

# 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

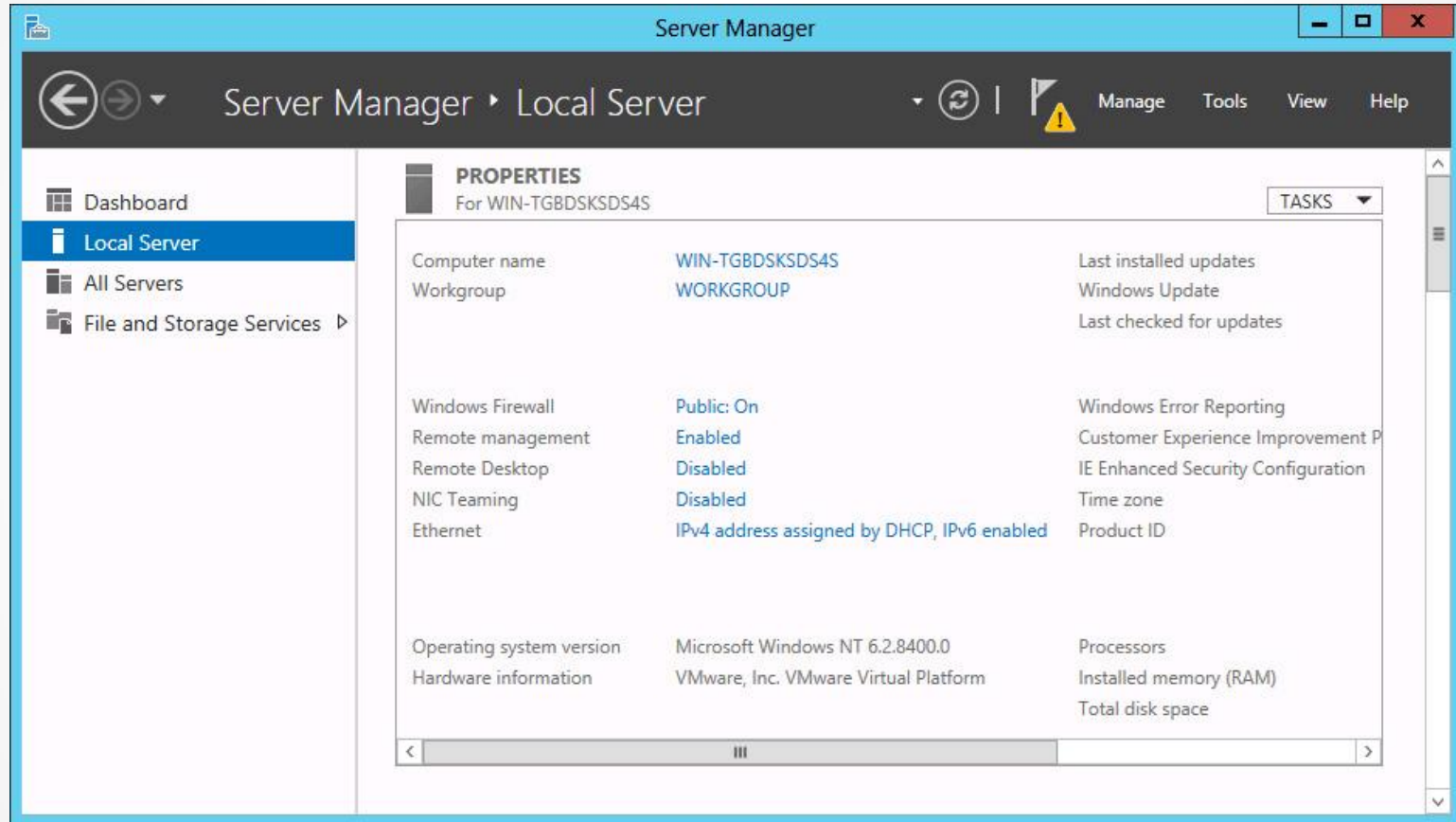
# Completing Post-Installation Tasks

## Lesson 2: Configuring Servers

# Completing Post-Installation Tasks

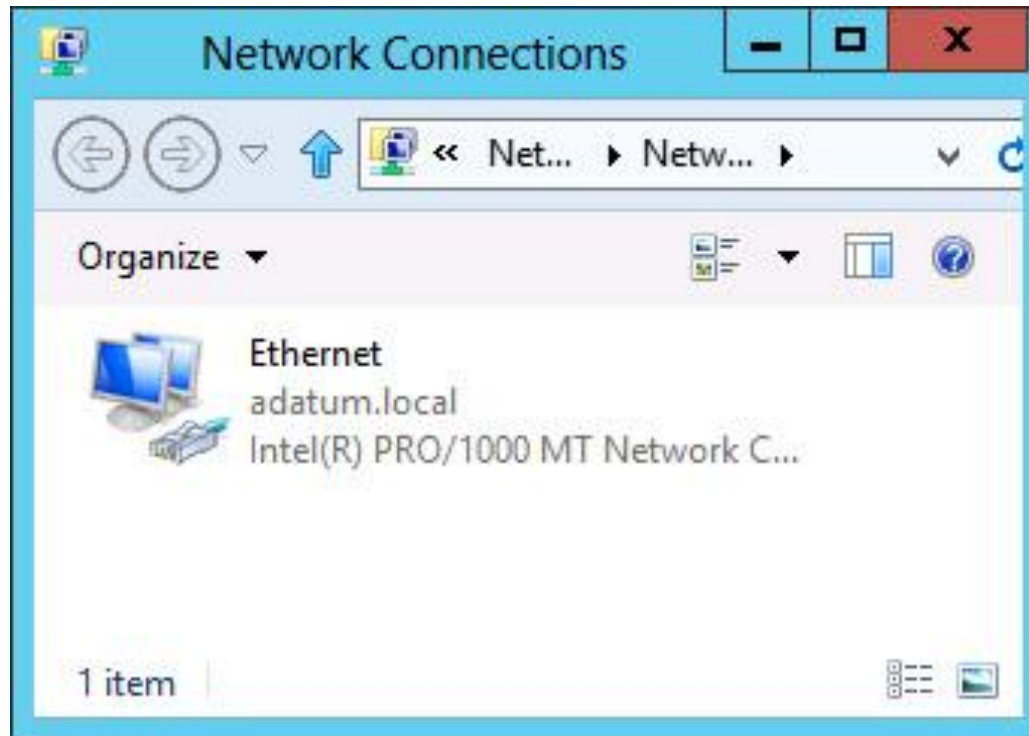
- While Server 2012 has been redesigned to allow most tasks to be completed remotely, there are tasks that must be performed directly from the server, including:
  - Configure the network connection.
  - Set the time zone.
  - Rename the computer.
  - Join a domain.
  - Enable Remote Desktop.
  - Configure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

