

# 70-410 – Installing and Configuring Windows Server 2012 R2 (MCSA/MCSE) Series!

**Overview:** This series describes how to install and configure Windows Server 2012 R2. Students will learn the basics of the server, server 2012 management, working with server core, configuring local storage and file and print access. Students will also learn about remote management, virtualization, the TCP/IP Protocol Suite, DHCP, DNS, Active Directory domain services and Windows security.

## Course Modules:

### Module 01 -Server 2012 Overview

(Duration: 1h 10m)

1. Workbook (Pdf)
2. Server 2012 Overview
3. On Premise vs. Cloud
4. Common Cloud Computing
5. Cloud Computing
6. Local Resources Provided to Clients
7. Windows Server 2012 Editions
8. Server 2012 Server Roles
9. Features with Windows Server 2012

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10. Server Core
11. Installation Options
12. Install Options Integrated
13. Media Formats
14. Windows DS
15. Other Install Options
16. Demo – Installing Windows 2012 Enterprise
17. Windows Server Installation
18. Server Upgrades
19. Server Migration
20. Minimum Hardware Requirements
21. Installation Steps
22. Post Server Installation Tasks – Round One
23. Demo – Introduction to Server Manager
24. Windows Activation
25. Offline Domain Join
26. Post Server Installation Tasks – Round Two
27. Using PowerShell to Manage Servers
28. Resources Utilization by Using Features on Demand
29. Features on Demand – Order of Search
30. How to Override Features on Demand (Default Behavior)
31. Removing Feature Files
32. Migrate Roles from Previous Versions of Windows Server
33. Supported Operation Systems (Source)
34. Module 01 Review
35. **Review Quiz (Number of attempts allowed: Unlimited)**

## Module 02 -Windows Server 2012 Management

**(Duration: 1h 6m)**

1. Workbook (Pdf)
2. Windows Server 2012 Management
3. Server Manager
4. Demo
5. – Add Roles Server Manager

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6. Demo
7. – Event Viewer
8. Demo
9. – Best Practice Analyzer
10. Administrative Tools Available
11. Demo
12. – Administrative Tools Available
13. Enabling Remote Management
14. Delegate Administration
15. Delegation Planning
16. Demo
17. – Delegation of Domain Administration
18. Advanced Services
19. Configuring NIC Teaming
20. Switch Dependent Teaming Modes
21. 802.11ac Support
22. NetSh Commands with Windows Server 2012 R2
23. Wired and Wireless Ethernet Access Passwords
24. Module 02 Review
25. **Review Quiz (Number of attempts allowed: Unlimited)**

## Module 0 3-Working with Server Core

**(Duration: 1h 19m)**

1. Workbook (Pdf)
2. Working with Server Core
3. Demo
4. – Installing Server Core
5. Introduction to PowerShell
6. Demo
7. – PowerShell
8. Adding GUI to Server Core
9. Removing GUI to Server Core
10. To Install a Removed Role or Feature Using WIM Image
11. Server Core Tools

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12. Demo
13. – Recover from Closing Command Prompt
14. Roles Available to Server Core
15. Listing Roles on Server Core
16. Enabling Remote Management
17. Demo
18. – Netsh
19. -Firewall
20. Server Configuration
21. – Core
22. Demo
23. – Sconfig on Server Core
24. Features Not Supported by Server Core
25. Installing Domain Controllers on Server Core
26. – Options
27. PowerShell Examples for User Management
28. PowerShell Examples for Group Management
29. PowerShell Examples for Computer Management
30. PowerShell Examples for OU's
31. Module 03 Review
32. **Review Quiz (Number of attempts allowed: Unlimited)**

## Module 04 -Configuring Local Storage

**(Duration: 1h 40m)**

1. Workbook (Pdf)
2. Configuring Local Storage
3. Key Features of Storage
4. Disk Types and Performance
5. Enhanced Integrated Drive Electronics (EIDE)
6. Serial Advanced Technology Attachment (SATA)
7. Small Computer System Interface (SCSI)
8. Solid State Drives
9. Direct Attached Storage (DAS)
10. Network Attached Storage (NAS)

