



## Windows Server • Course - 20410

# Microsoft 20410 - Installing and Configuring Windows Server 2012

### Length

- 5 days

### Prerequisites

Before attending this course, students must have:

- An understanding of networking fundamentals.
- An understanding of basic AD DS concepts.
- An awareness and understanding of security best practices.
- Basic knowledge of server hardware.
- Experience working with, and configuring, Windows client operating systems, such as Windows 7 or Windows 8.
- Additionally, students would benefit from having some previous Windows Server operating system experience.

Get hands-on instruction and practice installing and configuring Windows Server 2012, including Windows Server 2012 R2, in this five-day Microsoft Official Course. This course is part one 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 the initial implementation and configuration of core services, such as Networking, Storage, Active Directory Domain Services (AD DS), Group Policy, File and Print Services, and Hyper-V.

This course maps directly to and is the preferred choice for hands-on preparation for the Microsoft Certified Solutions Associate (MCSA) Exam 410: Installing and Configuring Windows Server 2012, which is the first of three exams required for the MCSA: Windows Server 2012 credential.

*Labs in this course are based on Windows Server 2012 R2 and Windows 8.1*

## Course Outline

### Audience

This course is intended for information technology (IT) professionals who have some knowledge and experience working with Windows operating systems and who want to acquire the skills and knowledge necessary to install and perform the initial configuration of a Windows Server 2012 or Windows Server 2012 R2 server in an existing Windows server environment. Typically, candidates who are interested in attending this course include:

- Windows Server administrators who are relatively new to Windows Server administration and related technologies who are looking to learn more about Windows Server 2012 and Windows Server 2012 R2.
- IT professionals who are experienced in other non-Microsoft technologies, who meet the course prerequisites and are looking to cross-train on Windows Server 2012 and Windows Server 2012 R2.
- IT professionals who are looking to take the Microsoft Certified Solutions Associate (MCSA) 410: Installing and Configuring Windows Server 2012 exam.
- IT professionals who want to take the Microsoft Certified Solutions Expert (MCSE) exams in DataCenter, Desktop Infrastructure, Messaging, Collaboration and Communications will also be interested in taking

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

This module introduces the new Windows Server 2012 administrative interface, including roles and features that are available with the Windows Server 2012 operating system. It also discusses various Windows Server 2012 installation options and configuration steps performed during installation and after deployment, in addition to using Windows PowerShell to perform common administrative tasks in Windows Server 2012.

##### Lessons

1. Windows Server 2012 R2 Overview
2. Installing Windows Server 2012 R2
3. Post-Installation Configuration of Windows Server 2012 R2
4. Overview of Windows Server 2012 R2 Management
5. Introduction to Windows PowerShell

*Lab : Deploying and Managing Windows Server 2012 R2*

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

This module covers the structure of Active Directory Domain Services (AD DS) and its various components, such as forest, domain, and organizational units (OUs). It also gives an overview of Domain Controllers, in addition to choices that are available with Windows Server 2012 for installing AD DS on a server.

##### Lessons

1. Overview of AD DS
2. Overview of Domain Controllers
3. Installing a Domain Controller

*Lab : Installing Domain Controllers*

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

This module describes how to manage user accounts and computer accounts, including how to manage various consumer devices that employees use. The module also covers how to manage an enterprise network by managing groups, and how to delegate administrative tasks to designated users or groups.

##### Lessons

1. Managing User Accounts
2. Managing Groups
3. Managing Computer Accounts
4. Delegating Administration

*Lab : Managing Active Directory Domain Services Objects*

this course as they prepare for the Microsoft Certified Solutions Associate (MCSA) exams. These are a prerequisite for their individual specialties.

## What You'll Learn

After completing this course, students will be able to:

- Install and configure Windows Server 2012.
- Describe AD DS.
- Manage Active Directory objects.
- Automate Active Directory administration.
- Implement IPv4.
- Implement Dynamic Host Configuration Protocol (DHCP).
- Implement Domain Name System (DNS).
- Implement IPv6.
- Implement local storage.
- Implement file and print services.
- Implement Group Policy.
- Secure Windows servers by using Group Policy Objects (GPOs).
- Implement server virtualization by using Hyper-V.