# Using GUI Tools



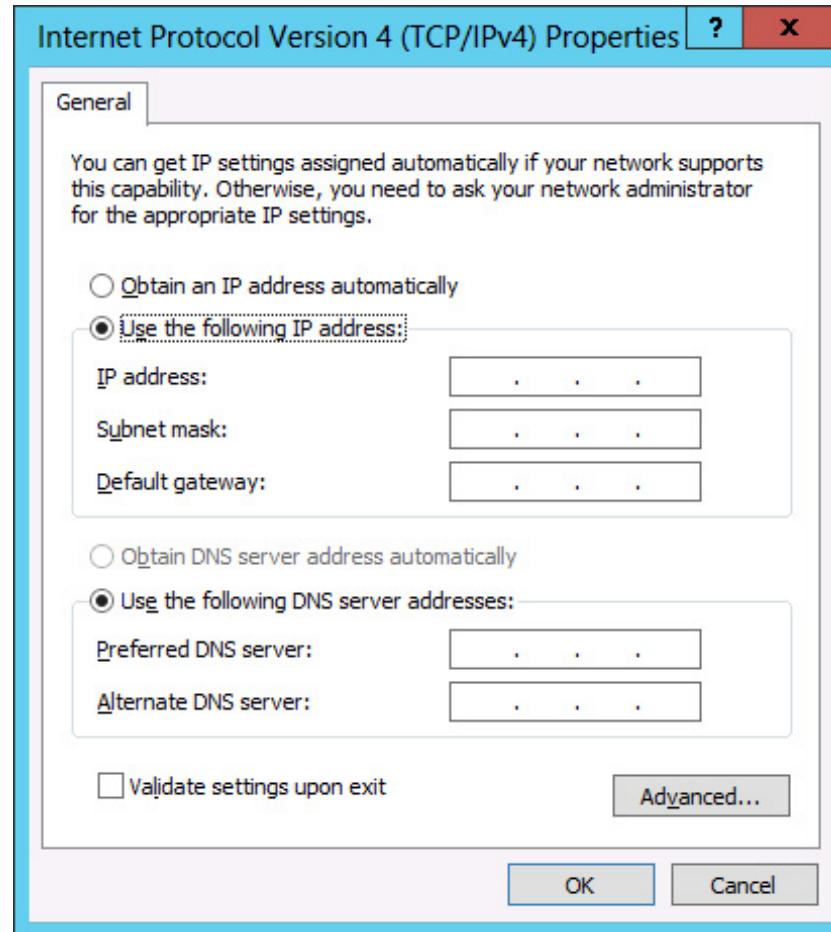
Use the Server Manager for the Local Server to Complete Post-Installation Tasks

