Networking with Windows Server 2016

Duration: 5 Days Course Code: M20741 Version: B

Overview:

EOL - 30/12/21

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.

Target 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. 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 2016. System or Infrastructure Administrators with general networking knowledge who are looking to gain core and advanced networking knowledge and skills on Windows Server 2016. The secondary audience for this course is those IT professionals who are looking to take the MCSA 70-741:

Objectives:

- 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 for remote access.
- Implement DirectAccess.
- Implement virtual private networks (VPNs).
- Implement networking for branch offices.
- Configure advanced networking features.
- Implement software defined networking.

Prerequisites:

- 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 or Windows 10

Testing and Certification

Content:

Module 1: Planning and implementing an IPv4 network

- Planning IPv4 addressing
- Configuring an IPv4 host
- Managing and troubleshooting IPv4 network connectivity
- Lab : Planning an IPv4 network
- Planning the IPv4 address assignments
- Lab : Implementing and troubleshooting an IPv4 network
- Verifying the IPv4 configuration
- Troubleshooting IPv4

Module 2: Implementing DHCP

- Overview of the DHCP server role
- Deploying DHCP
- Managing and troubleshooting DHCP
- Lab : Implementing DHCP
- Planning the DHCP server implementation
- Implementing the DHCP configuration
- Validating the DHCP implementation

Module 3: Implementing IPv6

- Overview of IPv6 addressing
- Configuring an IPv6 host
- Implementing IPv6 and IPv4 coexistence
- Transitioning from IPv4 to IPv6
- Lab : Implementing IPv6
- Reviewing the default IPv6 configuration
- Implementing DHCPv6
- Lab : Configuring and evaluating IPv6 transition technologies
- Configuring network integration by using ISATAP
- Configuring native IPv6 connectivity
- Configuring 6to4 connectivity

Module 4: Implementing DNS

- 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
- 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

Module 5: Implementing and managing IPAM

- IPAM overview
- Deploying IPAM
- Managing IP address spaces by using IPAM
- Lab : Implementing IPAM
- Installing the IPAM Server feature
- Provisioning the IPAM Server feature
- Managing IP address spaces by using IPAM

Module 6: Remote access in Windows Server 2016

- Remote access overview
- Implementing Web Application Proxy
- Lab : Implementing Web Application Proxy
- Implementing Web Application Proxy
- Validating Web Application Proxy

Module 7: Implementing DirectAccess

- 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
- 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

Module 8: Implementing VPNs

- Planning VPNs
- Implementing VPNs
- Lab : Implementing a VPN
- Implementing a VPN
- Validating VPN deployment
- Lab : Troubleshooting VPN access
- Troubleshooting VPN access

Module 9: Implementing networking for branch offices

- 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
- Implementing DFS
- Validating the deployment
- Lab : Implementing BranchCache
- Implementing BranchCache
- Validating the deployment

Module 10: Configuring advanced networking features

- Overview of high performance networking features
- Configuring advanced Hyper-V networking features
- Lab : Configuring advanced Hyper-V networking features
- Creating and using Microsoft Hyper-V virtual switches
- Configuring and using the advanced features of a virtual switch

Module 11: Implementing software defined networking

- Overview of software defined networking
- Implementing network virtualization
- Implementing Network Controller
- Lab : Implementing Network Controller
- Deploying Network Controller
- Configuring network services with Network Controller
- Managing and monitoring with Network Controller

Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

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