

# 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

# NETWORKING WITH WINDOWS SERVER (55349)

Course Code: 821558

CLASSROOM LIVE

\$2,995 CAD

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**

This 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

# NETWORKING WITH WINDOWS SERVER (55349)

Course Code: 821558

VIRTUAL CLASSROOM LIVE

\$2,995 CAD

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
- 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**

This 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

## Virtual 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

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

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





# NETWORKING WITH WINDOWS SERVER (55349)

Course Code: 821558

PRIVATE GROUP TRAINING

5 Day

Visit us at [www.globalknowledge.com](http://www.globalknowledge.com) or call us at 1-866-716-6688.

Date created: 6/27/2026 1:15:35 PM

Copyright © 2026 Global Knowledge Training LLC. All Rights Reserved.