# Using GUI Tools



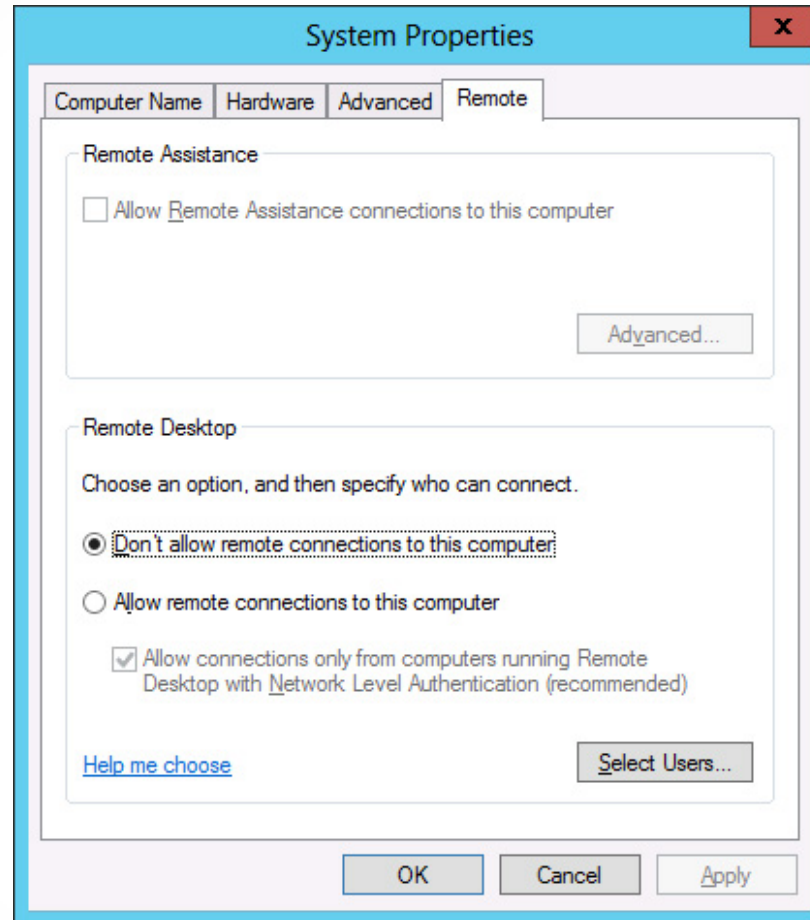
The Network Connections window

# Using GUI Tools



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

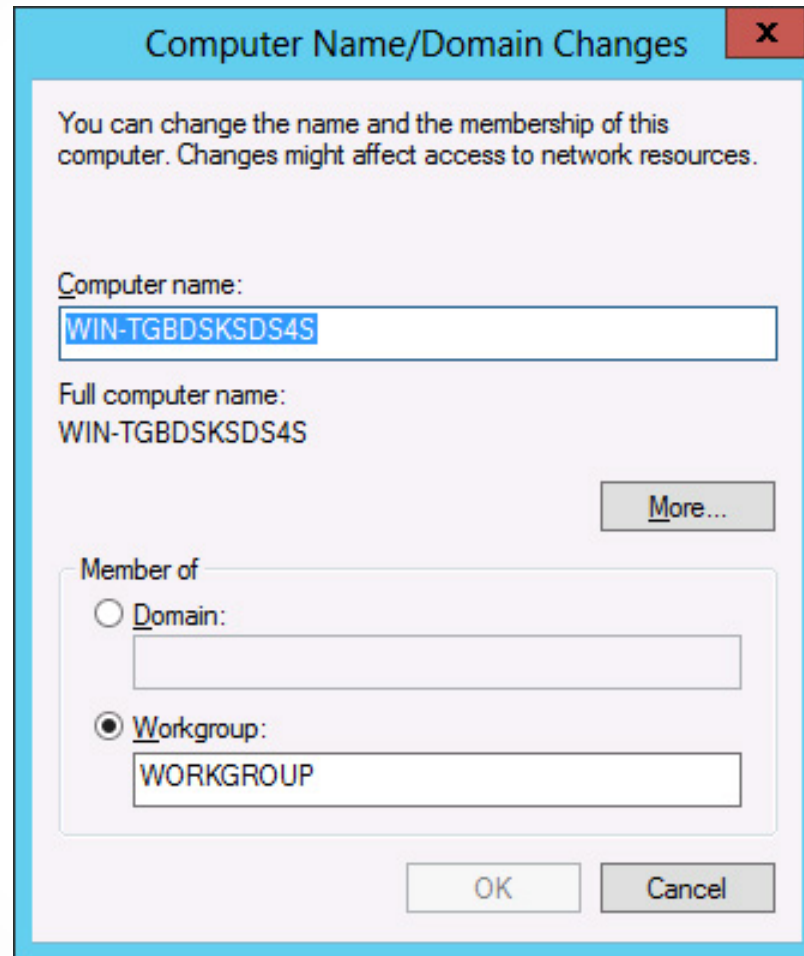
# Using GUI Tools



The Remote tab of the System Properties sheet



# Using GUI Tools

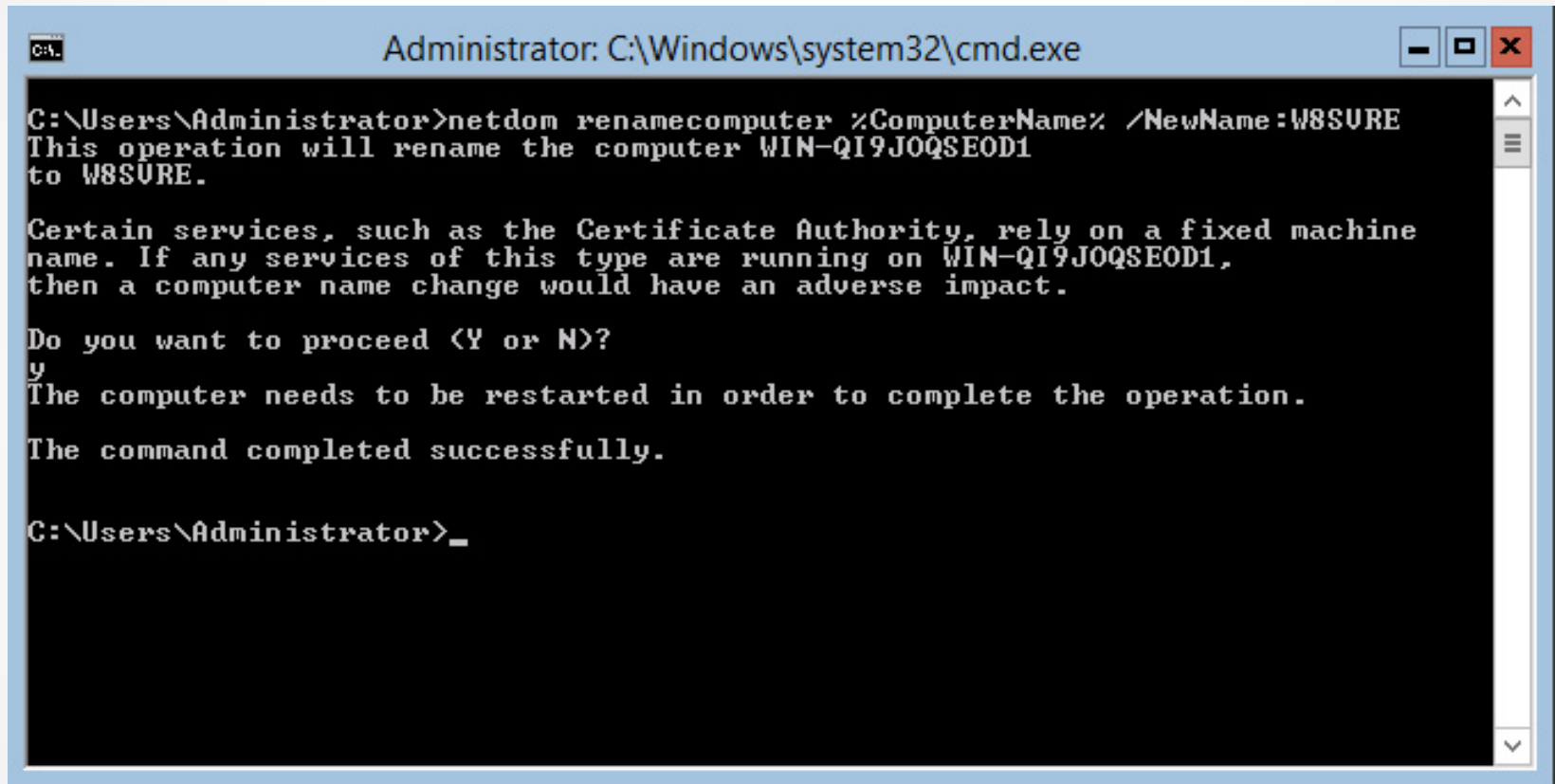


The Computer Name/Domain Changes dialog box

# Using Command Line Tools

- If you selected Server Core when installing, you can perform the post-installation tasks from the command line.
- Minimum requirements:
  - Rename the computer
  - Join the domain
- Use the **Netdom.exe** command.

# Using Command Line Tools



```
Administrator: C:\Windows\system32\cmd.exe
C:\Users\Administrator>netdom renamecomputer %ComputerName% /NewName:W8SURE
This operation will rename the computer WIN-QI9JQSE0D1
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-QI9JQSE0D1,
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.

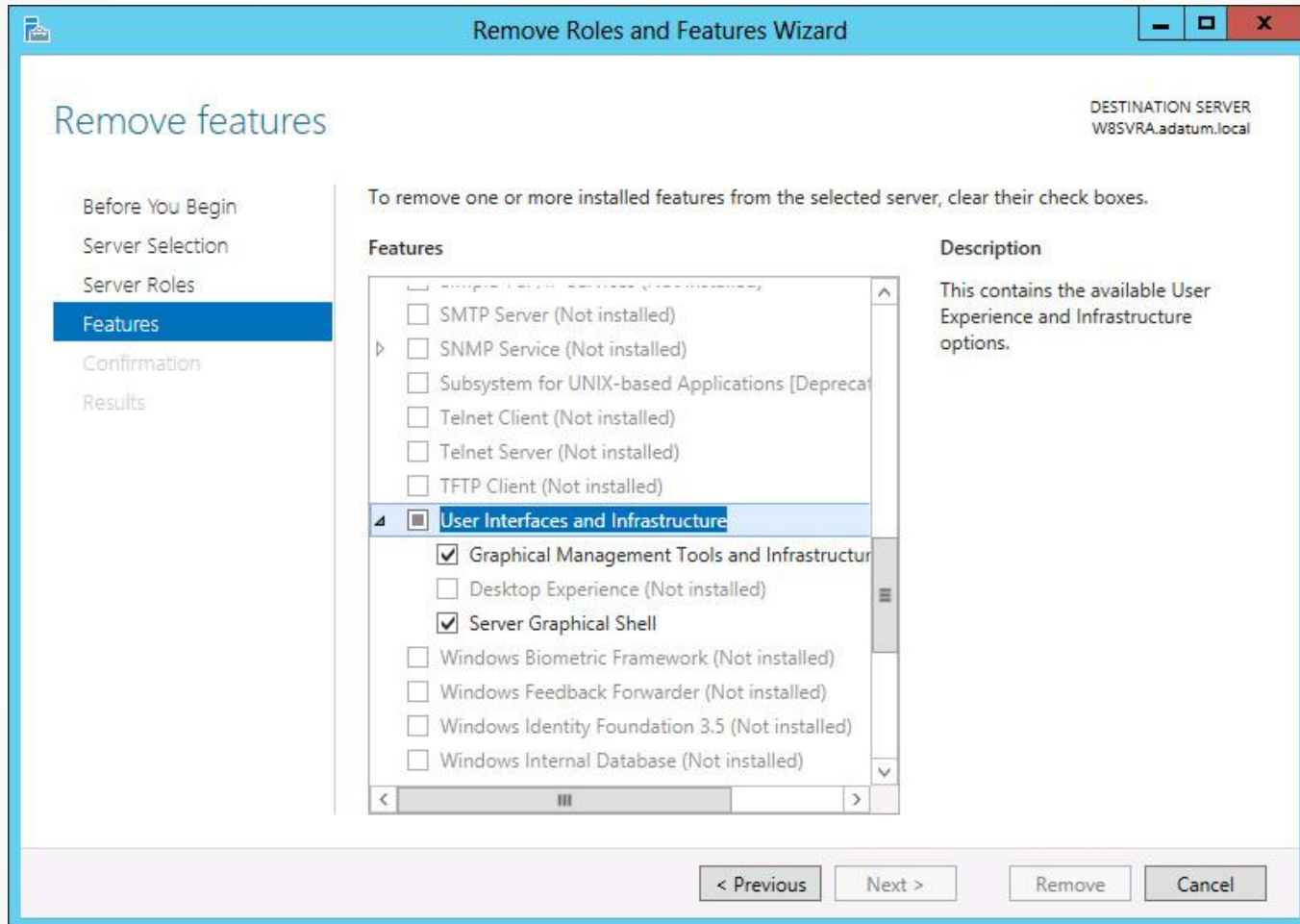
C:\Users\Administrator>_
```

