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(10970B) – Networking with Windows Server

OBJECTIVE

Get hands-on instruction and practice implementing networking with Windows Server 2012 and Windows Server 2012 R2 in this 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 Window Server 2012 R2. As part of the learning experience, you will perform hands-on exercises in a virtual lab environment.

COURSE TOPICS

Module 1: Implementing IPv4 Services

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

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

Module 3: Implementing IPv6

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

Module 4: Implementing IPAM

- IPAM Overview
- Deploying IPAM

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- Managing IP Address Spaces by Using IPAM

Module 5: Implementing Remote Access

- Remote Access Overview
- Implementing Direct Access by Using the Getting Started Wizard
- Implementing and Managing an Advanced Direct Access Infrastructure
- Implementing VPN
- Planning a Complex Remote Access Infrastructure
- Implementing Web Application Proxy

Module 6: Implementing Network Security

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

Module 7: Implementing Network Access Protection

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

Module 8: Implementing Networking for Branch Offices

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

Module 9: Implementing Networking Infrastructure for File and Data Services

- Implementing iSCSI
- Implementing High Performance Networking Features

Module 10: Implementing and Managing Networking in Hyper-V

- Creating and Using Hyper-V Virtual Switches
- Configuring Advanced Hyper-V Networking Features

Module 11: Virtualizing Your Network Infrastructure

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

After completing this course, students will be able to:

- Plan and implement an IPv4 network and configure and manage DHCP.

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- 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 Direct Access, 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.

PREREQUISITES

Before attending this course, students must have the following:

- Experience working with Windows Server 2008 or Windows Server 2012
- Experience working in a Windows Sever 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
- 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

TRAINING APPROACH

This course includes lectures, course notes, exercises and hands-on practice.

COURSE DURATION

24 Hours (in 3 days)

CERTIFICATION COMPLETION

A certificate of completion is provided for all trainees attending the course