NETWORKING WITH WINDOWS SERVER (55349)

Course Code: 821558

This 5-day classroom-based course provides the fundamental networking skills required to deploy and support Windows Server in most organizations.

This 5-day course is for IT professionals who have some networking knowledge and experience, and who are looking for a single course that provides insight into core and advanced Windows Server networking technologies. This audience typically includes network administrators and system and infrastructure administrators.

What You'll Learn

At Course Completion

- Plan and implement an IPv4 network.
- Implement Dynamic Host Configuration Protocol (DHCP).
- Implement IPv6.
- Implement Domain Name System (DNS).
- Implement and manage IP address management (IPAM).
- Plan and implement remote access.
- Implement networking for branch offices.
- Configure advanced networking features.

Who Needs to Attend

This course is for IT pros that have some networking knowledge and experience, and who are looking for a single course that provides insight into core and advanced Windows Server networking technologies. This audience typically includes network administrators and system and infrastructure administrators.

Prerequisites

Recommended prerequisite knowledge Before attending this course, students should have:

- Knowledge of the TCP/IP protocol stack, addressing, and name resolution.
- Understanding of networking-infrastructure components, such as cabling, routers, hubs, and switches.
- Familiarity with networking topologies and architectures, such as local area networks (LANs), wide area networks (WANs), and wireless networking.
- Knowledge of TCP/IP protocol stack, addressing, and name resolution.

- Practical experience with Windows Server.
- Practical experience with Windows Server Hyper-V.
- Practical experience with Windows 10 or Windows 11

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CLASSROOM LIVE	$2,995 USD	5 Day

Classroom Live Outline

Module 1: Planning and implementing an IPv4 network

This module explains how to use fundamental networking tools and techniques to configure and troubleshoot IPv4-based networks.

Lessons

- Planning IPv4 addressing
- Configuring an IPv4 host
- Managing and troubleshooting IPv4 network connectivity

Module 2: Implementing DHCP

This module explains how to plan and implement DHCP to support the IPv4 infrastructure.

Lessons

- Overview of the DHCP server role
- Deploying DHCP
- Managing and troubleshooting DHCP

Module 3: Implementing IPv6

This module explains how to implement IPv6, and how to integrate IPv6 and IPv4 networks.

Lessons

- Overview of IPv6 addressing
- Configuring an IPv6 host
- Implementing IPv6 and IPv4 coexistence
- Transitioning from IPv4 to IPv6

Module 4: Implementing DNS

This module explains how to install, configure, and troubleshoot DNS within the

organization's network.

Lessons

- Implementing DNS servers
- Configuring zones in DNS
- Configuring name resolution between DNS zones
- Configuring DNS integration with Active Directory Domain Services (AD DS)
- Configuring advanced DNS settings

Module 5: Implementing and managing IPAM

This module explains how to implement and manage the IPAM feature in Windows Server. This module also explains how to use IPAM to manage services such as DHCP and DNS.

Lessons

- Overview of IPAM
- Deploying IPAM
- Managing IP address spaces by using IPAM

Module 6: Remote access in Windows Server

His module explains how to plan for remote access in Windows Server and how to implement Web Application Proxy.

Lessons

- Overview of remote access
- Implementing the Web Application Proxy

Module 7: Implementing DirectAccess

This module explains how to implement and manage DirectAccess in Windows Server.

Lessons

- Overview of DirectAccess
- Implementing DirectAccess by using the Getting Started Wizard
- Implementing and managing an advanced DirectAccess infrastructure

Module 8: Implementing VPNs

This module explains how to implement and manage remote access in Windows Server by using VPNs.

Lessons

- Planning VPNs
- Implementing VPNs

Module 9: Implementing networking for branch offices

This module explains how to implement network services for branch offices.

Lessons

- Networking features and considerations for branch offices
- Implementing Distributed File System (DFS) for branch offices
- Implementing BranchCache for branch offices

Module 10: Configuring advanced networking features

This module explains how to implement an advanced networking infrastructure.

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

Module 11: Implementing Software Defined Networking

This module explains how to implement SDN.

Lessons
- Overview of SDN.
- Implementing network virtualization
- Implementing Network Controller

Classroom Live Labs

Lab: Planning an IPv4 network
- Migrating Settings by using Windows Easy Transfer
- Configuring a Reference Image of Windows 7
- Configuring a Reference Image

Lab: Implementing and troubleshooting an IPv4 network
- Verifying IPv4
- Troubleshooting IPv4

Lab: Implementing DHCP
- Planning a DHCP server implementation
- Implementing the DHCP configuration
- Validating the DHCP implementation

Lab: Configuring and evaluating IPv6 transition technologies
- Reviewing the default IPv6 configuration
- Implementing DHCPv6
- Configuring network integration by using ISATAP
- Configuring native IPv6 connectivity
- Configuring 6to4 connectivity

Lab: Planning and implementing name resolution by using DNS
- Planning DNS name resolution
- Implementing DNS servers and zones

Lab: Integrating DNS with Active Directory
- Integrating DNS with Active Directory

Lab: Configuring advanced DNS settings

- Configuring DNS policies
- Validating the DNS implementation
- Troubleshooting DNS

Lab: Implementing IPAM

- Installing the IPAM Server feature
- Provisioning the IPAM Server
- Managing IP address spaces by using IPAM