Renaming a Computer from the Command Line

# Converting Between GUI and Server Core

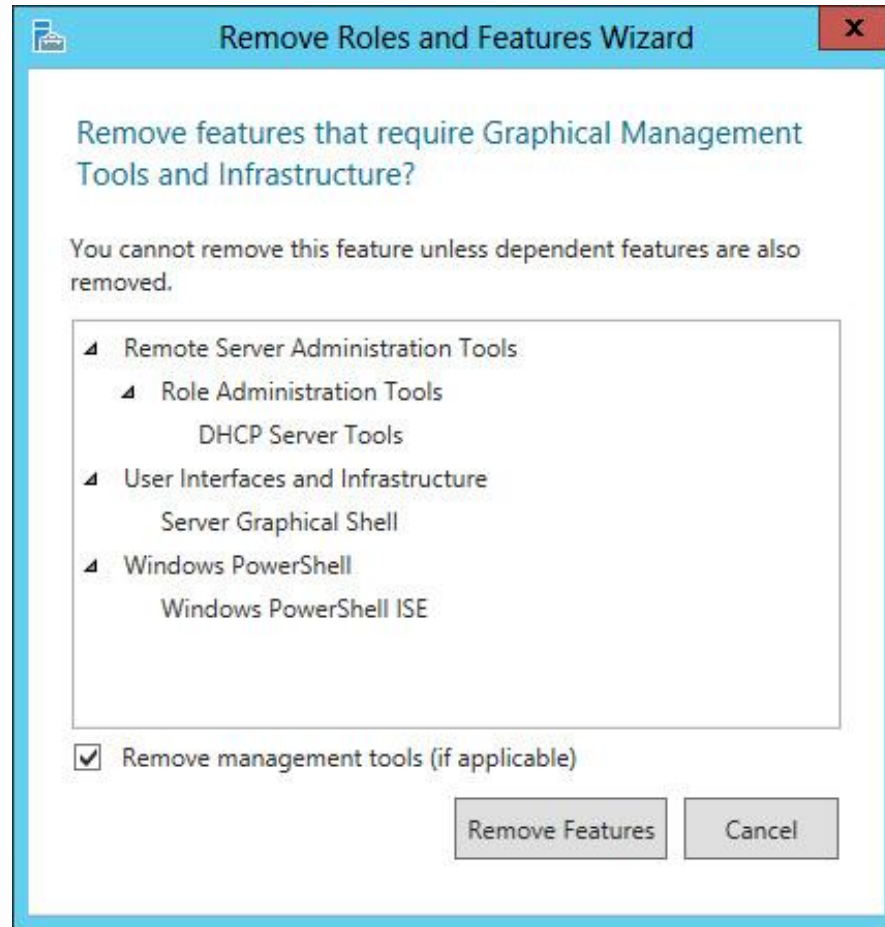
- This is a major improvement in Server 2012 over Server 2008 R2.
- Previously, you could only change from Server Core to GUI by performing a re-install.
- Server 2012 allows you to convert between GUI and Server Core as needed.
- Allows the ease of configuration using the GUI and then allows you to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

# Converting a GUI Server to Server Core



The Remove features page in Server Manager

# Converting a GUI Server to Server Core



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

# 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**
  - All adapters are connected to different switches, providing alternate routes through the network
- **Switch Dependent Mode**
  - All adapters are connected to the same switch, providing a single interface with their combined bandwidth

# Creating a NIC Team

**SERVERS**  
All Servers | 1 total

Name	Status	Server Type	Teams
W8SVRA	Online	Physical	0

**TEAMS**  
All Teams | 0 total

Team	Status	Teaming Mode	Load Balancing	Adapters
------	--------	--------------	----------------	----------

**ADAPTERS AND INTERFACES**

Adapter	Speed	State	Reason
Available to be added to a team (2)			
Ethernet	1 Gbps		
Ethernet 2	1 Gbps		

The NIC Teaming window in Server Manager

# Creating a NIC Team

The screenshot shows a window titled "NIC Teaming" with a close button (X) in the top right corner. The main content area is titled "New team".

Under "New team", there is a "Team name:" label followed by an empty text input field.

Below that is the "Member adapters:" section, which contains a table with the following columns: "In Team", "Adapter", "Speed", "State", and "Reason".

In Team	Adapter	Speed	State	Reason
<input type="checkbox"/>	Ethernet	1 Gbps		
<input type="checkbox"/>	Ethernet 2	1 Gbps		

Below the table is a section titled "Additional properties" with a collapse arrow (^). It contains the following settings:

- Teaming mode:** Switch Independent (dropdown menu)
- Load balancing mode:** Address Hash (dropdown menu)
- Standby adapter:** None (all adapters Active) (dropdown menu)
- Primary team interface:** (Name generated automatically); Default VLAN

At the bottom right of the dialog are "OK" and "Cancel" buttons.

The New team page in Server Manager

# Creating a NIC Team

The screenshot shows the 'NIC Teaming' window in Server Manager. The window title is 'NIC Teaming'. It is divided into three main sections: 'SERVERS', 'TEAMS', and 'ADAPTERS AND INTERFACES'. Each section has a 'TASKS' dropdown menu.

**SERVERS**  
All Servers | 1 total

Name	Status	Server Type	Teams
W8SVRA	Online	Physical	1

**TEAMS**  
All Teams | 1 total

Team	Status	Teaming Mode	Load Balancing	Adapters
NIC Team	OK	Static Teaming	Address Hash	2

**ADAPTERS AND INTERFACES**

Network Adapters | Team Interfaces

Adapter	Speed	State	Reason
NIC Team (2)			
Ethernet	1 Gbps	Active	
Ethernet 2	1 Gbps	Active	