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

This module describes how to use command-line tools and Windows PowerShell to automate AD DS administration. It discusses various command-line tools and Windows PowerShell commands, and then describes how to use these tools and commands to modify objects individually and in bulk operations.

Lessons

1. Using Command-line Tools for AD DS Administration
2. Using Windows PowerShell for AD DS Administration
3. Performing Bulk Operations with Windows PowerShell

*Lab : Automating AD DS Administration by Using Windows PowerShell*

### Module 5: Implementing IPv4

In this module, students see how to implement an IPv4 addressing scheme. This module discusses using IPv4, which is the network protocol used on the Internet and on local area networks, to troubleshoot network communication. It also covers determining and troubleshooting network-related problems.

Lessons

1. Overview of TCP/IP
2. Understanding IPv4 Addressing
3. Subnetting and Supernetting
4. Configuring and Troubleshooting IPv4

*Lab : Implementing IPv4*

### Module 6: Implementing Dynamic Host Configuration Protocol

This module covers supporting and troubleshooting a Windows Server-based network infrastructure by deploying, configuring, and troubleshooting the Dynamic Host Configuration Protocol (DHCP) server role.

Lessons

1. Installing a DHCP Server Role
2. Configuring DHCP Scopes
3. Managing a DHCP Database
4. Securing and Monitoring DHCP

*Lab : Implementing DHCP*

## **Module 7: Implementing DNS**

This module describes name resolution for Windows operating system clients and Windows Server servers. It also covers installing and configuring a DNS Server service and its components.

### Lessons

1. Name Resolution for Windows Clients and Servers
2. Installing a DNS Server
3. Managing DNS Zones

*Lab : Implementing DNS*

## **Module 8: Implementing IPv6**

This module discusses the features and benefits of IPv6, how IPv6 affects IPv4 networks, and how to integrate IPv6 into IPv4 networks by using various transition technologies.

### Lessons

1. Overview of IPv6
2. IPv6 Addressing
3. Coexistence with IPv4
4. IPv6 Transition Technologies

*Lab : Implementing IPv6*

## **Module 9: Implementing Local Storage**

This module gives an overview of different storage technologies, including managing disks and volumes. It also discusses how to implement the storage solutions in Windows Server 2012, and how to use Storage Spaces, a new feature that you can use to combine disks into pools that are then managed automatically.

### Lessons

1. Overview of Storage
2. Managing Disks and Volumes
3. Implementing Storage Spaces

*Lab : Implementing Local Storage*

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

This module discusses how to enable and configure File and Print Services in Windows Server 2012, including securing files and folders on Windows Server 2012 and using shadow copies. It also describes configuring the new Work Folders role service, in addition to important considerations and best practices for working with File and Print Services.

### Lessons

1. Securing Files and Folders
2. Protecting Shared Files and Folders by Using Shadow Copies
3. Configuring Work Folders
4. Configuring Network Printing

*Lab : Implementing File and Print Services*

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

This module provides an overview of Group Policy and provides details about how to implement Group Policy, including creating and managing Group Policy Objects and implementing a Central Store for administrative templates.

### Lessons

1. Overview of Group Policy
2. Group Policy Processing
3. Implementing a Central Store for Administrative Templates

*Lab : Implementing Group Policy*

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

This module describes Windows Server 2012 operating system security, and how to configure security settings by using Group Policy and Security Compliance Manager. It also covers how to identify security threats, restrict unauthorized software, and secure a Windows Server 2012 infrastructure by configuring Windows Firewall with Advanced Security.

### Lessons

1. Windows Operating Systems Security Overview
2. Configuring Security Settings
3. Restricting Software
4. Configuring Windows Firewall with Advanced Security

*Lab : Increasing Security for Server Resources*

*Lab : Configuring AppLocker and Windows Firewall*

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

This module describes virtualization technologies available on Windows, specifically focusing on server Virtualization with Hyper-V. It covers how to install and configure Hyper-V and how to configure and manage key components of a Hyper-V implementation, such as Storage and Networking.

### Lessons

1. Overview of Virtualization Technologies
2. Implementing Hyper-V
3. Managing Virtual Machine Storage
4. Managing Virtual Networks

*Lab : Implementing Server Virtualization with Hyper-V*