MS 20741 B: Networking with Windows Server 2016

Days: 5

Prerequisites: In addition to professional experience, students who attend this training should already have the following technical knowledge:

- Experience working with Windows Server 2008 or Windows Server 2012
- Experience working in a Windows Server infrastructure enterprise environment
- Knowledge of the Open Systems Interconnection (OSI) model
- Understanding of core networking infrastructure components and technologies 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
- Some basic knowledge of the TCP/IP protocol stack, addressing and name resolution
- Experience with and knowledge of Hyper-V and virtualization
- Hands-on experience working with the Windows client operating systems such as Windows 8.1/Windows 10

Audience: 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 2016.

Description: This 5-day classroom-based course provides the fundamental networking skills required to deploy and support Windows Server 2016 in most organizations. It covers IP fundamentals, remote access technologies, and more advanced content including software defined networking.

OUTLINE:

MODULE 1: PLANNING AND IMPLEMENTING AN IPV4 NETWORK

LESSONS

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

LAB: PLANNING AN IPV4 NETWORK

LAB: IMPLEMENTING AND TROUBLESHOOTING AN IPV4 NETWORK

MODULE 2: IMPLEMENTING DHCP

LESSONS

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

LAB: IMPLEMENTING DHCP

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MODULE 3: IMPLEMENTING IPV6

LESSONS

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

LAB: IMPLEMENTING IPV6

LAB: CONFIGURING AND EVALUATING IPV6 TRANSITION TECHNOLOGIES

MODULE 4: IMPLEMENTING DNS

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

LAB: INTEGRATING DNS WITH ACTIVE DIRECTORY

LAB: CONFIGURING ADVANCED DNS SETTINGS

MODULE 5: IMPLEMENTING AND MANAGING IPAM

LESSONS

- IPAM overview
- Deploying IPAM
- Managing IP address spaces by using IPAM

LAB: IMPLEMENTING IPAM

MODULE 6: REMOTE ACCESS IN WINDOWS SERVER 2016

LESSONS

- Remote access overview
- Implementing Web Application Proxy

LAB: IMPLEMENTING WEB APPLICATION PROXY

MODULE 7: IMPLEMENTING DIRECTACCESS

LESSONS

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

LAB: IMPLEMENTING DIRECTACCESS BY USING THE GETTING STARTED WIZARD

LAB: DEPLOYING AN ADVANCED DIRECTACCESS SOLUTION

MODULE 8: IMPLEMENTING VPNS

LESSONS

- Planning VPNs
- Implementing VPNs

LAB: IMPLEMENTING A VPN

LAB: TROUBLESHOOTING VPN ACCESS

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MODULE 9: IMPLEMENTING NETWORKING 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 FOR BRANCH OFFICES

LAB: IMPLEMENTING BRANCHCACHE

MODULE 10: CONFIGURING ADVANCED NETWORKING FEATURES

LESSONS

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

LAB: CONFIGURING ADVANCED HYPER-V NETWORKING FEATURES

MODULE 11: IMPLEMENTING SOFTWARE DEFINED NETWORKING

LESSONS

- Overview of software defined networking
- Implementing network virtualization
- Implementing Network Controller

LAB: IMPLEMENTING NETWORK CONTROLLER