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

# Using Roles, Features, and Services



## Lesson 2: Configuring Servers

# 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



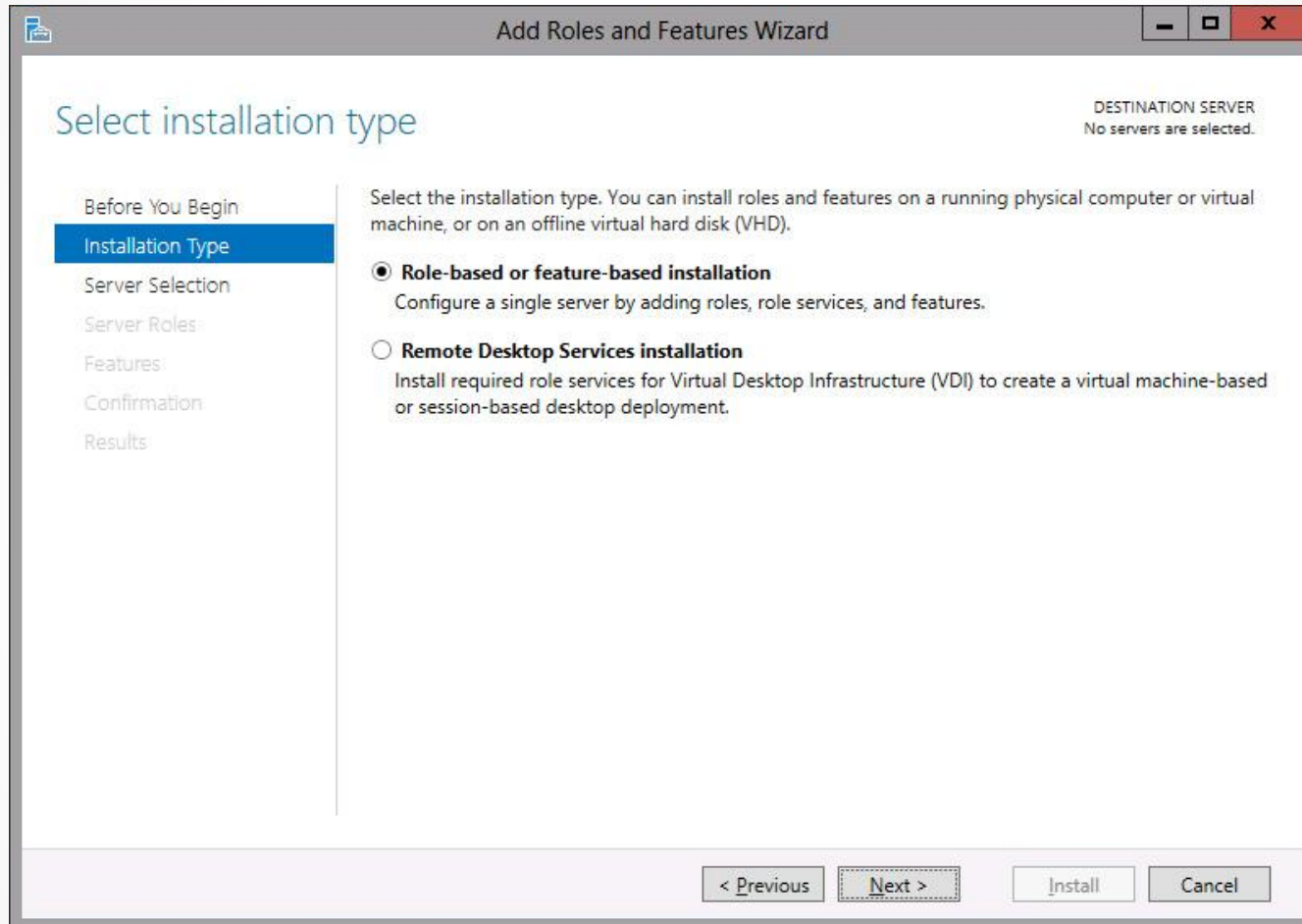
## Lesson 2: Configuring Servers

# 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.

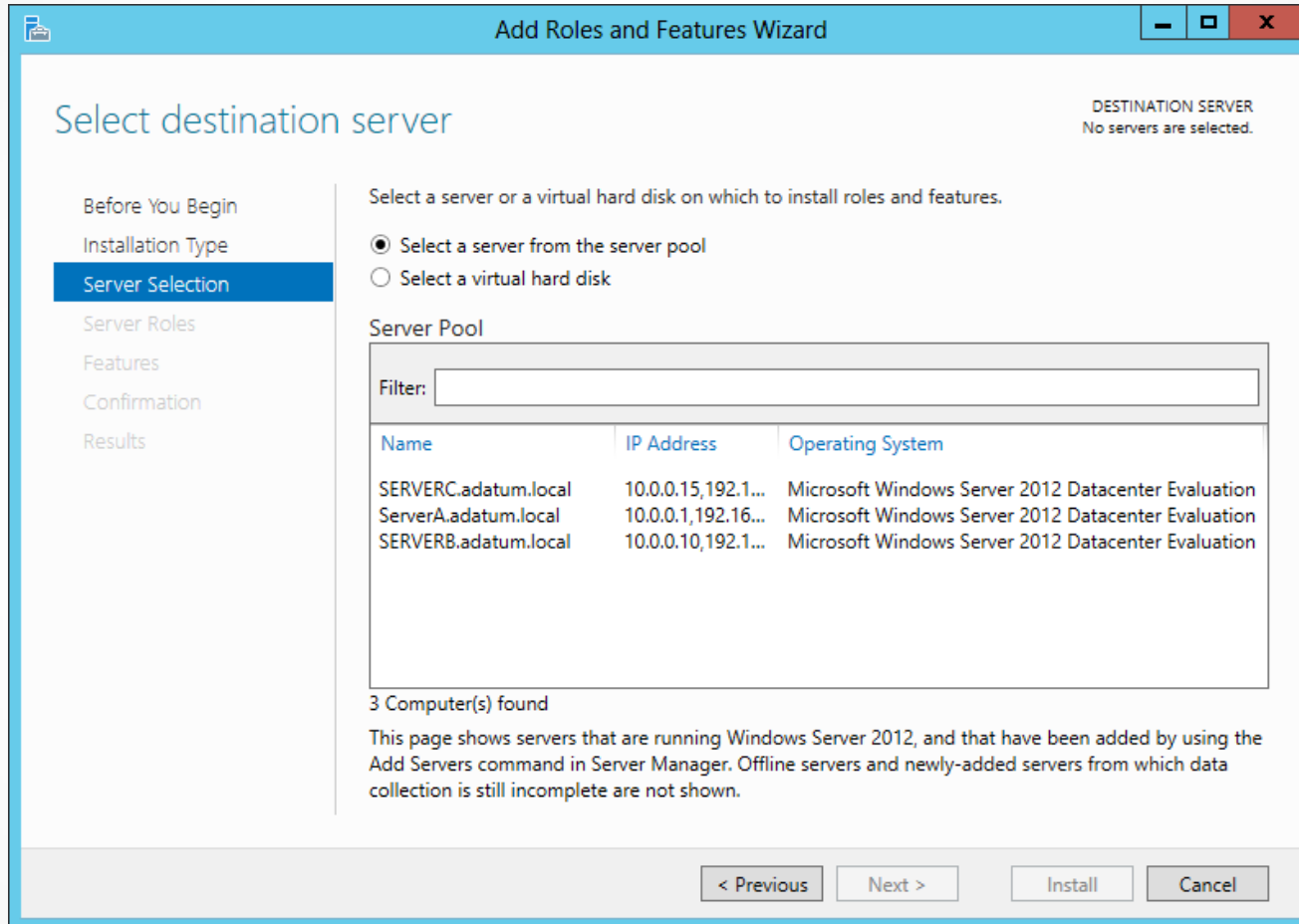


