MServer-SI
Networking in Windows Server

Description:

This 5-day classroom-based course provides the fundamental networking skills required to deploy and support Windows Server 2016/2019 in most organizations. It covers IP fundamentals, remote access technologies, and more advanced content including Software Defined Networking.

Students will be able to:

- 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.

Course requirements:

- Experience working with Windows Server
- 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 8/10/11

This course is intended for:

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.

Literature:

All participants will receive internal OKsystem materials.

Hardware:

Classrooms are equipped with high-performance computers with Internet access and the possibility of wireless connection.

Syllabus:

Chapter 1: Planning and implementing an IPv4 network

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

Chapter 2: Implementing DHCP

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

Chapter 3:Implementing IPv6

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

Chapter 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

Chapter 5: Implementing and managing IPAM

- Overview of IPAM
- Deploying IPAM
- Managing IP address spaces by using IPAM

Chapter 6: Remote access in Windows Server 2016

- Overview of remote access
- Implementing Web Application Proxy

Chapter 7: Implementing DirectAccess

- Overview of DirectAccess

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

Chapter 8: Implementing VPNs

- Planning VPNs
- Implementing VPNs

Chapter 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

Chapter 10: Configuring advanced networking features

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

Chapter 11: Implementing Software Defined Networking

- Overview of Software Defined Networking
- Implementing network virtualization
- Implementing Network Controller