20741WV Networking with Windows Server

Overview

Course Duration: 5 Days

About This Course

This 5-day classroom-based course provides the fundamental networking skills required to deploy and support Windows Server in most organizations. It covers IP fundamentals, remote access technologies, and more advanced content including Software Defined Networking.

Although this course and the associated labs are written for Windows Server 2022, the skills taught will also be backwards compatible for Server 2016 and Server 2019.

The course and labs also focus on how to administer Windows Server using not only the traditional tools such as PowerShell and Server manager, but also Windows Admin Center.

Audience Profile

This course is intended for existing IT professionals who have some networking knowledge and experience and are looking for a single course that provides insight into core and advanced networking technologies in Windows Server. This audience would typically include:

- Network administrators who are looking to reinforce existing skills and learn about new networking technology changes and functionality in Windows Server.

- System or Infrastructure Administrators with general networking knowledge who are looking to gain core and advanced networking knowledge and skills on Windows Server

Course Details

Module 1: Planning and implementing an IPv4 network

- This module also 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
- Lab: Planning, Implementing, and troubleshooting an IPv4 network

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
- Lab: Implementing 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
- Lab: Configuring and evaluating IPv6 transition technologies

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
- Lab: Planning and implementing name resolution by using DNS, Integrating DNS with AD, Advanced DNS

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
- Lab: Implementing 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
- Lab: Remote access in Windows Server

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
- Lab: Implementing DirectAccess & Deploying an advanced DirectAccess solution

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
- Lab: Implementing VPN

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
- Lab: Implementing DFS & BranchCache

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
- Lab: Configuring advanced 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
- Lab: Configure Software Defined Networking