Lab: Implementing Web Application Proxy

- Implementing Web Application Proxy
- Validating the Web Application Proxy deployment

Lab: Implementing DirectAccess by using the Getting Started Wizard

- Verifying readiness for a DirectAccess deployment
- Configuring DirectAccess
- Validating the DirectAccess deployment

Lab: Deploying an advanced DirectAccess solution

- Preparing the environment for DirectAccess
- Implementing the advanced DirectAccess infrastructure
- Validating the DirectAccess deployment

Lab: Implementing VPN

- Implementing VPN
- Validating the VPN deployment
- Troubleshooting VPN access

Lab: Implementing DFS for branch offices

- Implementing DFS
- Validating the deployment

Lab: Implementing BranchCache

- Implementing BranchCache
- Validating the deployment

Lab: Configuring advanced Hyper-V networking features

- Creating and using Hyper-V virtual switches
- Configuring and using the advanced features of a virtual switch

Lab: Deploying Network Controller

- Preparing to deploy Network Controller
- Deploying Network Controller

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VIRTUAL CLASSROOM LIVE	$2,995 USD	5 Day

Virtual Classroom Live Outline

Module 1: Planning and implementing an IPv4 network

This module explains how to use fundamental networking tools and techniques to configure and troubleshoot IPv4-based networks.

Lessons

- Planning IPv4 addressing
- Configuring an IPv4 host
- Managing and troubleshooting IPv4 network connectivity

Module 2: Implementing DHCP

This module explains how to plan and implement DHCP to support the IPv4 infrastructure.

Lessons

- Overview of the DHCP server role
- Deploying DHCP
- Managing and troubleshooting DHCP

Module 3: Implementing IPv6

This module explains how to implement IPv6, and how to integrate IPv6 and IPv4 networks.

Lessons

- Overview of IPv6 addressing
- Configuring an IPv6 host
- Implementing IPv6 and IPv4 coexistence
- Transitioning from IPv4 to IPv6

Module 4: Implementing DNS

This module explains how to install, configure, and troubleshoot DNS within the

organization's network.

Lessons
- Implementing DNS servers
- Configuring zones in DNS
- Configuring name resolution between DNS zones
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Module 5: Implementing and managing IPAM

This module explains how to implement and manage the IPAM feature in Windows Server. This module also explains how to use IPAM to manage services such as DHCP and DNS.

Lessons
- Overview of IPAM
- Deploying IPAM
- Managing IP address spaces by using IPAM

Module 6: Remote access in Windows Server

His module explains how to plan for remote access in Windows Server and how to implement Web Application Proxy.

Lessons
- Overview of remote access
- Implementing the Web Application Proxy

Module 7: Implementing DirectAccess

This module explains how to implement and manage DirectAccess in Windows Server.

Lessons
- Overview of DirectAccess
- Implementing DirectAccess by using the Getting Started Wizard
- Implementing and managing an advanced DirectAccess infrastructure

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This module explains how to implement and manage remote access in Windows Server by using VPNs.

Lessons
- Planning VPNs
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- Networking features and considerations for branch offices
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- Implementing BranchCache for branch offices

Module 10: Configuring advanced networking features

This module explains how to implement an advanced networking infrastructure.

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

Module 11: Implementing Software Defined Networking

This module explains how to implement SDN.

Lessons
- Overview of SDN.
- Implementing network virtualization
- Implementing Network Controller

Virtual Classroom Live Labs

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- Configuring a Reference Image of Windows 7
- Configuring a Reference Image

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- Validating the DHCP implementation

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- Planning DNS name resolution
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- Integrating DNS with Active Directory

Lab: Configuring advanced DNS settings

- Configuring DNS policies
- Validating the DNS implementation
- Troubleshooting DNS

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- Installing the IPAM Server feature
- Provisioning the IPAM Server
- Managing IP address spaces by using IPAM

Lab: Implementing Web Application Proxy

- Implementing Web Application Proxy
- Validating the Web Application Proxy deployment

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Lab: Deploying an advanced DirectAccess solution

- Preparing the environment for DirectAccess
- Implementing the advanced DirectAccess infrastructure
- Validating the DirectAccess deployment

Lab: Implementing VPN

- Implementing VPN
- Validating the VPN deployment
- Troubleshooting VPN access

Lab: Implementing DFS for branch offices

- Implementing DFS
- Validating the deployment

Lab: Implementing BranchCache

- Implementing BranchCache
- Validating the deployment

Lab: Configuring advanced Hyper-V networking features

- Creating and using Hyper-V virtual switches
- Configuring and using the advanced features of a virtual switch

Lab: Deploying Network Controller

- Preparing to deploy Network Controller
- Deploying Network Controller

May 18 - 22, 2026 | 9:00 AM - 5:00 PM EDT

Jul 13 - 17, 2026 | 9:00 AM - 5:00 PM EDT

Sep 21 - 25, 2026 | 9:00 AM - 5:00 PM EDT

Nov 16 - 20, 2026 | 9:00 AM - 5:00 PM EST

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PRIVATE GROUP TRAINING	5 Day

Visit us at www.globalknowledge.com or call us at 1-866-716-6688.

Date created: 4/23/2026 7:05:58 AM