

KOENIG SOLUTIONS • COURSE OUTLINE

Troubleshooting Windows Server 2016 Core Technologies

Learn to diagnose and resolve issues across networking, authentication, storage, Group Policy, AD DS, remote access and Hyper-V on Windows Server 2016.

11

MODULES

39

TOPICS

20

HANDS-ON LABS

COURSE OVERVIEW

This course covers a structured troubleshooting methodology and tools for diagnosing issues in Windows Server 2016 environments. It addresses resolving problems with network connectivity, authentication, application access, file access and storage, followed by troubleshooting Group Policy application and AD DS operations such as replication, domain controllers and trusts. It also covers diagnosing remote access to data and applications, virtualization issues in Hyper-V, and high availability configurations including failover clustering.

WHO THIS COURSE IS FOR

System Administrators

Network Administrators

IT Support Engineers

Infrastructure Engineers

Server Support Specialists

PREREQUISITES

In addition to their professional experience, students who attend this training should already have the following technical knowledge:

- Students who attend this training can meet the prerequisites by attending the following courses, or obtaining equivalent knowledge and skills: 20740C: Installation, Storage, and Compute with Windows Server 2016, 20741D: Networking with Windows Server 2016, 20742B: Identity with Windows Server 2016
- Networking fundamentals, including IPv4 and Domain Name System (DNS)
- Principles and management of AD DS
- Basic understanding of public key infrastructure (PKI)
- Windows PowerShell basics
- Hyper-V
- Load balancing
- Failover clustering

What You Will Learn

- Apply a structured troubleshooting methodology and tools
- Troubleshoot network connectivity, IP settings and DHCP issues
- Resolve client name resolution problems
- Troubleshoot user, computer and Office 365 authentication issues
- Resolve AD DS replication, domain controller and trust issues
- Diagnose access issues for applications, certificates and web apps
- Troubleshoot file access, BitLocker and server storage issues
- Diagnose Hyper-V, remote access and failover clustering issues

COURSE SYLLABUS

11 Modules, 39 Topics

01

4 Labs

Implement a Troubleshooting Methodology

TOPICS

- Overview of the troubleshooting process
- Overview of troubleshooting tools
- Use remote administration tools
- Troubleshoot Windows PowerShell commands and scripts

02

3 Labs

Troubleshoot Network Connectivity

TOPICS

Troubleshooting with Message Analyzer · Troubleshooting IP settings · Troubleshoot network connectivity · Troubleshooting DHCP · Troubleshooting client name resolution

03

2 Labs

Troubleshoot Authentication Issues

TOPICS

- Troubleshoot user and computer account authentication
- Troubleshoot AD DS replication issues
- Troubleshoot authentication to Office 365

04

Lab

Troubleshoot Application Access Issues

TOPICS

Troubleshooting access to Windows Server apps · Troubleshooting issues with certificates · Troubleshooting access to web-based apps

05

2 Labs

Troubleshoot File Access Issues

TOPICS

Troubleshooting access to files and folders · Manage and troubleshoot BitLocker

06

Lab

Troubleshoot Storage Issues

TOPICS

Troubleshooting server storage issues · Troubleshoot DFS · Troubleshoot advanced file services

07

Lab

Troubleshoot Group Policy

TOPICS

Group Policy overview · Troubleshoot Group Policy application

07

3 Labs

Troubleshooting AD DS

TOPICS

- Overview of AD DS administration tools
- Control AD DS administration
- Backup and restore AD DS objects
- Troubleshoot issues related to domain controllers
- Troubleshoot AD DS trusts

08

Lab

Troubleshoot Remote Access to Data and Apps

TOPICS

Troubleshoot VPN connectivity · Overview of remote access for apps · Troubleshoot Remote Desktop Services

09

Lab

Troubleshoot Visualization Issues

TOPICS

Issues with VM configuration · Troubleshoot VM resources · Troubleshoot PowerShell Direct access · Troubleshoot Hyper-V networking · Troubleshoot Hyper-V VM storage · Troubleshoot VM startup

Troubleshooting High Availability

TOPICS

- Considerations for implementing load balancing
- Troubleshooting failover clustering
- Troubleshooting Hyper-V clusters

HANDS-ON LABS

Practise What You Learn

#	MODULE	ACTIVITY
01	Implement a Troubleshooting Methodology	■ Implement a troubleshooting methodology: Implement a troubleshooting methodology ■ Use troubleshooting tools: Use troubleshooting tools ■ Troubleshoot a remote server computer: Use remote tools to administer a remote server ■ Troubleshoot a script: Troubleshoot a script
02	Troubleshoot Network Connectivity	■ Resolve network connectivity issues: Resolve a network problem ■ Troubleshoot DHCP: Resolve DHCP issues, Install and configure the DHCP server role, Configure DHCP failover ■ Resolve name resolution issues: Resolve a name resolution issue (1), Resolve a name resolution issue (2)
03	Troubleshoot Authentication Issues	■ Resolve sign-in problems: Resolve a sign-in problem (1), Resolve a sign-in problem (2) ■ Resolve sign-in problems at branch offices: Resolve sign-in problems at branch offices
04	Troubleshoot Application Access Issues	Troubleshoot application access issues: Troubleshoot application startup, Troubleshoot application security warnings, Troubleshoot application authentication
05	Troubleshoot File Access Issues	■ Troubleshooting file access: Troubleshoot file access (1), Troubleshoot file access (2) ■ Test BitLocker on a Windows 2016 Server: Test BitLocker on Windows Server 2016
06	Troubleshoot Storage Issues	Troubleshooting server storage issues: Repair data redundancy, Troubleshoot file replication, Troubleshoot Dynamic Access Control
07	Troubleshoot Group Policy	Troubleshooting GPO application: Troubleshoot GPOs (1), Troubleshoot GPOs (2), Troubleshoot GPOs (3)

#	MODULE	ACTIVITY
07	Troubleshooting AD DS	■ Deploy LAPS: Troubleshoot local administrator password configuration, Install and configure LAPS, Deploy and test LAPS ■ Recover AD DS objects: Recover missing user accounts ■ Resolve common AD DS problems: Restore the Toronto AD DS site, Restore the TOR-DC1 and FSMO roles, Restore the Adatum Contoso forest trust
08	Troubleshoot Remote Access to Data and Apps	Troubleshoot remote access to data and apps: Resolve common remote access problems, Troubleshoot VPN connectivity, Troubleshoot access to a RemoteApp program
09	Troubleshoot Visualization Issues	Troubleshooting Hyper-V: Troubleshoot replication
10	Troubleshooting High Availability	Troubleshooting high availability: Troubleshooting high availability for a virtual machine, Troubleshooting storage for high availability, Troubleshooting a failover cluster

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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