

## **Configuring Advanced Windows Server 2012 Services (MS-20412)**

**Modality:** Virtual Classroom

**Duration:** 5 Days

**SATV Value:** 5

***The exam associated with this course will retire on 31st January 2021. However, the course is still valid as training material for learning purposes.***

### **About this course:**

In this five-day Microsoft Official Course students will get comprehensive instruction and training about configuring advanced Windows Server 2012, comprising Windows Server 2012 R2, services. This IT Ops Training course is part three in a sequence of three courses that delivers the expertise and understanding essential about how to incorporate a core Windows Server 2012 infrastructure in a present enterprise setting. The three courses as a group cover executing, managing, sustaining and provisioning services and substructure in a Windows Server 2012 environment. Though there is some cross-over of skills and errands crossways these courses, this course emphasizes on cutting-edge configuration of services compulsory to organize, manage and sustain a Windows Server 2012 infrastructure, such as cutting-edge 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 Grouping, business steadiness and calamity rescue services as well as access and information provisioning and defense technologies such as Dynamic Access Control (DAC), and Web Application Proxy integration with AD FS and Workplace Link. This course also formulates the students for the Microsoft 70-412 Configuring Advanced Windows Server 2012 Services accreditation exam.

The average salary an IT Professional gets is **\$85,460** per year.

### **Course Objectives:**

After completing this course, students will be developing the skills to:

- Configure advanced types for Dynamic Host Configuration Protocol (DHCP), Domain Name System (DNS), and configure IP Address Management (IPAM) using Windows Server 2012.
- Organize and cope iSCSI, BranchCache and FSRM.
- Organize DAC to handle and audit access to collective files.
- Plan and incorporate an AD DS setting out that includes numerous domains and forests.
- Design and implement an AD DS deployment that contains locations.
- Implement and organize an Active Directory Certificate Services (AD CS) arrangement.
- Incorporate an AD RMS arrangement.
- Implement an AD FS arrangement.
- Deliver high accessibility and load balancing for web-based applications by executing Network Load Balancing (NLB).
- Implement and endorse high accessibility and load balancing for web-based applications by

applying NLB.

- Deliver great availability for network services and applications by employing failover grouping.
- Implement a failover group, and organize and authorize a highly accessible network service.
- Install and manage Hyper-V virtual machines in a failover cluster.
- Implement a backup and disaster recovery solution based on business and technical requirements.

## Audience:

This course is anticipated for Information Technology (IT) Experts with hands on information executing, handling and sustaining a Windows Server 2012 or Windows Server 2012 R2 environment who wish to obtain the skills and knowledge obligatory to implement advanced administration and provisioning of services within that Windows Server 2012 setting. Applicants who would typically be interested in joining this course will be:

- Skilled Windows Server Administrators who have actual world understanding working in a Windows Server 2008 or Windows Server 2012 enterprise setting.
- IT Specialists desiring to take the Microsoft Certified Solutions Expert (MCSE) exams in Datacenter, Desktop Substructure, Messaging, Cooperation and Communications will moreover be concerned in taking this course as they get ready for the MCSA exams, which are a pre-requisite for their single specialties.

## Prerequisite:

- Beforehand joining this course, students must have experience working using Windows Server 2008 or Windows Server 2012 servers day to day in an Enterprise setting.

## Course Outline:

### Module 1: Implementing Advanced Network Services

In this module students 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

After completing this module, students will be able to:

- Configure advanced features in DHCP with Windows Server 2012.

- Configure the advanced DNS settings in Windows Server 2012.
- Implement IP Address Management in Windows Server 2012.

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

In this module students 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

After completing this module, students will be able to:

- Learn how to configure and manage iSCSI.
- Implement BranchCache using Windows Server 2012.
- Implement Windows Server 2012 features that optimize storage utilization.

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

In this module students 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

After completing this module, students will be able to:

- Describe DAC.
- Implement and configure components of DAC.
- Implement DAC on file servers.
- Describe and implement access- denied assistance.
- Implement the integration of Work Folders with DAC.

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

In this module students 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

After completing this module, students will be able to:

- Describe the components of a highly complex AD DS deployment.
- Implement a complex AD DS deployment.
- Configure AD DS trusts.

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

In this module students 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

After completing this module, students will be able to:

- Describe how replication works in a Windows Server 2012 AD DS environment.
- Configure AD DS sites in order to optimize AD DS network traffic.

- Configure and monitor AD DS replication.

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

In this module students 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

After completing this module, students will be able to:

- Describe and use certificates in business environments.
- Describe the Public Key Infrastructure (PKI) components and concepts, and describe the options for implementing a certification authority infrastructure.
- Plan and implement an AD CS certification authority infrastructure.
- Plan and implement a certificate template deployment using an AD CS certification authority.
- Plan and implement certificate distribution and revocation.
- Configure and manage key archival and recovery.

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

In this module students 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

After completing this module, students will be able to:

- Describe what AD RMS is, and how it can be used to achieve content protection.
- Deploy and manage an AD RMS infrastructure.
- Configure content protection using AD RMS.
- Enable users outside the organization to access content protected by using AD RMS.

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

In this module students 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

After completing this module, students will be able to:

- Describe the identity federation business scenarios and how AD FS can be used to address the scenarios.
- Configure the AD FS prerequisites and deploy the AD FS services.
- Implement AD FS to enable SSO in a single organization.
- Implement AD FS to enable SSO between federated partners.
- Implement the Web Application Proxy and describe WorkPlace Join integration with AD FS.

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

In this module students 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

After completing this module, students will be able to:

- Describe how NLB works.
- Configure an NLB cluster.
- Plan an NLB implementation.

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

In this module students 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

After completing this module, students will be able to:

- Explain failover clustering features in Windows Server 2012.
- Describe how to implement a failover cluster.
- Explain how to configure high