# Installing Roles and Features



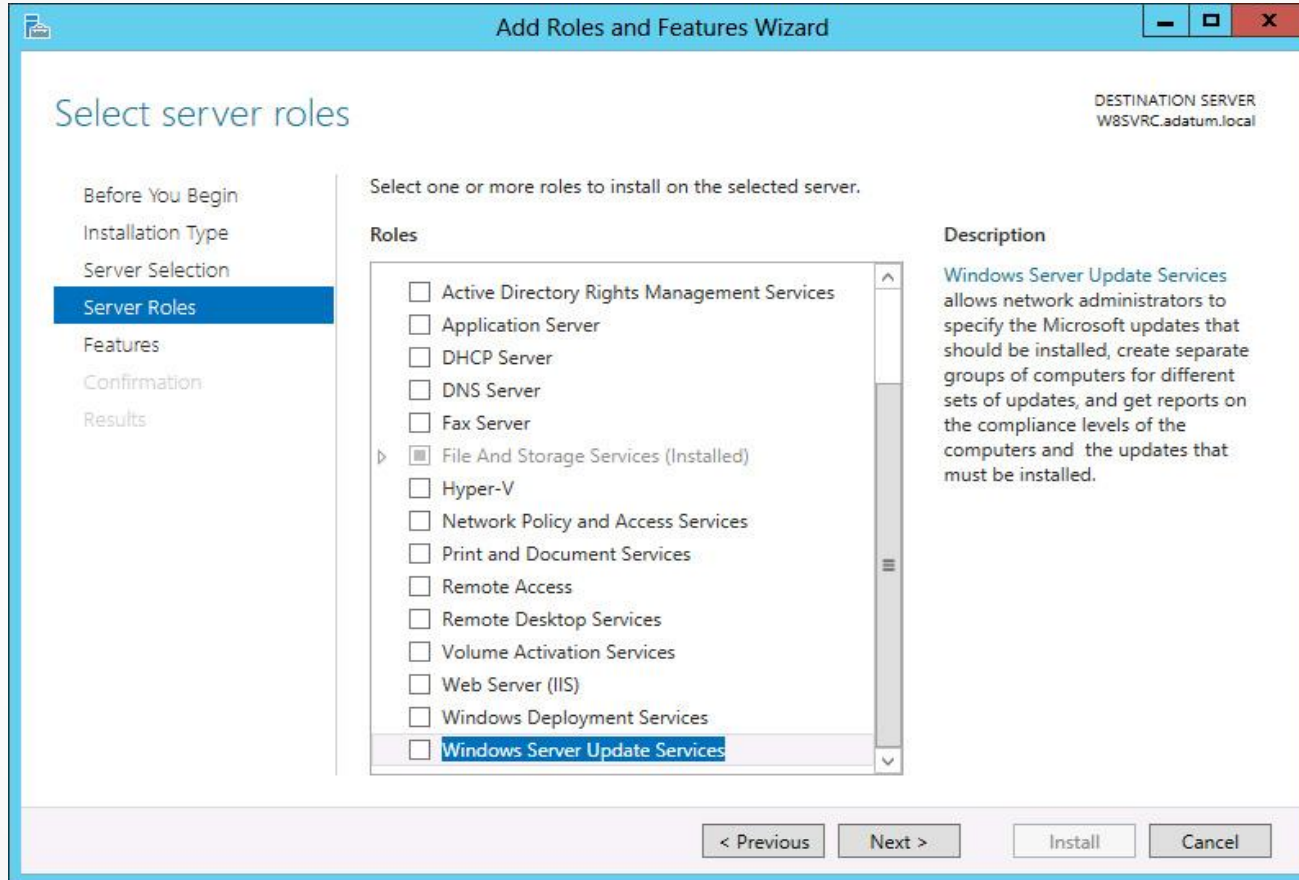
The Select Installation type page in the Add Roles and Features Wizard

# Installing Roles and Features



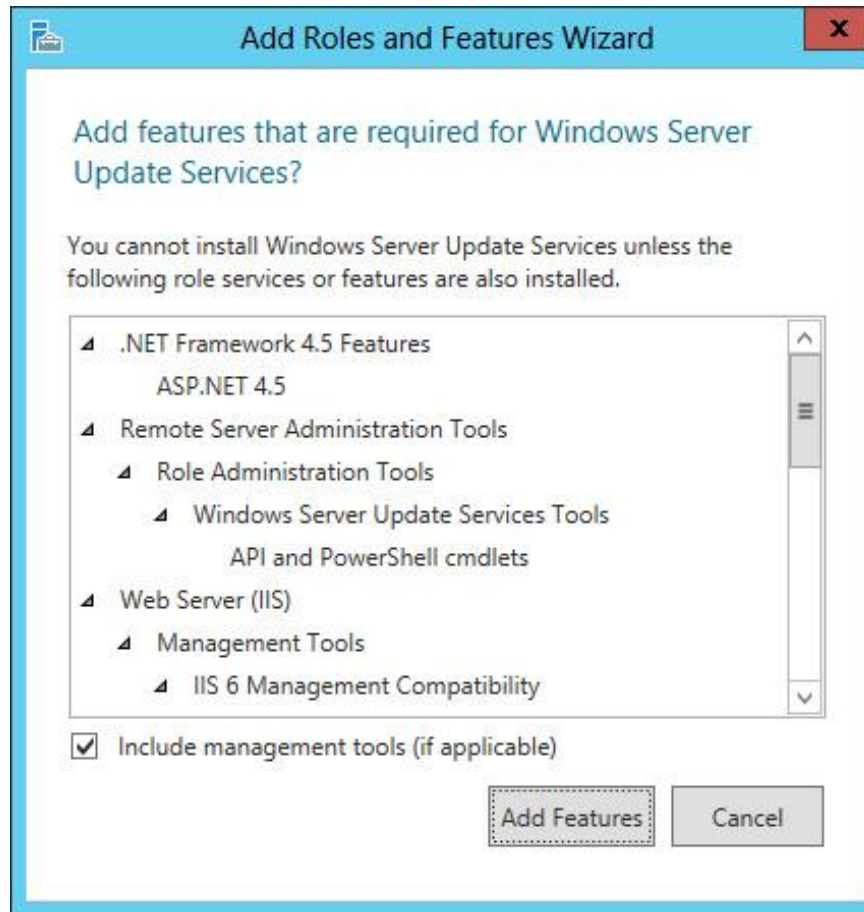
The Select destination server page in the Add Roles and Features Wizard

