

## MCSE (Microsoft Certified Solutions Expert ) Server Infrastructure Course Outline

### 70-410 / Installing and Configuring Windows Server 2012

#### Module 1: Deploying and Managing Windows Server 2012

- Windows Server 2012 Overview
- Overview of Windows Server 2012 Management
- Installing Windows Server 2012
- Post-Installation Configuration of Windows Server 2012
- Introduction to Windows PowerShell

#### Module 2: Introduction to Active Directory Domain

- Overview of AD DS
- Overview of Domain Controllers
- Installing a Domain Controller

#### Module 3: Managing Active Directory Domain Services

- Managing User Accounts
- Managing Group Accounts
- Managing Computer Accounts
- Delegating Administration

#### Module 4: Automating Active Directory Domain Services

- Using Command-line Tools for AD DS Administration
- Using Windows PowerShell for AD DS Administration
- Performing Bulk Operations with Windows PowerShell

#### Module 5: Implementing IPv4

- Overview of TCP/IP
- Understanding IPv4 Addressing
- Subnetting and Supernetting
- Configuring and Troubleshooting IPv4

### **Module 6: Implementing Dynamic Host Configuration Protocol**

- Installing a DHCP Server Role
- Configuring DHCP Scopes
- Managing a DHCP Database
- Securing and Monitoring DHCP

### **Module 7: Implementing Domain Name System**

- Name Resolution for Windows Client and Servers
- Installing and Managing a DNS Server
- Managing DNS Zones

### **Module 8: Implementing IPv6**

- Overview of IPv6
- IPv6 Addressing
- Coexistence with IPv4
- IPv6 Transition Technologies
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### **Module 9: Implementing Local Storage**

- Overview of Storage
- Managing Disks and Volumes
- Implementing Storage Spaces

### **Module 10: Implementing File and Print Services**

- Securing Files and Folders
- Protecting Shared Files and Folders by Using Shadow Copies
- Configuring Network Printing

### **Module 11: Implementing Group Policy**

- Overview of Group Policy
- Group Policy Processing
- Implementing a Central Store for Administrative Templates

### **Module 12: Securing Windows Servers Using Group Policy Objects**

- Windows Operating Systems Security Overview
- Configuring Security Settings
- Restricting Software
- Configuring Windows Firewall with Advanced Security

### **Module 13: Implementing Server Virtualization with Hyper-V**

- Implementing Hyper-V
- Managing Virtual Machine Storage
- Managing Virtual Networks

## 70-411 / Administering Windows Server 2012

### Module 1: Deploying and Maintaining Server Images

- Overview of Windows Deployment Services
- Implementing Deployment with Windows Deployment Services
- Administering Windows Deployment Services

### Module 2: Configuring and Troubleshooting Domain Name System

- Installing the DNS Server Role
- Configuring the DNS Server Role
- Configuring DNS Zones
- Configuring DNS Zone Transfers
- Managing and Troubleshooting DNS

### Module 3: Maintaining Active Directory Domain Services

- Overview of AD DS
- Implementing Virtualized Domain Controllers
- Implementing RODC
- Administering AD DS
- Managing the AD DS Database

### Module 4: Managing User and Service Accounts

- Automating User Account Management
- Configuring Password-Policy and User-Account Lockout Settings
- Configuring Managed Service Accounts

### Module 5: Implementing a Group Policy Infrastructure

- Introducing Group Policy
- Implementing and Administering Group Policy Objects (GPOs)
- Group Policy Scope and Group Policy Processing
- Troubleshooting the Application of GPOs

### Module 6: Managing User Desktops with Group Policy

- Implementing Administrative Templates
- Configuring Folder Redirection and Scripts
- Configuring Group Policy Preferences
- Managing Software with Group Policy

### **Module 7: Configuring and Troubleshooting Remote Access**

- Configuring Network Access
- Configuring Virtual Private Network (VPN) Access
- Overview of Network Policies
- Troubleshooting Routing and Remote Access
- Configuring DirectAccess

### **Module 8: Installing, Configuring, and Troubleshooting the Network Policy Server Role**

- Installing and Configuring a NPS
- Configuring Remote Authentication Dial-In User Service (RADIUS) Clients and Servers
- NPS Authentication Methods
- Monitoring and Troubleshooting a NPS

### **Module 9: Implementing Network Access**

- Overview of Network Access Protection
- Overview of NAP Enforcement Processes
- Configuring NAP
- Monitoring and Troubleshooting NAP

### **Module10: Optimizing File Services**

- Overview of FSRM
- Using FSRM to Manage Quotas, File Screens, and Storage Reports
- Implementing Classification and File Management Tasks
- Overview of Distributed File System (DFS)
- Configuring DFS Namespaces
- Configuring and Troubleshooting Distributed File System Replication (DFS-R)

