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MCSE 2016



Course Guide

Microsoft Certified Solution Expert - The MCSE: Server Infrastructure certification validates your ability to build comprehensive server infrastructure solutions.

By completing MCSE track, candidate will secure following certificates:

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Microsoft Certified Solution Expert Contents

MCSE curriculum follows the Microsoft certification standards and is designed to meet the requirements of corporate as well as enterprise needs.

Installation, Storage, and Compute with Windows Server 2016 (Exam 70-740)

Installing, upgrading, and migrating servers and workloads

- Introducing Windows Server 2016
- Preparing and installing Server Core
- Preparing for upgrades and migrations
- Migrating server roles and workloads
- Windows Server activation models

Configuring local storage

- Managing disks in Windows Server
- Managing volumes in Windows Server

Implementing enterprise storage solutions

- Overview of DAS, NAS, and SANs
- Comparing Fibre Channel, iSCSI, and Fibre Channel over Ethernet
- Understanding iSNS, DCB, and MPIO
- Configuring sharing in Windows Server 2016

Implementing Storage Spaces and Data Deduplication

- Implementing Storage Spaces
- Managing Storage Spaces
- Implementing Data Deduplication

Installing and configuring Hyper-V and virtual machines

- Overview of Hyper-V
- Installing Hyper-V
- Configuring storage on Hyper-V host servers
- Configuring networking on Hyper-V host servers
- Configuring Hyper-V virtual machines
- Managing virtual machines

Deploying and managing Windows and Hyper-V containers

- Overview of containers in Windows Server 2016
- Deploying Windows Server and Hyper-V containers
- Installing, configuring, and managing containers by using Docker

Overview of high availability and disaster recovery

- Defining levels of availability

- Planning high availability and disaster recovery solutions with Hyper-V virtual machines
- Backing up and restoring by using Windows Server Backup
- High availability with failover clustering in Windows Server 2016

Implementing failover clustering

- Planning a failover cluster
- Creating and configuring a new failover cluster
- Maintaining a failover cluster
- Troubleshooting a failover cluster
- Implementing site high availability with stretch clustering

Implementing failover clustering with Windows Server 2016 Hyper-V

- Overview of the integration of Hyper-V Server 2016 with failover clustering
- Implementing Hyper-V VMs on failover clusters
- Key features for VMs in a clustered environment

Implementing Network Load Balancing

- Overview of NLB
- Configuring an NLB cluster
- Planning an NLB implementation

Creating and managing deployment images

- Introduction to deployment images
- Creating and managing deployment images by using MDT
- Virtual machine environments for different workloads

Managing, monitoring, and maintaining virtual machine installations

- WSUS overview and deployment options
- Update management process with WSUS
- Overview of Windows PowerShell DSC
- Overview of Windows Server 2016 monitoring tools
- Using Performance Monitor
- Monitoring event logs

Networking with Windows Server 2016 (Exam 70-741)

Planning and implementing an IPv4 network

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

Implementing DHCP

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

Implementing IPv6

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

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

Implementing and managing IPAM

- Overview of IPAM
- Deploying IPAM
- Managing IP address spaces by using IPAM
- *Remote access in Windows Server 2016*
Overview of remote access
- Implementing the Web Application Proxy

Implementing DirectAccess

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

Implementing VPNs

- Planning VPNs
- Implementing VPNs

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

Configuring advanced networking features

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

Implementing Software Defined Networking

Overview of SDN.

- Implementing network virtualization
- Implementing Network Controller

Identity with Windows Server 2016 (Exam 70-742)

Installing and configuring domain controllers

- Overview of AD DS
- Overview of AD DS domain controllers
- Deploying a domain controller

Managing objects in AD DS

- Managing user accounts
- Managing groups in AD DS
- Managing computer objects in AD DS
- Using Windows PowerShell for AD DS administration
- Implementing and managing OUs

Advanced AD DS infrastructure management

- Overview of advanced AD DS deployments
- Deploying a distributed AD DS environment
- Configuring AD DS trusts

Implementing and administering AD DS sites and replication

- Overview of AD DS replication
- Configuring AD DS sites
- Configuring and monitoring AD DS replication

Implementing Group Policy

- Introducing Group Policy
- Implementing and administering GPOs
- Group Policy scope and Group Policy processing
- Troubleshooting the application of GPOs

Managing user settings with Group Policy

- Implementing administrative templates
- Configuring Folder Redirection, software installation, and scripts
- Configuring Group Policy preferences

Securing Active Directory Domain Services

- Securing domain controllers
- Implementing account security
- Implementing audit authentication
- Configuring managed service accounts

Deploying and managing AD CS

- Deploying CAs
- Administering CAs
- Troubleshooting and maintaining CAs

Deploying and managing certificates

- Deploying and managing certificate templates
- Managing certificate deployment, revocation, and recovery
- Using certificates in a business environment
- Implementing and managing smart cards

Implementing and administering AD FS

- Overview of AD FS
- AD FS requirements and planning
- Deploying and configuring AD FS
- Web Application Proxy Overview

Implementing and administering AD RMS

- Overview of AD RMS

- Deploying and managing an AD RMS infrastructure
- Configuring AD RMS content protection

Implementing AD DS synchronization with Microsoft Azure AD

- Planning and preparing for directory synchronization
- Implementing directory synchronization by using Azure AD Connect

- Managing identities with directory synchronization

Monitoring, managing, and recovering AD DS

- Monitoring AD DS
- Managing the Active Directory database
- Active Directory backup and recovery options for AD DS and other identity and access solutions

Securing Windows Server 2016 (Exam 70-744) Attacks, breach detection, and Sysinternals tools

- Understanding attacks
- Detecting security breaches
- Examining activity with the Sysinternals tools

Protecting credentials and privileged access

- Understanding user rights
- Computer and service accounts
- Protecting credentials
- Privileged Access Workstations and jump servers
- Local administrator password solution

Limiting administrator rights with Just Enough Administration

- Understanding JEA
- Verifying and deploying JEA

Privileged access management and administrative forests

- ESAE forests
- Overview of Microsoft Identity Manager
- Overview of JIT administration and PAM

Mitigating malware and threats

- Configuring and managing Windows Defender
- Restricting software
- Configuring and using the Device Guard feature

Analyzing activity with advanced auditing and log analytics

- Overview of auditing
- Advanced auditing
- Windows PowerShell auditing and logging

Deploying and configuring Advanced Threat Analytics and Microsoft Operations Management Suite

- Deploying and configuring ATA
- Deploying and configuring Microsoft Operations Management Suite
- Deploying and configuring Azure Security Center

Secure Virtualization Infrastructure

- Guarded fabric
- Shielded and encryption-supported virtual machines

Securing application development and server-workload infrastructure

- Using SCT
- Understanding containers

Planning and protecting data

- Planning and implementing encryption
- Planning and implementing BitLocker
- Protecting data by using Azure Information Protection

Optimizing and securing file services

- File Server Resource Manager
- Implementing classification and file management tasks
- Dynamic Access Control

Securing network traffic with firewalls and encryption

- Understanding network-related security threats
- Understanding Windows Firewall with Advanced Security
- Configuring IPsec
- Datacenter Firewall

Securing network traffic

- Configuring advanced DNS settings
- Examining network traffic with Message Analyzer
- Securing and analyzing SMB traffic

Practical Approach

- The real life examples will be given throughout the lectures.

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