

## Installing and Configuring Windows Server 2012

This course is part one of a three-part series 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.

While there is some cross-over in skills and tasks across the courses, this course primarily covers the initial implementation and configuration of core services including Active Directory Domain Services (AD DS), networking services, and Microsoft Hyper-V Server 2012 configuration.

### Détails

- **Code** : ICWS12
- **Durée** : 4 jours ( 28 heures )

#### Public

- IT Professionals

#### Pré-requis

- An understanding of basic Active Directory Domain Services (AD DS) concepts.

### Objectifs

- Install and Configure Windows Server 2012.
- Describe AD DS.
- Manage Active Directory objects.
- Automate Active Directory administration.
- Implement IPv4.

### Programme

#### 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
- Lab : Deploying and Managing Windows Server 2012
- Deploying Windows Server 2012
- Configuring Windows Server 2012 Server Core
- Managing Servers
- Using Windows PowerShell to Manage Servers
- After completing this module, students will be able to:
  - Describe Windows Server 2012.
  - Describe the management tools available in Windows Server 2012.
  - Install Windows Server 2012.
  - Perform post-installation configuration of Windows Server 2012.
  - Perform basic administrative tasks using Windows PowerShell.

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

- Overview of AD DS
- Overview of Domain Controllers
- Installing a Domain Controller
- Lab : Installing Domain Controllers
- Installing a Domain Controller
- Installing a Domain Controller by Using IFM

- After completing this module, students will be able to:
  - Describe the structure of AD DS.
  - Describe the purpose of domain controllers.
  - Explain how to install a domain controller.

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

- Managing User Accounts
- Managing Group Accounts
- Managing Computer Accounts
- Delegating Administration
- Lab : Managing Active Directory Domain Services Objects
- Delegating Administration for a Branch Office
- Creating and Configuring User Accounts in AD DS
- Managing Computer Objects in AD DS
- After completing this module, students will be able to:
  - Manage user accounts with graphical tools.
  - Manage group accounts with graphical tools.
  - Manage computer accounts.
  - Delegate permissions to perform AD DS administration.

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

- Using Command-line Tools for AD DS Administration
- Using Windows PowerShell for AD DS Administration
- Performing Bulk Operations with Windows PowerShell
- Lab : Automating AD DS Administration by Using Windows PowerShell
- Creating User Accounts and Groups by Using Windows PowerShell

- Using Windows PowerShell to Create User Accounts in Bulk
- Using Windows PowerShell to Modify User Accounts in Bulk
- After completing this module, students will be able to:
  - Use command-line tools for AD DS administration.
  - Use Windows PowerShell cmdlets for AD DS administration.
  - Perform bulk operations by using Windows PowerShell.

## Module 5: Implementing IPv4

- Overview of TCP/IP
- Understanding IPv4 Addressing
- Subnetting and Supernetting
- Configuring and Troubleshooting IPv4
- Lab : Implementing IPv4
- Identifying Appropriate Subnets
- Troubleshooting IPv4
- After completing this module, students will be able to:
  - Describe the TCP/IP protocol suite.
  - Describe IPv4 addressing.
  - Determine a subnet mask necessary for subnetting or supernetting.
  - Configure IPv4 and troubleshoot IPv4 communication.

## Module 6: Implementing Dynamic Host Configuration Protocol

- Installing a DHCP Server Role
- Configuring DHCP Scopes
- Managing a DHCP Database
- Securing and Monitoring DHCP
- Lab : Implementing DHCP
- Implementing DHCP
- Implementing a DHCP Relay Agent (Optional Exercise)
- After completing this module, students will be able to:
  - Install the DHCP server role.
  - Configure DHCP scopes.
  - Manage a DHCP database.
  - Secure and monitor the DHCP server role.

## Module 7: Implementing Domain Name System

- Name Resolution for Windows Client and Servers
- Installing and Managing a DNS Server
- Managing DNS Zones
- Lab : Implementing DNS
- Installing and Configuring DNS
- Creating Host Records in DNS
- Managing the DNS Server Cache
- After completing this module, students will be able to:
  - Describe name resolution for Windows operating system clients and Windows Server servers.
  - Install and manage DNS Server service.
  - Manage DNS zones.

## Module 8: Implementing IPv6

- Overview of IPv6
- IPv6 Addressing

- Coexistence with IPv6
- IPv6 Transition Technologies
- Lab : Implementing IPv6
- Configuring an IPv6 Network
- Configuring an ISATAP Router
- After completing this module, students will be able to:
  - Describe the features and benefits of IPv6.
  - Describe IPv6 addressing.
  - Describe IPv6 coexistence with IPv4.
  - Describe IPv6 transition technologies.

## Module 9: Implementing Local Storage

- Overview of Storage
- Managing Disks and Volumes
- Implementing Storage Spaces
- Lab : Implementing Local Storage
- Installing and Configuring a New Disk
- Resizing Volumes
- Configuring a Redundant Storage Space
- After completing this module, students will be able to:
  - Describe the various storage technologies.
  - Explain how to manage disks and volumes.
  - Explain how to implement 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
- Lab : Implementing File and Print Services
- Creating and Configuring a File Share
- Configuring Shadow Copies
- Creating and Configure a Printer Pool
- After completing this module, students will be able to:
  - Secure shared files and folders.
  - Protect shared files and folders by using shadow copies.
  - Configure network printing.

## Module 11: Implementing Group Policy

- Overview of Group Policy
- Group Policy Processing
- Implementing a Central Store for Administrative Templates
- Lab : Implementing Group Policy
- Configuring a Central Store
- Creating GPOs
- After completing this module, students will be able to:
  - Create and manage Group Policy Objects.
  - Describe Group Policy processing.
  - Implement 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
- Lab : Lab A: Increasing Security for Server Resources

- Using Group Policy to Secure Member Servers
- Auditing File System Access
- Auditing Domain Logons
- Lab : Lab B: Configuring AppLocker and Windows Firewall
- Configuring AppLocker Policies
- Configuring Windows Firewall
- After completing this module, students will be able to:
  - Describe Windows Server operating system Security.
  - Configure security settings by using Group Policy.
  - Restrict unauthorized software from running on servers and clients.
  - Configure Windows Firewall with Advanced Security.

## Hyper-V

- Overview of Virtualization Technologies
- Implementing Hyper-V
- Managing Virtual Machine Storage
- Managing Virtual Networks
- Lab : Implementing Server Virtualization with Hyper-V
- Installing the Hyper V Role onto a Server
- Configuring Virtual Networking
- Creating and Configuring a Virtual Machine
- Using Virtual Machine Snapshots
- After completing this module, students will be able to:
  - Describe virtualization technologies.
  - Implement Hyper-V.
  - Manage virtual machine storage.
  - Manage virtual networks.

## Module 13: Implementing Server Virtualization with

### Modalités

- **Type d'action** :Acquisition des connaissances
- **Moyens de la formation** :Formation présentielle – 1 poste par stagiaire – 1 vidéo projecteur – Support de cours fourni à chaque stagiaire
- **Modalités pédagogiques** :Exposés – Cas pratiques – Synthèse
- **Validation** :Exercices de validation – Attestation de stages