### **Module 11: Configuring Encryption and Advanced Auditing**

- Encrypting Files by Using Encrypting File System
- Configuring Advanced Auditing

### **Module 12: Implementing Update Management**

- Overview of WSUS
- Deploying Updates with WSUS

### **Module 13: Monitoring Windows Server 2012**

- Monitoring Tools
- Using Performance Monitor
- Monitoring Event Logs

## 70-412 / Configuring Advanced Windows Server 2012 Services

### Module 1: Implementing Advanced Network Services

- Configuring Advanced DHCP Features
- Configuring Advanced DNS Settings
- Implementing IPAM

### Module 2: Implementing Advanced File Services

- Configuring iSCSI Storage
- Configuring BranchCache
- Optimizing Storage Usage

### Module 3: Implementing Dynamic Access Control

- Overview of Dynamic Access Control
- Planning for Dynamic Access Control
- Deploying Dynamic Access Control

### Module 4: Implementing Distributed Active Directory Domain Services Deployments

- Overview of Distributed AD DS Deployments
- Deploying a Distributed AD DS Environment
- Configuring AD DS Trusts

### Module 5: Implementing Active Directory Domain Services Sites and Replication

- Overview of AD DS Replication
- Configuring AD DS Sites
- Configuring and Monitoring AD DS Replication

### Module 6: Implementing Active Directory Certificate Services

- PKI Overview
- Deploying CAs
- Deploying and Configuring CA Hierarchy
- Deploying and Managing Certificate Templates
- Implementing Certificate Distribution and Revocation
- Managing Certificate Recovery

### Module 7: Implementing Active Directory Rights Management Services

- AD RMS Overview
- Deploying and Managing an AD RMS Infrastructure
- Configuring AD RMS Content Protection
- Configuring External Access to AD RMS

### **Module 8: Implementing Active Directory Federation Services**

- Overview of AD FS
- Deploying AD FS
- Implementing AD FS for a Single Organization
- Deploying AD FS in a B2B Federation Scenario

### **Module 9: Implementing Network Load Balancing**

- Overview of NLB
- Configuring an NLB Cluster
- Planning an NLB Implementation

### **Module 10: Implementing Failover Clustering**

- Overview of Failover Clustering
- Implementing a Failover Cluster
- Configuring Highly Available Applications and Services on a Failover Cluster
- Maintaining a Failover Cluster
- Implementing a Multi-Site Failover Cluster

### **Module 11: Implementing Failover Clustering with Hyper-V**

- Overview of Integrating Hyper-V with Failover Clustering
- Implementing Hyper-V Virtual Machines on Failover Clusters
- Implementing Hyper-V Virtual Machine Movement
- Managing Hyper-V Virtual Environments by Using VMM

### **Module 12: Implementing Disaster Recovery**

- Overview of Disaster Recovery
- Implementing Windows Server Backup
- Implementing Server and Data Recovery

## **Bonus / Microsoft Threat Management Gateway**

### **Module 1: Forefront Threat Management Gateway (TMG) 2010 Overview**

- Introduction to Forefront TMG
- Installation and Initial Setup
- Basic Configuration Concepts

## **Module 2: Secure Web Gateway**

- Secure Web Gateway Overview
- HTTPS Inspection
- URL Filtering
- Malware Protection
- Intrusion Prevention

## **Module 3: Remote Access Gateway**

- Remote Access Gateway Overview
- Non-HTTP Server Publishing
- Web Publishing
- Virtual Private Networking (VPN) Connectivity

## **Module 4: Secure Mail Relay**

- Secure Mail Relay Overview
- Solution Components
- Configuring SMTP Protection

## **Module 5: Forefront TMG 2010 Design and Deployment Considerations**

- Logical Design Considerations
- Scalability and Availability
- Client Configuration
- Migration Options

## 70-413 Designing and Implementing a Server Infrastructure

### Module 1: Planning Server Upgrade and Migration

- Upgrade and Migration Considerations
- Creating a Server Upgrade and Migration Plan
- Planning for Virtualization

### Module 2: Planning and Implementing a Server Deployment Infrastructure

- Selecting an Appropriate Server Imaging Strategy
- Selecting a Deployment Automation Strategy
- Implementing an Automated Deployment Strategy

### Module 3: Designing and Maintaining an IP Configuration and Address Management Solution

- Designing and Implementing DHCP
- Planning and Implementing DHCP Scopes
- Planning and Implementing an IPAM Provisioning Strategy

### Module 4: Designing and Implementing Name Resolution

- Designing a DNS Server Implementation Strategy
- Designing the DNS Namespace
- Designing and Implementing DNS Zones
- Designing and Configuring DNS Zone Replication and Delegation
- Optimizing DNS Servers
- Designing DNS for High Availability and Security

