

## Course Details

**Duration:** 5 Days

**Course code:** M20412

### Overview:

Get hands-on instruction and practice configuring advanced Windows Server 2012, including Windows Server 2012 R2, services in this five-day Microsoft Official Course. This course is part three in a series of three courses that provides the skills and knowledge necessary to implement a core Windows Server 2012 infrastructure in an existing enterprise environment.

The three courses collectively cover implementing, managing, maintaining and provisioning services and infrastructure in a Windows Server 2012 environment. Although there is some cross-over of skills and tasks across these courses, this course focuses on advanced configuration of services necessary to deploy, manage and maintain a Windows Server 2012 infrastructure, such as advanced networking services, Active Directory Domain Services (AD DS), Active Directory Rights Management Services (AD RMS), Active Directory Federation Services (AD FS), Network Load Balancing, Failover Clustering, business continuity and disaster recovery services as well as access and information provisioning and protection technologies such as Dynamic Access Control (DAC), and Web Application Proxy integration with AD FS and Workplace Join.

This course maps directly to and is the preferred choice for hands-on preparation for Microsoft Certified Solutions Associate (MCSA): Exam 412: Configuring Advanced Windows Server 2012 Services, which is the third of three exams required for MCSA: Windows Server 2012 credential.

**Please Note:** Labs in this course are based on the General Availability release of Windows Server 2012 R2 and Windows 8.1.

### Target Audience:

This course is intended for Information Technology (IT) Professionals with hands on experience implementing, managing and maintaining a Windows Server 2012 or Windows Server 2012 R2 environment who wish to acquire the skills and knowledge necessary to perform advanced management and provisioning of services within that Windows Server 2012 environment. Candidates who would typically be interested in attending this course will be:

- ◆ Experienced Windows Server Administrators who have real world experience working in a Windows Server 2008 or Windows Server 2012 enterprise environment.
- ◆ IT Professionals who are looking to take the exam 412, Configuring Advanced Windows Server 2012 Services.
- ◆ IT Professionals wishing to take the Microsoft Certified Solutions Expert (MCSE) exams in Datacenter, Desktop Infrastructure, Messaging, Collaboration and Communications will also be interested in taking this course as they prepare for the MCSA exams, which are a pre-requisite for their individual specialties.

### Prerequisites:

- ◆ Experience working with Windows Server 2008 or Windows Server 2012 servers day to day in an

Enterprise environment.

- ◆ The course pre-requisites can be met by having knowledge equivalent to, or by attendance at, courses 20410B: Installing and Configuring Windows Server 2012 and 20411B: Administering Windows Server 2012 as this course will build upon the knowledge and skills covered in those courses

### Delegates will learn how to:

At the end of this course you will be able to:

- ◆ Configure advanced features for Dynamic Host Configuration Protocol (DHCP), Domain Name System (DNS), and configure IP Address Management (IPAM) with Windows Server 2012.
- ◆ Configure and manage iSCSI, BranchCache and FSRM.
- ◆ Configure DAC to manage and audit access to shared files.
- ◆ Plan and implement an AD DS deployment that includes multiple domains and forests.
- ◆ Plan and implement an AD DS deployment that includes locations.
- ◆ Implement and configure an Active Directory Certificate Services (AD CS) deployment.
- ◆ Implement an AD RMS deployment.
- ◆ Implement an AD FS deployment.
- ◆ Provide high availability and load balancing for web-based applications by implementing Network Load Balancing (NLB).
- ◆ Implement and validate high availability and load balancing for web-based applications by implementing NLB.
- ◆ Provide high availability for network services and applications by implementing failover clustering.
- ◆ Implement a failover cluster, and configure and validate a highly available network service.
- ◆ Deploy and manage Hyper-V virtual machines in a failover cluster.
- ◆ Implement a backup and disaster recovery solution based on business and technical requirements.

## Course Outline

### Module 1: Implementing Advanced Network Services

In this module delegates will be able to configure advanced features for Dynamic Host Configuration Protocol (DHCP) and Domain Name System (DNS), and configure IP Address Management (IPAM).

#### Lessons

- ◆ Configuring Advanced DHCP Features
- ◆ Configuring Advanced DNS Settings
- ◆ Implementing IPAM
- ◆ Managing IP Address Spaces with IPAM

#### Lab : Implementing Advanced Network Services

- ◆ Configuring Advanced DHCP Settings
- ◆ Configuring Advanced DNS Settings
- ◆ Configuring IPAM

## **Module 2: Implementing Advanced File Services**

In this module delegates will be able to configure file services to meet advanced business requirements.

### **Lessons**

- ◆ Configuring iSCSI Storage
- ◆ Configuring BranchCache
- ◆ Optimizing Storage Usage

### **Lab : Implementing Advanced File Services**

- ◆ Configuring iSCSI Storage
- ◆ Configuring the File Classification Infrastructure

### **Lab : Implementing BranchCache**

- ◆ Configuring the Main Office Servers for BranchCache
- ◆ Configuring the Branch Office Servers for BranchCache
- ◆ Configuring Client Computers for BranchCache
- ◆ Monitoring BranchCache

## **Module 3: Implementing Dynamic Access Control**

In this module delegates will be able to configure Dynamic Access Control (DAC) to manage and audit access to shared files.