# Installing Roles and Features



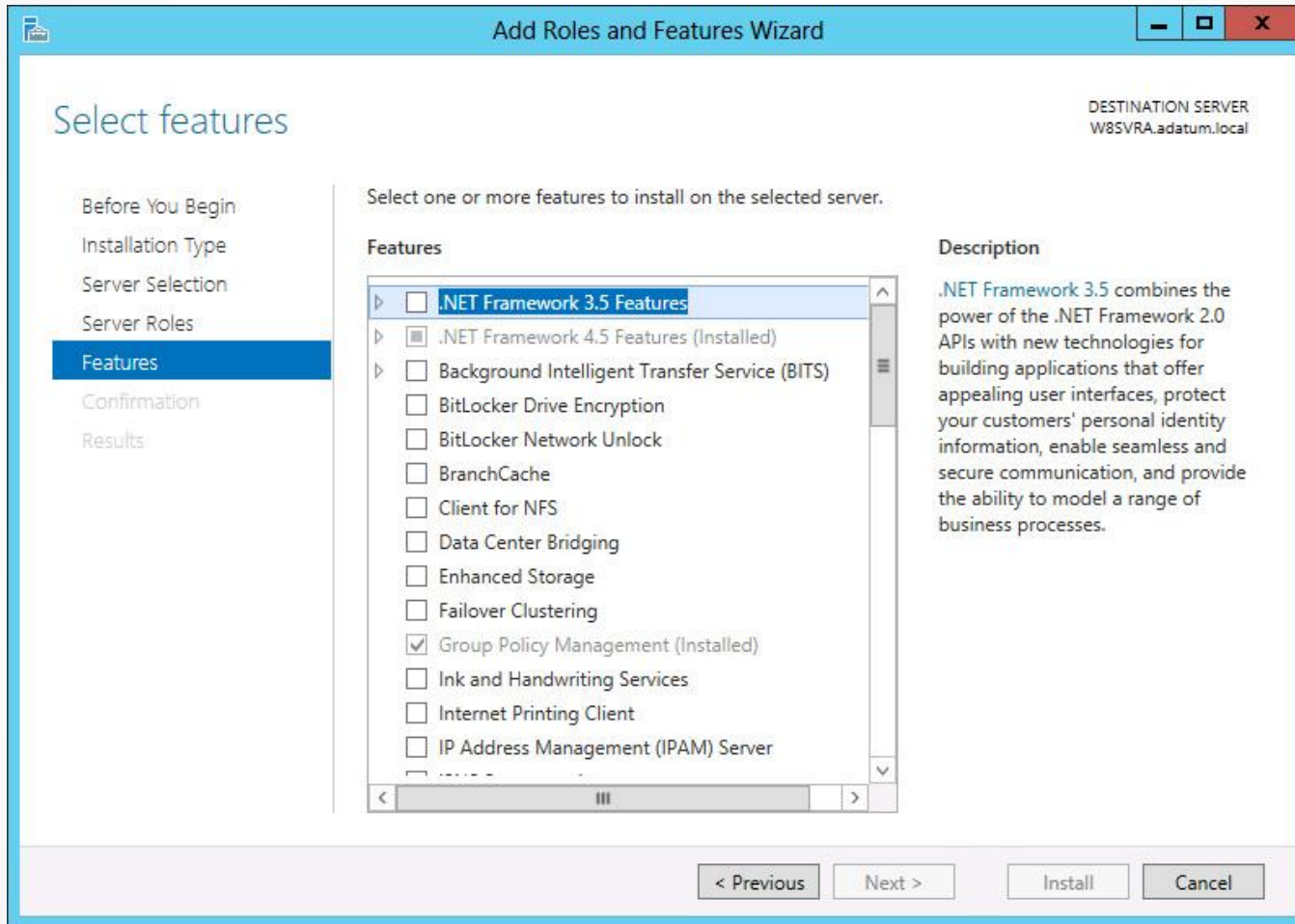
The Select server roles page in the Add Roles and Features Wizard

# Installing Roles and Features



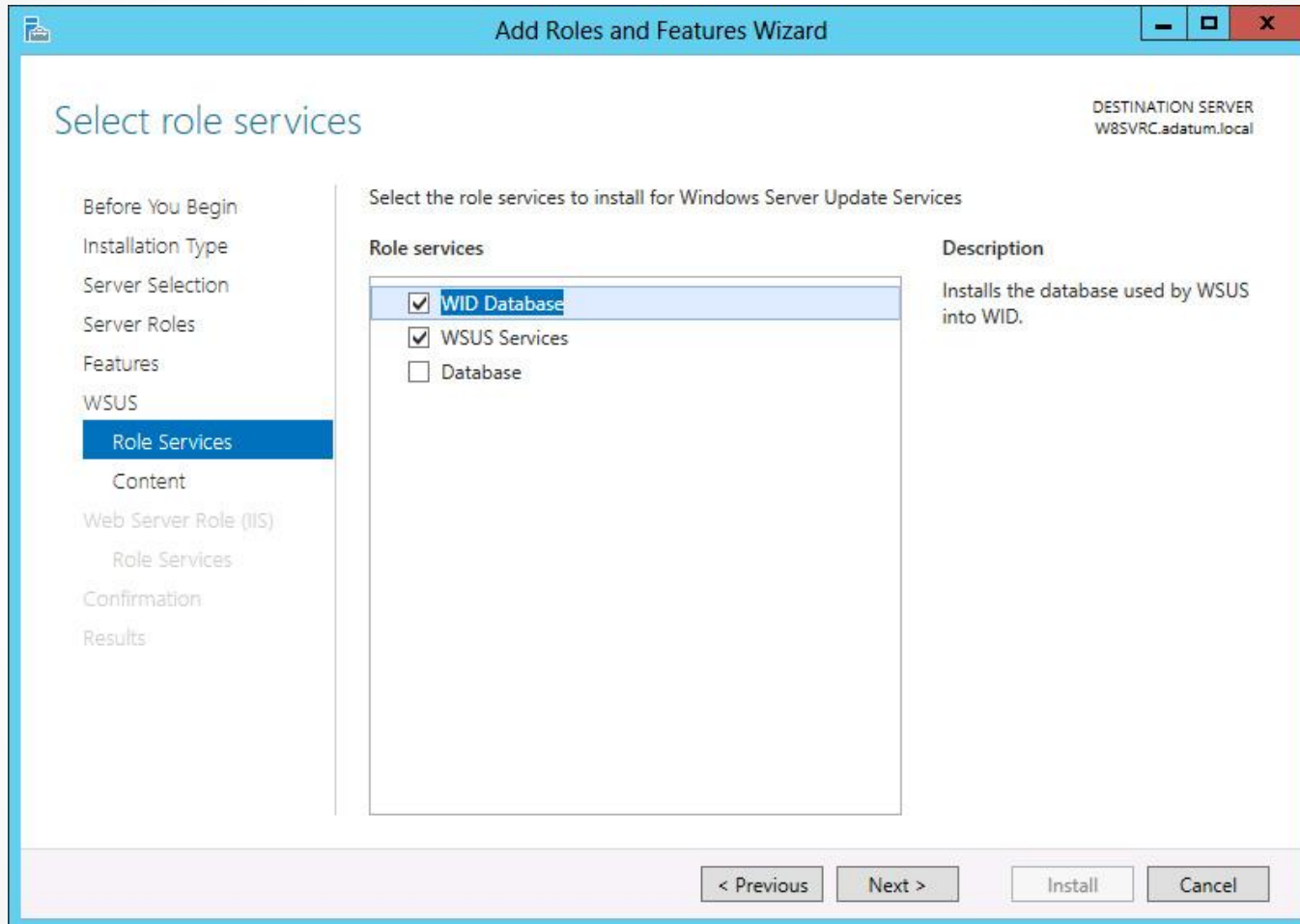
The Add features that are required dialog box in the Add Roles and Features Wizard