### Module 5: Designing and Implementing an Active Directory Domain Services Forest and Domain Infrastructure

- Designing and Implementing AD DS Forest Trusts
- Designing and Implementing AD DS Domains
- Designing DNS Namespaces in AD DS Environments
- Designing AD DS Domain Trusts

### Module 6: Designing and Implementing an OU Infrastructure and AD DS Permissions Model

- Planning the AD DS Administrative Tasks Delegation Model
- Designing the OU Structure
- Designing and Implementing an AD DS Group Strategy



### **Module 7: Designing and Implementing a Group Policy Object Strategy**

- Gathering the Information Required for a GPO Design
- Designing and Implementing GPOs
- Designing GPO Processing
- Planning Group Policy Management

### **Module 8: Designing and Implementing an AD DS Physical Topology**

- Designing and Implementing AD DS Sites
- Designing AD DS Replication
- Designing the Placement of Domain Controllers
- Virtualization Considerations for Domain Controllers
- Designing Highly-Available Domain Controllers

### **Module 9: Planning and Implementing Storage**

- Storage Considerations
- Planning and Implementing iSCSI SANs

### **Module 10: Planning and Implementing File Services**

- Planning and Implementing a Distributed File System
- Planning and Implementing BranchCache
- Planning and Implementing Dynamic Access Control

### **Module 11: Designing and Implementing Network Access Services**

- Designing and Implementing Remote Access Services
- Designing RADIUS Authentication by Using a Network Policy Server
- Designing a Perimeter Network
- Planning and Implementing DirectAccess

### **Module 12: Designing and Implementing Network Protection**

- Overview of Network Security Design
- Identifying and Mitigating Common Network Security Threats
- Designing and Implementing a Windows Firewall Strategy
- Designing and Implementing a Network Access Protection Infrastructure

## **70-414 Implementing an Advanced Server Infrastructure**

### **Module 1: Planning and Implementing a Server Virtualization Strategy**

- Overview of System Center 2012 Components
- Integrating System Center 2012 and Server Virtualization
- Planning and Implementing a Server Virtualization Host Environment

### **Module 2: Planning and Implementing Networks and Storage for Virtualization**

- Planning a Storage Infrastructure for Virtualization
- Implementing a Storage Infrastructure for Virtualization
- Planning and Implementing a Network Infrastructure for Virtualization

### **Module 3: Planning and Deploying Virtual Machines**

- Planning Virtual Machine Configuration
- Preparing for Virtual Machine Deployments with VMM
- Deploying Virtual Machines

### **Module 4: Planning and Implementing a Virtualization Administration Solution**

- Planning and Implementing Microsoft System Center Administration
- Planning and Implementing Self-Service with System Center
- Planning and Implementing Automation with System Center

### **Module 5: Planning and Implementing a Server Monitoring Strategy**

- Planning Monitoring in Windows Server 2012
- Overview of System Center Operations Manager
- Planning and Configuring Monitoring Components
- Configuring Integration with VMM

### **Module 6: Planning and Implementing High Availability for File Services and Applications**

- Planning and Implementing Storage Spaces
- Planning and Implementing DFS
- Planning and Implementing Network Load Balancing

### **Module 7: Planning and Implementing a Highly Available Infrastructure Using Failover Clustering**

- Planning a Failover Clustering Infrastructure
- Implementing Failover Clustering
- Integrating Failover Clustering with Server Virtualization
- Planning a Multi-Site Failover Cluster

#### **Module 8: Planning and Implementing an Server Updates Infrastructure**

- Planning and Implementing a Windows Server Update Services (WSUS) Deployment
- Planning Software Updates with System Center 2012 Configuration Manager
- Planning and Implementing Updates in a Server Virtualization Infrastructure

#### **Module 9: Planning and Implementing a Business Continuity Strategy**

- Overview of Business Continuity Planning
- Planning and Implementing Backup Strategies
- Planning and Implementing Recovery
- Planning and Implementing Virtual Machine Backup and Recovery

#### **Module 10: Planning and Implementing an Public Key Infrastructure**

- Planning and Implementing a Certification Authority Deployment
- Planning and Implementing Certificate Templates
- Planning and Implementing Certificate Distribution and Revocation
- Planning and Implementing Key Archival and Recovery

#### **Module 11: Planning and Implementing an Identity Federation Infrastructure**

- Planning and Implementing an AD FS Server Infrastructure
- Planning and Implementing AD FS Claim Providers and Relying Parties
- Planning and Implementing AD FS Claims and Claim Rules

#### **Module 12: Planning and Implementing an Information Rights Management Infrastructure**

- Planning and Implementing an AD RMS Cluster
- Planning and Implementing AD RMS Templates and Policies
- Planning and Implementing External Access to AD RMS Services
- Planning and Implementing AD RMS Integration with Dynamic Access Control (DAC)