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11. Storage Area Network (SAN)
12. Common RAID Levels
13. Windows Server 2012 R2 Storage Features
14. Storage Spaces
15. Demo
16. – Configuring Storage Spaces
17. Work Folders
18. Work Folder Limitations
19. Work Folder Components
20. Certificate Notes
21. Work Folder Server Components
22. Work Folder Server Configuration
23. Work Folder Server Configuration PowerShell Commands
24. Work Folders Client Configuration
25. Demo
26. – Configuring Work Folders
27. Offload Data Transfers (ODX)
28. SMB 3.0 Support
29. File System Enhancements
30. Storage Management
31. Resilient File System (ReFS)
32. Storage PowerShell Cmdlets
33. Configure Basic Disks
34. Configure Dynamic Disks
35. Common Operations
36. – Basic and Dynamic Disks
37. Demo
38. – Creating Volume Mount Points
39. Configuring MBR Disks
40. Configuring GPT Disks
41. Installing And Configuring A New Disk
42. eNotes: Types of Volumes / Pools
43. Demo
44. – Create VHDs
45. Extending and Shrinking Volumes
46. Utilities for Volume
47. s
48. BranchCache
49. BranchCache Requirements
50. BranchCache Server Settings

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51. BranchCache Client Settings
52. Enabling Distributed Cache Mode or Hosted Cache Mode
53. Module 04 Review
54. **Review Quiz (Number of attempts allowed: Unlimited)**

## Module 05 -Configure File and Print Access

**(Duration: 1h 17m)**

1. Workbook (Pdf)
2. File Shares and Permissions
3. Create and Configure Shares
4. File Sharing Profiles
5. Demo
6. – Configure File Shares
7. Configure Offline Files
8. Offline Files Settings
9. Configure NTFS Permissions
10. NTFS Permissions
11. eNotes: NTFS Permission Examples
12. Access Based Enumeration (ABE)
13. Configure Volume Shadow Copy Service (VSS)
14. Demo
15. – Shadow Copies
16. Configure Print and Document Services
17. Demo
18. – Install Print and Document Services Role
19. Easy Print
20. – Print Driver
21. Network Printing Security Options
22. Demo
23. – Create a Shared Printer
24. Printer Pooling
25. Demo
26. – Creating a Printer Pool
27. Branch Office Direct Printing

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- 28. Options to Deploy Printers
- 29. Printer Migration for Web Services for Devices (WSD Print Devices)
- 30. Server 2012 R2 New and Updated
- 31. Module 05 Review
- 32. **Review Quiz (Number of attempts allowed: Unlimited)**

## Module 06 – Remote Management and Virtualization

**(Duration: 1h 56m)**

- 1. Workbook (Pdf)
- 2. Remote Management
- 3. Demo
- 4. – Enable Remote Management
- 5. Remote Management
- 6. – MISC
- 7. Remote Desktop
- 8. Remote Desktop Services Role Services
- 9. Server 2012 R2 Improvements and Additions
- 10. Demo
- 11. – Remote Desktop
- 12. Multi
- 13. -Server Management
- 14. Demo
- 15. – Server Groups
- 16. Virtualization
- 17. Presentation Virtualization
- 18. Remote Desktop Gateway
- 19. Virtualization
- 20. Hyper
- 21. –
- 22. V
- 23. Application Virtualization (App
- 24. -V)
- 25. Microsoft Enterprise Desktop Virtualization (MED
- 26. -V)

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27. Simulated Hardware for VM's
28. Demo
29. – Create a VM
30. Demo
31. – Hyper
32. -V Settings
33. Dynamic Memory
34. Integration Services
35. Start and Stop Actions
36. Resource Metering
37. Virtual Hard Disk
38. Virtual Disk Types
39. Shrinking Fixed Virtual Hard Disks
40. VHD's vs. VHDX
41. Demo
42. – Managing VHD's
43. Differencing Disks
44. Virtual Hard Disk Operations/Maintenance Operations
45. Methods of Creating Virtual Hard Disk
46. VHD's and File Shares
47. Differencing Disks
48. Virtual Networks
49. Virtual Network Extensions
50. Demo
51. – Hyper
52. -V Network Settings
53. Virtual Adapters
54. Legacy Network Adapters
55. Demo
56. – Creating Network Adapters
57. Considerations for VM Network Configuration
58. Important Note
59. – External Virtual Networks
60. Virtual Machine MAC Address
61. Using Snapshots
62. Module 06 Review
63. **Review Quiz (Number of attempts allowed: Unlimited)**

