KOENIG SOLUTIONS · COURSE OUTLINE

Administering Windows Server Hybrid Core Infrastructure

15 Days	15	43	1
DURATION	MODULES	TOPICS	HANDS-ON ACTIVITIES

COURSE OVERVIEW

This course provides comprehensive training on administering Windows Server hybrid environments, covering Active Directory Domain Services (AD DS), hybrid identity, networking, security, high availability, and disaster recovery. It is designed for IT professionals who want to manage Windows Server environments on-premises, in hybrid setups, or in the cloud using Azure services.

PREREQUISITES

Required Prerequisites

- Basic knowledge of Windows Server (2016/2019/2022) administration.
- Understanding of Active Directory Domain Services (AD DS) and Group Policy.
- Familiarity with networking fundamentals (DNS, DHCP, VPN, firewalls, etc.).
- Basic PowerShell scripting skills.
- Some experience with Microsoft Azure and hybrid cloud concepts is recommended but not mandatory.

LEARNING OBJECTIVES

- Deploy and manage Active Directory Domain Services across forests
- Configure hybrid identity with Microsoft Entra Connect and Conditional Access
- Manage Group Policy Objects and harden AD DS against attacks
- Administer Windows Servers using Windows Admin Center and PowerShell
- Implement Hyper-V virtualisation and Windows Server containers
- Configure DNS, DHCP, IPAM and remote access for hybrid networks
- Manage storage using Storage Spaces Direct and Azure File Sync
- Plan failover clustering, backup and disaster recovery solutions

COURSE SYLLABUS

15 Modules, 43 Topics

WEEK 1 Active Directory & Hybrid Identity

01

Day 1: Introduction to Windows Server Hybrid Infrastructure

TOPICS

- Overview of Windows Server roles and features
- Understanding hybrid infrastructure in Windows Server
- Introduction to Microsoft Entra ID & Hybrid Identity

02

Day 2: Deploy & Manage Active Directory Domain Services (AD DS)

TOPICS

- Installing and configuring domain controllers (on-prem & cloud)
- Deploying Read-Only Domain Controllers (RODCs)
- Managing FSMO roles and AD DS replication

03

Day 3: Multi-Domain, Multi-Forest, and Group Policy Management

TOPICS

- Configuring multi-site, multi-domain, and multi-forest environments
- Implementing trust relationships between domains
- Managing Group Policy Objects (GPOs) and security policies

04

Day 4: Hybrid Identity & Microsoft Entra ID

TOPICS

- Microsoft Entra Connect Sync & Cloud Sync
- Managing authentication methods in hybrid environments
- Conditional Access & MFA policies for secure authentication

05

Day 5: Group Policy & Security Configurations

TOPICS

- Implementing Group Policy in AD DS
- Configuring password policies, account lockout policies, and security baselines
- Hardening AD DS against attacks (e.g., Kerberos, NTLM vulnerabilities)

WEEK 2 Windows Server Management & Networking

06

Day 6: Managing Windows Servers in a Hybrid Environment

TOPICS

- Deploying and using Windows Admin Center
- Configuring PowerShell Remoting & Just Enough Administration (JEA)
- Azure Arc, Azure Monitor, and Update Management for hybrid environments

07

Day 7: Virtualization & Containers

TOPICS

- Managing Hyper-V and nested virtualization
- Implementing Windows Server containers and networking
- Configuring VM high availability and performance tuning

08

Day 8: Networking in a Hybrid Environment

TOPICS

- Configuring DNS with AD DS & Azure DNS
- Implementing DHCP, IPAM, and troubleshooting hybrid networks
- Securing DNS traffic with DNSSEC

09

Day 9: Remote Access & VPN Configurations

TOPICS

- Implementing Microsoft Entra Application Proxy & VPNs
- Configuring Azure Virtual WAN for hybrid networking
- Managing Remote Access roles & Web Application Proxy

10

Day 10: Storage & File Services

TOPICS

- Implementing Azure File Sync & DFS migration
- Managing Storage Spaces Direct (S2D) and Storage Replica
- Configuring File Server Resource Manager (FSRM) & quotas

WEEK 3 Security, High Availability & Disaster Recovery

11

Day 11: Windows Server Security & Hardening

TOPICS

- Configuring Microsoft Defender for Identity & Sentinel
- Implementing Just-in-Time Administration & Privileged Access Workstations
- Hardening Windows Server with security policies

12

Day 12: Authentication & Identity Security

TOPICS

- Configuring MFA, Conditional Access, and Microsoft Entra ID policies
- Securing Windows Defender Antivirus, Credential Guard & BitLocker

13

Day 13: High Availability & Load Balancing

TOPICS

- Implementing Failover Clustering & Network Load Balancing (NLB)
- Configuring Hyper-V Replica for disaster recovery
- Deploying Storage Replica in hybrid environments

14

Day 14: Disaster Recovery & Backup Solutions

TOPICS

- Implementing Azure Backup & Windows Server Backup
- Active Directory disaster recovery & restoring deleted objects
- Planning site recovery solutions for hybrid environments

15

Day 15: Final Review & Practice

TOPICS

- Reviewing all key concepts from the last 3 weeks
- Identifying weak areas for improvement

HANDS-ON ACTIVITIES

- Hands-on labs & practice tests

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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