### **Lessons**

- ◆ Overview of DAC
- ◆ Implementing DAC Components
- ◆ Implementing DAC for Access Control
- ◆ Implementing Access Denied Assistance
- ◆ Implementing and Managing Work Folders

### **Lab : Implementing Secure Data Access**

- ◆ Preparing for DAC deployment
- ◆ Implementing DAC
- ◆ Validating and Remediating DAC
- ◆ Implementing Work Folders

## **Module 4: Implementing Distributed AD DS Deployments**

In this module delegates will be able to plan and implement an Active Directory Domain Services (AD DS) deployment that includes multiple domains and forests.

### **Lessons**

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

### **Lab : Implementing Distributed AD DS Deployments**

- ◆ Implementing Child Domains in AD DS
- ◆ Implementing Forest Trusts

## **Module 5: Implementing AD DS Sites and Replication**

In this module delegates will be able to plan and implement an AD DS deployment that includes multiple locations.

### **Lessons**

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

### **Lab : Implementing AD DS Sites and Replication**

- ◆ Modifying the Default Site
- ◆ Creating Additional Sites and Subnets
- ◆ Configuring AD DS Replication
- ◆ Monitoring and Troubleshooting AD DS Replication

### **Module 6: Implementing Active Directory Certificate Services**

In this module delegates will be able to implement an Active Directory Certificate Services (AD CS) deployment.

#### **Lessons**

- ◆ Using Certificates in a Business Environment
- ◆ PKI Overview
- ◆ Deploying CAs
- ◆ Deploying and Managing Certificate Templates
- ◆ Implementing Certificate Distribution and Revocation
- ◆ Managing Certificate Recovery

#### **Lab : Deploying and Configuring CA Hierarchy**

- ◆ Deploying a Stand-alone Root CA
- ◆ Deploying an Enterprise Subordinate CA

#### **Lab : Deploying and Managing Certificates**

- ◆ Configuring Certificate Templates
- ◆ Configuring Certificate Enrollment
- ◆ Configuring Certificate Revocation
- ◆ Configuring Key Recovery

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

In this module delegates will be able to implement an AD RMS deployment.

#### **Lessons**

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

#### **Lab : Implementing AD RMS**

- ◆ Installing and Configuring AD RMS
- ◆ Configuring AD RMS Templates
- ◆ Implementing the AD RMS Trust Policies
- ◆ Verifying the AD RMS Deployment

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

In this module delegates will be able to implement an Active Directory Federation Services (AD FS) deployment.

#### **Lessons**

- ◆ Overview of AD FS
- ◆ Deploying AD FS
- ◆ Implementing AD FS for a Single Organization
- ◆ Deploying AD FS in a Business-to-Business Federation Scenario
- ◆ Extending AD FS to External Clients

#### **Lab : Implementing AD FS**

- ◆ Installing and Configuring AD FS
- ◆ Configuring an Internal Application for AD FS

### **Lab : Implementing AD FS for External Partners and Users**

- ◆ Configuring AD FS for a Federated Business Partner
- ◆ Configuring Web Application Proxy

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

In this module delegates will be able to provide high availability and load balancing for web-based applications by implementing Network Load Balancing (NLB).

#### **Lessons**

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

### **Lab : Implementing NLB**

- ◆ Implementing an NLB Cluster
- ◆ Configuring and Managing the NLB Cluster
- ◆ Validating High Availability for the NLB Cluster

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

In this module delegates will be able to provide high availability for network services and applications by implementing failover clustering.

#### **Lessons**

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

### **Lab : Implementing Failover Clustering**

- ◆ Configuring a Failover Cluster
- ◆ Deploying and Configuring a Highly Available File Server
- ◆ Validating the Deployment of the Highly Available File Server
- ◆ Configuring Cluster-Aware Updating on the Failover Cluster

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

In this module delegates will be able to deploy and manage Hyper-V virtual machines in a failover cluster.

#### **Lessons**

- ◆ 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

### **Lab : Implementing Failover Clustering with Hyper-V**

- ◆ Configuring Hyper-V Replicas
- ◆ Configuring a Failover Cluster for Hyper-V
- ◆ Configuring a Highly Available Virtual Machine

### **Module 12: Implementing Business Continuity and Disaster Recovery**

In this module delegates will be able to implement a backup and disaster recovery solution based on business and technical requirements.

#### **Lessons**

- ◆ Data Protection Overview
- ◆ Implementing Windows Server Backup
- ◆ Implementing Server and Data Recovery

## **Lab : Implementing Windows Server Backup and Restore**

- ◆ Backing Up Data on a Windows Server 2012 R2 Server
- ◆ Restoring Files Using Windows Server Backup