
Networking with Windows Server

Duration: 5 Days Course Code: M10970

Overview:

Get hands-on instruction and practice implementing networking with Windows Server 2012 and Windows Server 2012 R2 in this 5-day Microsoft Official Course. You will learn the skills you need to help reduce networking complexity while lowering costs, simplifying management tasks, and delivering services reliably and efficiently. You will learn how to automate and consolidate networking processes and resources, more easily connect private clouds with public cloud services, and more easily connect users to IT resources and services across physical boundaries. You will learn how to configure some of the key networking features such as IP Addressing, IPAM, DNS and DHCP, Remote Access technologies such as DirectAccess and VPNs. You will learn how to secure networks using Windows Firewall, IPSec and Network Access Protection, as well as becoming familiar with high performance technologies such as NIC Teaming, Receive Side Scaling, SMB Direct and SMB MultiChannel. You will learn how to integrate your network infrastructure with Hyper-V and leverage virtual high performance technologies such as SR-IOV, virtual Machine Queue, (VMQ), virtual Receive Side Scaling (vRSS) as well as provision multitenant networks using Hyper-V Network Virtualization and provisioning external access for those multitenant networks using the built in software gateway in Windows Server 2012 R2. As part of the learning experience, you will perform hands-on exercises in a virtual lab environment.

Target Audience:

This course is intended for Information Technology (IT) professionals who have some networking knowledge and experience and are looking for a single course that will further develop that knowledge and skillset on core and advanced networking technologies in Windows Server 2012 and Windows Server 2012 R2. Network administrators who are looking to further develop skills with the latest networking technology in Windows Server 2012 and Windows Server 2012 R2 System or Infrastructure Administrators with general networking knowledge who are looking to build upon that core knowledge and cross train into advanced networking technologies on Windows Server 2012 and Windows Server 2012 R2 IT Professionals who have taken the 10967A: Fundamentals of a Windows Server Infrastructure course or have knowledge equivalent to the technologies covered in that course and are looking to build upon that knowledge

Objectives:

- Plan and implement an IPv4 network and configure and manage DHCP.
 - Implement name resolution by using DNS.
 - Implement IPv6 and integrate IPv6 and IPv4 networks.
 - Implement and manage the IP Address Management feature in Windows Server 2012.
 - Implement and manage remote access technologies in Windows Server 2012 such as DirectAccess, VPNs and Web Application Proxy
 - Implement network security by using Windows Firewall with Advanced Security and IPsec in Windows Server 2012.
 - Implement and manage Network Access Protection (NAP).
 - Implement network services for branch offices.
 - Implement network infrastructure for file and data services.
 - Implement and manage networking in Hyper-V.
 - Virtualize the physical network infrastructure in Windows Server 2012 and Windows Server 2012 R2 using Hyper-V Network Virtualization and the built in Gateway.
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Prerequisites:

- Experience working with Windows Server 2008 or Windows Server 2012
 - Experience working in a Windows Server infrastructure enterprise environment
 - An understanding of core networking infrastructure components and technologies such as cabling, routers, hubs, switches
 - Familiarity with networking topologies and architectures such as LANs, WANs, and wireless networking
 - Some basic knowledge of the TCP/IP protocol stack, addressing, and name resolution
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- Experience with and knowledge of Hyper-V and virtualization technologies
 - Hands-on experience working with Windows Client operating systems such as Windows 7 or Windows 8
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Content:

Module 1: Implementing IPv4 Services

- Planning IPv4 Addressing
- Managing and Troubleshooting IPv4 Connectivity
- Deploying Dynamic Host Configuration Protocol
- Managing and Troubleshooting DHCP

Lab : Planning IPv4 Addressing

- Planning IPv4 Address Assignments
- Lab : Implementing IPv4 Services
- Planning the DHCP Server Implementation
- Implementing the DHCP Configuration
- Validate the DHCP Deployment

Module 2: Implementing Name Resolution by Using DNS

- Implementing DNS Servers
- Configuring Zones in DNS
- Configuring DNS Integration with AD DS
- Configuring Advanced DNS Settings
- Configuring DNS Resolution Between Zones

Lab : Planning and Implementing Name Resolution by Using DNS

- Planning DNS Name Resolution
- Implementing DNS Servers and Zones
- Integrating DNS with Active Directory

Module 3: Implementing IPv6

- Overview of IPv6 Addressing
- Implementing IPv6 and IPv4 Coexistence
- Transitioning from IPv4 to IPv6

Lab : Configuring and Evaluating IPv6 Transition Technologies

- Reviewing the Default IPv6 Configuration
- Configuring Network Integration by Using ISATAP
- Configuring Native IPv6 Connectivity
- Configuring 6to4 Connectivity

Module 4: Implementing IPAM

- IPAM Overview
- Deploying IPAM
- Managing IP Address Spaces by Using IPAM

Lab : Implementing IPAM

- Installing the IPAM Server Feature
- Provisioning the IPAM Server
- Managing IP Address Spaces by Using IPAM

Module 5: Implementing Remote Access

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

Lab : Implementing Web Application Proxy

- Implementing Web Application Proxy
- Validating the Web Application Proxy Deployment

Module 6: Implementing Network Security

- Managing Windows Firewall with Advanced Security
- Configuring IPsec and Connection Security Rules
- Implementing Isolation Zones

Lab : Implementing Network Security

- Planning the Windows Firewall and Isolation Solution
- Implementing the Proposed Windows Firewall and Isolation Solution
- Validating the Network Security Settings

Module 7: Implementing Network Access Protection

- Implementing NPS
- Network Access Protection Overview
- Configuring NAP
- Configuring IPsec Enforcement for NAP
- Monitoring and Troubleshooting NAP

Lab : Implementing NAP with VPN Enforcement

- Configuring NAP with VPN Enforcement
- Testing the Deployment

Lab : Implementing IPsec Enforcement for NAP

- Preparing the CA
- Configuring IPsec Enforcement

Module 8: Implementing Networking for Branch Offices

- Networking Features and Considerations for Branch Offices
- Implementing DFS for Branch Offices
- Implementing BranchCache for Branch Offices

Lab : Implementing Networking for Branch Offices

- Implementing DFS
- Implementing BranchCache
- Validating the Deployment

Module 9: Implementing Networking Infrastructure for File and Data Services

- Implementing iSCSI
- Implementing High Performance Networking Features

Lab : Implementing File and Data Networking Infrastructure

- Configuring iSCSI Storage Connectivity
- Testing iSCSI High Availability
- Module 10: Implementing and Managing Networking in Hyper-V
- Creating and Using Hyper-V Virtual Switches
- Configuring Advanced Hyper-V Networking Features

Lab : Creating and Configuring Virtual Machine Networks

- Creating and Using Hyper-V Virtual Switches
- Configuring and Using the Advanced Features of a Virtual Switch
- Configuring Hyper-V Network Virtualization

Module 11: Virtualizing Your Network Infrastructure

- Implementing Hyper-V Network Virtualization
- Managing Your Virtualized Network Infrastructure

Lab : Creating and Configuring Virtual Machine Networks

- Creating and Using Hyper-V Virtual Switches
- Configuring and Using the Advanced Features of a Virtual Switch
- Configuring Hyper-V Network Virtualization

- Remote Access Overview
 - Implementing DirectAccess by Using the Getting Started Wizard
 - Implementing and Managing an Advanced DirectAccess Infrastructure
 - Implementing VPN
 - Planning a Complex Remote Access Infrastructure
 - Implementing Web Application Proxy
- Validating the Deployment of IPsec NAP
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Further Information:

For More information, or to book your course, please call us on 00 971 4 446 4987

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