Infrastructure Administrators

IT Generalists who manage and maintain Windows Server environments

Active Directory Administrators

IT Professionals looking to gain knowledge about Windows Server 2019 features and updates

Professionals preparing for Microsoft certification exams related to Windows Server 2019

Technical Consultants who assist businesses in optimizing Windows Server deployments

Help Desk Technicians aiming to expand their skillset into server support and administration

IT Professionals requiring understanding of Windows Server virtualization and containerization

Security Administrators responsible for protecting Windows Server environments

Storage Administrators focusing on Windows Server-based storage solutions

IT Professionals interested in learning about high availability and disaster recovery in Windows Server environments

System Engineers who design and implement server infrastructure solutions

LEARNING OBJECTIVES

- Distinguish Windows Server 2019 editions and administration tools
- Deploy domain controllers and configure Group Policy in AD DS
- Configure DHCP, DNS, IPAM and Remote Access services
- Implement file sharing, Storage Spaces, data deduplication and DFS
- Configure Hyper-V virtual machines and containers
- Plan and create failover clusters for high availability
- Implement Hyper-V Replica and Windows Server backup
- Harden Windows Server security and configure JEA and SMB protection

12 Modules, 47 Topics

01

2 Activities

Windows Server Administration Overview

This module describes how to distinguish different Windows Server 2019 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.

LESSONS

- Introducing Windows Server 2019
- Windows Server Core Overview
- Windows Server administration principles and tools overview

02

3 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 module describes the role of Active Directory certificate services and certificate usage.

LESSONS

- 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 module covers how to deploy, configure and manage DNS and IPAM. The module also describes how to use Remote Access Services.

LESSONS

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.

LESSONS

- 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.

LESSONS

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.

LESSONS

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

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.

LESSONS

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

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.

LESSONS

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

RDS in Windows Server

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

LESSONS

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

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.

LESSONS

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.

LESSONS

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.

LESSONS

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
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
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

#	MODULE	ACTIVITY
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
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.

FLEXIBLE DELIVERY

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Live Online Classes (ILO)

Fly-Me-A-Trainer (FMAT)

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✉ info@koenig-solutions.com