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## Module 07 -TCP/IP Protocol Suite

**(Duration: 2h 1m)**

1. Workbook (Pdf)
2. TCP/IP Protocol Suite
3. Components of Network Infrastructure
4. TCP/IP Protocol
5. Architecture
6. TCP/IP Applications
7. Sockets
8. Ports
9. IPv4 Addressing
10. IP Configuration
11. Public vs. Private IPv4 Addresses
12. Relating to Binary
13. IP Address Classes
14. CIDR Notations / VLSM
15. eNotes: CIDR
16. Configuring IP Addresses Using Server Manager
17. Configuring IP Address Using a Command Line
18. Configure IP Address Using PowerShell
19. Demo
20. – Configure IP Address Using PowerShell
21. TCP/IP Troubleshooting with PowerShell
22. TCP/IP Diagnostics
23. Network Card Teaming
24. Supernetting
25. Supernetting Examples
26. Overview Of IPv6
27. IPv4 vs IPv6
28. Comparing IPv4 and IPv6
29. IPv6 Benefits
30. Equivalents
31. IPv6 Addressing
32. Link Local Unicast Addresses

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33. Host Private Address
34. Zone ID's
35. Hexadecimal Numbering System
36. Converting Binary to Hex
37. Binary To Hex Examples
38. Things to Know About TCP/IPv6
39. Global Unicast Addresses
40. Global Unicast Addresses Structure
41. Unique Local Unicast Address
42. Zone ID
43. Format Prefixes
44. IPv6 Address Structure
45. Demo
46. – Configuring IPv6 Client
47. Autoconfiguration IPv6 Addresses
48. Autoconfiguration Address States
49. Autoconfiguration Process
50. IPv6 Over IPv4 Tunneling
51. Defining Capabilities: Node Types
52. Configure ISATAP
53. Host Configuration
54. 6to4
55. Teredo
56. PortProxy
57. Transition Process
58. Module 07 Review
59. **Review Quiz (Number of attempts allowed: Unlimited)**

## Module 08 -DHCP and DNS

**(Duration: 1h 27m)**

1. Workbook (Pdf)
2. DNS
3. DNS for Name Resolution
4. eNotes: How Names are Resolved

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5. – Iterative Queries
6. Link
7. -Local Multicast Name Resolution
8. WINS
9. Single Label Names
- 10.– WINS
11. Tools and Commands
12. Demo
- 13.– Tools and Commands
14. DNS Terms to Know
15. DNS Zones
16. DNS Registration Enhancements Windows Server 2012 R2
17. Demo
- 18.– Installing the DNS Server Role
19. Enhanced Zone Level Statistics Windows Server 2012 R2
20. Enhanced PowerShell Support Server 2012 R2
21. Dynamic Updates
22. DNS Server Cache and Forwarding
23. DNS Cache
24. DNS Records Required for IPv6 Coexistence
25. Troubleshooting Name Resolution
26. eNotes: Troubleshooting Name Resolution
27. DHCP
28. Dynamic Host Configuration Protocol (DHCP) Service
29. Lease Generation
30. DHCP Relay Agent
31. DHCP on Server Core
32. DHCP Installation
33. Demo
- 34.– Install DHCP
35. Create and Configure Scopes IPv4
36. Create and Configure Scopes IPv6
37. DHCP Reservation
38. Common DHCP Options
39. Order Options are Assigned
40. Managing DHCP Database
41. Move DHCP Database
42. Securing DHCP and Unauthorized Computers
43. Improved PowerShell Commands for DHCP in Server 2012 R2
44. New PowerShell Commands for DHCP

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45. Configure Client and Server for PXE Boot
46. DHCP Audit Logging
47. Common Event Codes
48. DHCP Issues
49. – Discussion
50. Module 08 Review
51. Review Quiz (Number of attempts allowed: Unlimited)

## Module 09 -Overview of Active Directory Domain Services

(Duration: 3h 31m)