# Installing Roles and Features



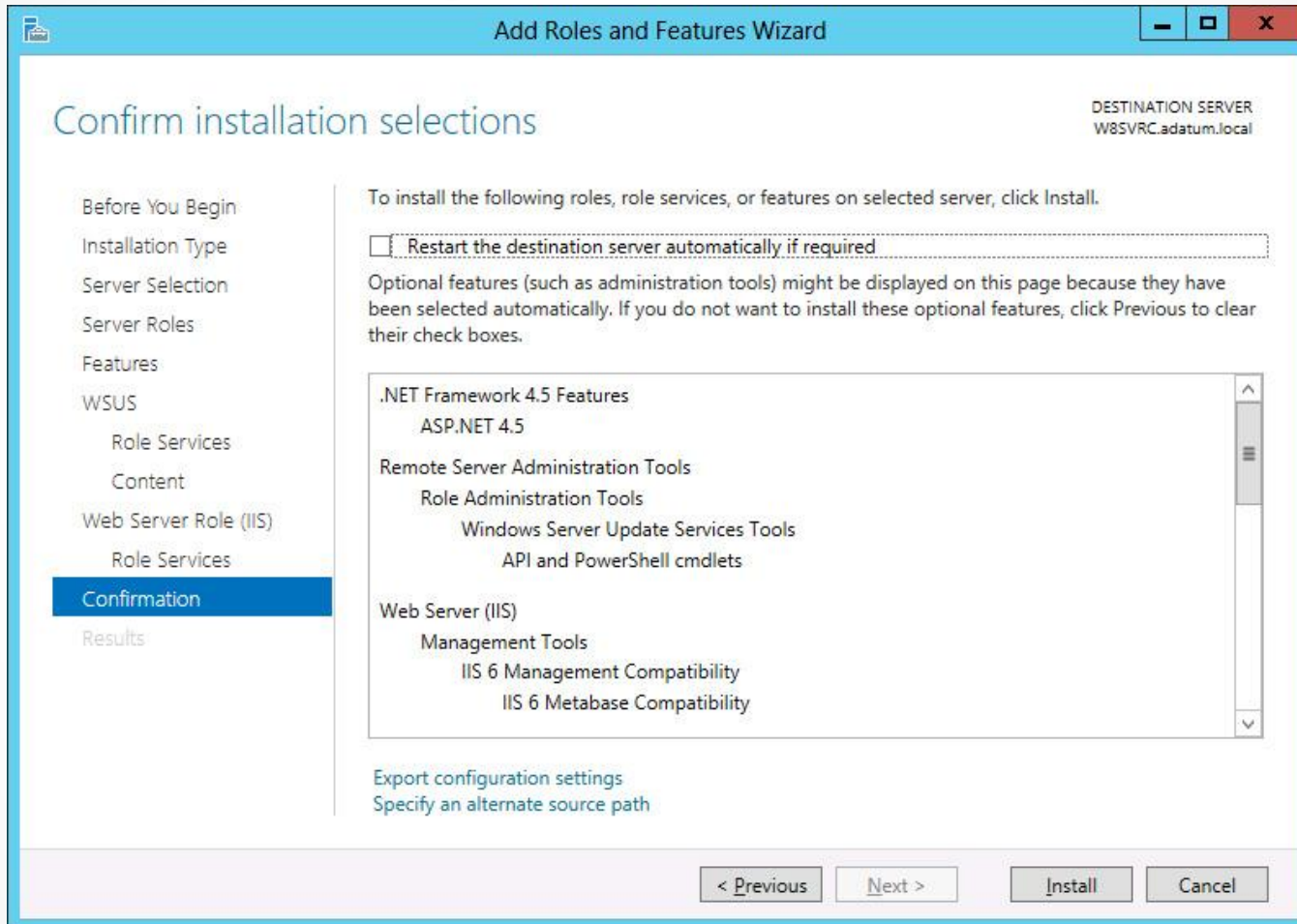
The Select features page in the Add Roles and Features Wizard

# Installing Roles and Features



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

# Installing Roles and Features



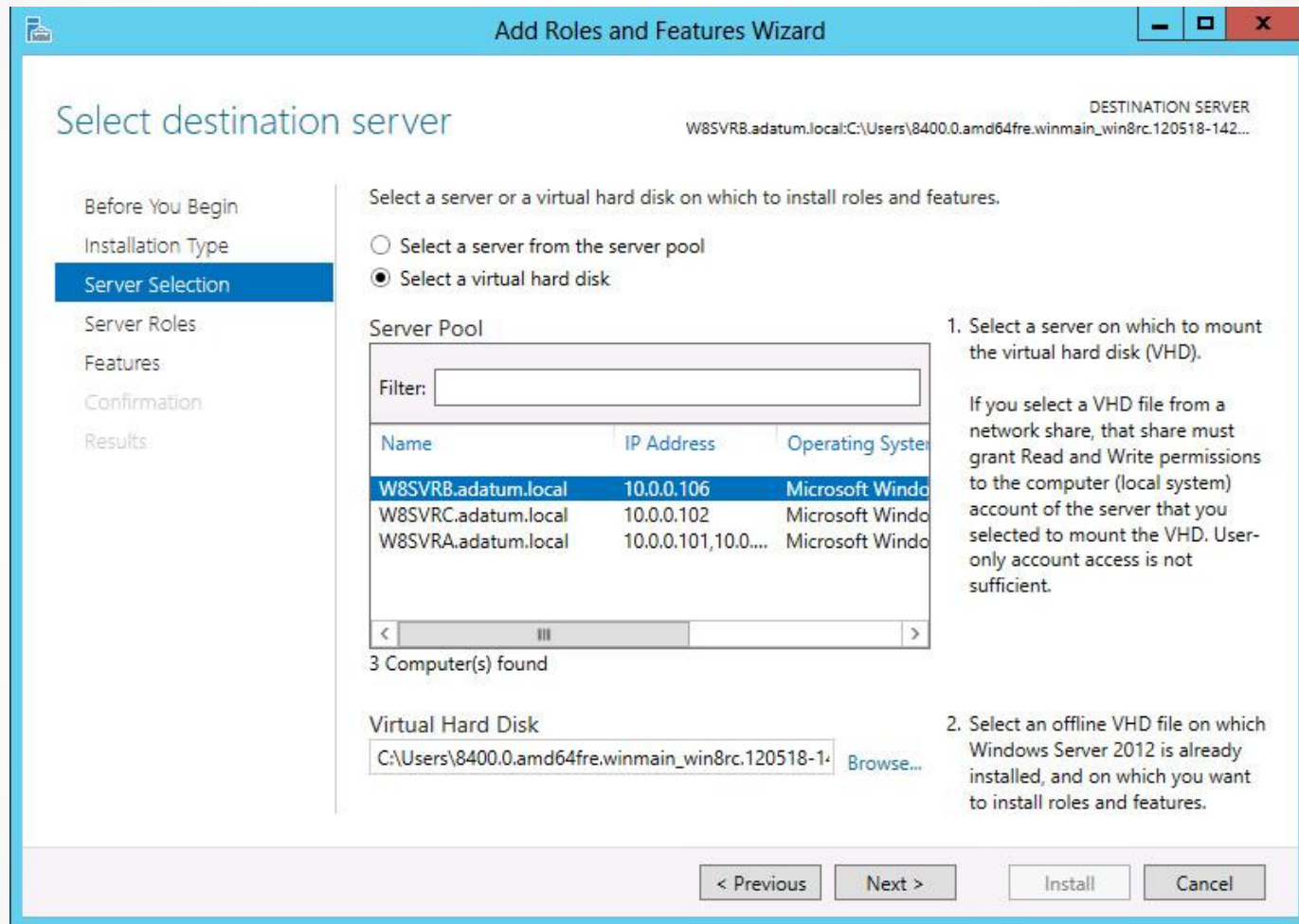
The Confirm installation selections page in the Add Roles and Features Wizard

# 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

# 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



## Lesson 2: Configuring Servers

# 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.

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