Lesson 2: Configuring Servers

MOAC 70-410: Installing and Configuring Windows Server 2012
Overview

• Exam Objective 1.2: Configure Servers
• Completing Post-Installation Tasks
• Using Roles, Features, and Services
• Using Server Manager
• Delegating Server Administration
Completing Post-Installation Tasks

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Completing Post-Installation Tasks

• While Server 2012 has been redesigned to allow most tasks to be completed remotely, there are tasks that must be performed directly from the server, including:
  o Configure the network connection.
  o Set the time zone.
  o Rename the computer.
  o Join a domain.
  o Enable Remote Desktop.
  o Configure Windows Update settings.
Using GUI Tools

Use the Server Manager for the Local Server to Complete Post-Installation Tasks
Using GUI Tools

The Network Connections window
Using GUI Tools

The Internet Protocol Version 4 (TCP/IPv4) Properties sheet
Using GUI Tools

The Remote tab of the System Properties sheet
Using GUI Tools

The Computer Name/Domain Changes dialog box

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Using Command Line Tools

• If you selected Server Core when installing, you can perform the post-installation tasks from the command line.

• Minimum requirements:
  o Rename the computer
  o Join the domain

• Use the `Netdom.exe` command.
Using Command Line Tools

Renaming a Computer from the Command Line

```
C:\Users\Administrator>netdom renamecomputer %ComputerName% /NewName:W8SURE
This operation will rename the computer WIN-QI9JOQSEOD1 to W8SURE.

Certain services, such as the Certificate Authority, rely on a fixed machine name. If any services of this type are running on WIN-QI9JOQSEOD1, then a computer name change would have an adverse impact.

Do you want to proceed (Y or N)?
Y
The computer needs to be restarted in order to complete the operation.

The command completed successfully.
```

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Converting Between GUI and Server Core

• This is a major improvement in Server 2012 over Server 2008 R2.
• Previously, you could only change from Server Core to GUI by performing a re-install.
• Server 2012 allows you to convert between GUI and Server Core as needed.
• Allows the ease of configuration using the GUI and then allows you to conserve system resources by converting to Server Core.
Converting a GUI Server to Server Core

The Remove features page in Server Manager

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Converting a GUI Server to Server Core

The Remove features that require Graphical Management Tools and Infrastructure dialog box

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Using PowerShell

• To convert a Windows Server 2012 Server Core installation to the full GUI option, use this Windows PowerShell command:

  `Install-WindowsFeature Server-Gui-Mgmt-Infra,Server-Gui-Shell -Restart`

• To convert a full GUI server installation to Server Core, use this command:

  `Uninstall-WindowsFeature Server-Gui-Mgmt-Infra,Server-Gui-Shell -Restart`
Configuring NIC Teaming

• Allows administrators to combine the bandwidth of multiple network interface adapters, providing increased performance and fault tolerance.

• NIC teaming is also called bonding, balancing, and aggregation.
NIC Teaming Modes

• **Switch Independent Mode**
  o All adapters are connected to different switches, providing alternate routes through the network

• **Switch Dependent Mode**
  o All adapters are connected to the same switch, providing a single interface with their combined bandwidth
Creating a NIC Team

The NIC Teaming window in Server Manager

The NIC Teaming window in Server Manager

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Creating a NIC Team

The New team page in Server Manager

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Creating a NIC Team

A new NIC team in the NIC Teaming window in Server Manager.

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Using Roles, Features, and Services

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Using Roles, Features, and Services

- **Role**: Define the primary function of a server
  - Example: Web Server (IIS)

- **Feature**: A smaller module, typically with a single purpose
  - Example: a management tool, extension, or optional component

- **Service**: Programs that run continuously in the background, waiting for a client to send a request
Using Server Manager

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Adding Roles and Features

- Use the Add Roles and Features Wizard in the Server Manager.
- Add multiple servers to the Server Manager interface to deploy roles and features to any of your servers.
Installing Roles and Features

The Select Installation type page in the Add Roles and Features Wizard
Installing Roles and Features

The Select destination server page in the Add Roles and Features Wizard
Installing Roles and Features

The Select server roles page in the Add Roles and Features Wizard
Installing Roles and Features

The Add features that are required dialog box in the Add Roles and Features Wizard
Installing Roles and Features

The Select features page in the Add Roles and Features Wizard
Installing Roles and Features

The Select role services page in the Add Roles and Features Wizard
Installing Roles and Features

The Confirm installation selections page in the Add Roles and Features Wizard
Deploying Roles to VHDs

- In addition to installing roles and features to servers on the network, Server Manager enables administrators to install them to virtual machines that are in an offline state.
Installing Roles and Features—Offline VHD

The Select destination server page in the Add Roles and Features Wizard

1. Select a server on which to mount the virtual hard disk (VHD).
   If you select a VHD file from a network share, that share must grant Read and Write permissions to the computer (local system) account of the server that you selected to mount the VHD. User-only account access is not sufficient.

2. Select an offline VHD file on which Windows Server 2012 is already installed, and on which you want to install roles and features.
Configuring Services

• Server Manager will allow you to view all of the services installed on a server and stop, start, restart, pause, and resume a service.
• To configure services you need to use the Services MMC snap-in.
Delegating Server Administration

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Delegating Server Administration

• Delegation allows you to have specific administrators or IT staff responsible for different parts of network administration.
• Not all IT staff require full administrative access to servers.
• Have junior IT personnel responsible only for tasks like creating user accounts and changing passwords.
Lesson Summary

- The new Server Manager is designed to enable administrators to fully manage Windows servers without ever having to interact directly with the server console, either physically or remotely.
- There are some tasks that administrators might have to perform immediately after the operating system installation that require direct access to the server console.
- If you selected the Server Core option when installing Windows Server 2012, you can perform post-installation tasks from the command line.
- In Windows Server 2012, the Properties tile in Server Manager provides the same functionality as the Initial Configuration Tasks window in previous versions.
Lesson Summary

• In Windows Server 2012, you can convert a computer installed with the full GUI option to Server Core, and add the full GUI to a Server Core computer.

• NIC teaming is a new feature in Windows Server 2012 that enables administrators to combine the bandwidth of multiple network interface adapters, providing increased performance and fault tolerance.

• For administrators of enterprise networks, it might be necessary to add a large number of servers to Server Manager. To avoid having to work with a long scrolling list of servers, you can create server groups, based on server locations, functions, or any other organizational paradigm.

• In addition to installing roles and features to servers on the network, Server Manager also enables administrators to install them to virtual machines that are currently in an offline state.