1. Workbook (Pdf)
2. Overview of Active Directory Domain Services
3. Physical Components of Active Directory
4. Logical Components of Active Directory
5. Domain Structures
6. – Domain and Forest
7. Domain Structure
8. – Forest
9. Domain Structure
10. – Schema
11. Domain Structures
12. – Logical
13. Default Containers and OU's
14. Domain Structures
15. – Sites (Physical)
16. Components of Site Structure
17. Domain
18. – Wide Scope
19. Overview of Domain Controllers
20. What Domain Controllers Do
21. Depreciated Features Server 2012 Related to AD DS

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22. Server 2012 R2 Enhancements
23. AD and Workplace Join
24. Global Catalog
25. Demo
26. – Global Catalog
27. Operations Master Roles
28. Best Practices
29. – FSMO and GC
30. Forest and Domain Functional Levels
31. Guidelines for Raising Domain and Forest Functional Levels
32. Functional Level Options
33. Functional Levels and Recycle Bin
34. Demo
35. – Functional Levels and FSMO
36. Forest Functional Levels
37. ADPrep Commands
38. RODC
39. How DC's are Found and Used
40. Demo
41. – SRV Records DNS
42. The AD DS Logon Process
43. Install Domain Controllers
44. DC Install Questions and Required Information
45. Required Information to Collect Pre
46. -Install
47. Demo
48. – Install Domain Controllers
49. Upgrading Domain Controllers
50. Clean Installation of Windows Server 2012 Domain Controllers
51. Install Domain Controller Using IFM
52. Demo
53. – Remove A Domain Controller From A Domain
54. Active Directory Management Tools
55. User Accounts
56. Uniqueness of Accounts
57. Attributes of Users
58. Creating Account Templates
59. Locking vs. Disabled
60. Directory Service Command Line Tools
61. Groups

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- 62. Group Scopes
- 63. Helpful Acronyms E-Notes
- 64. Default Groups
- 65. Protected Users Security Group
- 66. Protected Users Security Group User Limitations
- 67. Special Identities
- 68. Computer Accounts
- 69. Troubleshooting Computer Accounts
- 70. Troubleshooting Steps
- 71. Listing Group Membership
- 72. Delegate Management of Active Directory Objects
- 73. CSVDE for Exporting
- 74. CSVDE for Importing
- 75. Ldifde
- 76. Ldifde
- 77. – Export
- 78. Ldifde
- 79. – Import
- 80. Managing AD DS with PowerShell
- 81. Module 09 Review
- 82. **Review Quiz (Number of attempts allowed: Unlimited)**

## Module 10 -Windows Security

**(Duration: 1h 28m)**

- 1. Workbook (Pdf)
- 2. Windows Security
- 3. Windows Security
- 4. – Defense in Depth
- 5. Security Templates
- 6. Methods to Distribute Security Templates
- 7. User Rights
- 8. Demo
- 9. – Local Security Policy
- 10. Auditing

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11. Restricted Groups
12. Account Policies
13. Security Compliance Manager (SCM)
14. Group Policy
15. GPO Locations
16. – Content
17. Components of Group Policy
18. Group Policy Structure
19. Administrative Templates
20. ADM Files
21. Group Policy Central Store
22. Multiple Local Group Policies
23. Notes: Local Group Policies
24. Group Policy Preferences
25. Common Preferences
26. Starter GPO
27. GPO Permissions
28. Group Policy Processing
29. Inheritance
30. Default GPO's
31. Demo – Create a GPO
32. Authentication Policies – Server 2012 R2
33. Software Restriction Policies
34. Basics: Software Restriction Policies
35. AppLocker
36. AppLocker Rules
37. Windows Firewall
38. Windows Firewall with Advanced Security
39. Enhancements Over Standard Windows Firewall
40. Firewall Profiles
41. Connection Security Rules
42. Deploy Firewall Rules
43. Configure Authenticated Firewall Exceptions
44. Module 10 Review
45. Course Closure
46. **Review Quiz (Number of attempts allowed: Unlimited)**

**This course includes**

- about 17.1 hours on-demand video

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- 10 downloadable Pdf Workbooks
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- Access on mobile and Desktop
- Certificate of Completion

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