Deploying features and roles on remote servers through Windows PowerShell

In Windows Server 2012, you can deploy roles and features on remote servers. This feature is an important new functionality that is sure to be tested.

For the following procedures, it is assumed that the remote computer is configured to allow remote management (this is the default configuration) and that both.

the source and destination computers are located in the same Active Directory Domain Services domain.
 For information on how to manage remote servers from Server Manager in a workgroup environment, see "Add Servers to Server Manager" at *http://technet.microsoft.com/en-us/library/hh831453*.
To install roles and features on a remote server by using Windows PowerShell, follow these steps:
1.

Type **Get-WindowsFeature** and then press Enter to view a list of available and installed roles and features on the local server. If the local computer is not a server, run Get-WindowsFeature -ComputerName <computer_name>, where *computer_name* represents the name of a remote computer that is running Windows Server 2012.The results of the cmdlet contain the command names of roles and features that you add to your cmdlet in step 4.
2.

Type **Get-Help Install-WindowsFeature** and then press Enter to view the syntax and accepted parameters for the Install-WindowsFeature cmdlet.

3.

Type the following and then press Enter, where *feature_name* represents the command name of a role or feature that you want to install (obtained in step 2), and *computer_name* represents a remote computer on which you want to install roles and features. Separate multiple values for *feature_name* by using commas. The Restart parameter automatically restarts the destination server if required by the role or feature installation.

```
Install-WindowsFeature –Name <feature_name> -ComputerName <computer_name> -Restart
```

FIGURE 1-3 Installing a feature on a remote server.

Deploying features and roles on remote servers by using Server Manager

If you prefer to use Server Manager to deploy roles and features to a remote server, you must first add the remote server to the Server Manager server pool.

To add a remote server in Server Manager, follow these steps:

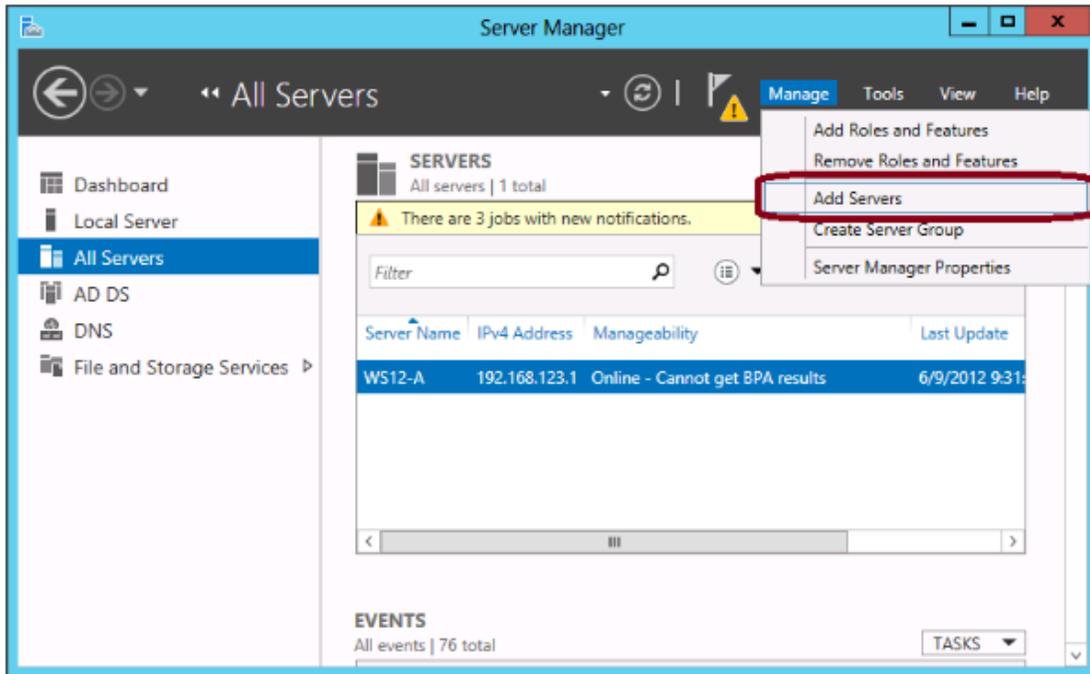1. From the Manage menu, select Add Servers, as shown in Figure 1-4.

FIGURE 1-4 Adding a remote server to manage in Server Manager.

2. Do one of the following:

- On the Active Directory tab, select servers that are in the current domain. Press Ctrl while selecting multiple servers. Click the right-arrow button to move selected servers to the Selected list.
- On the DNS tab, type the first few characters of a computer name or IP address and then press Enter or click Search. Select servers that you want to add and then click the right-arrow button.
- On the Import tab, browse for a text file that contains the DNS names or IP addresses of computers that you want to add, one name or IP address per line.

3. On the Active Directory tab, select servers that are in the current domain. Press Ctrl while selecting multiple servers. Click the right-arrow button to move selected servers to the Selected list.

4. When you are finished adding servers, click OK.

The new server will appear in Server Manager when you select All Servers in the navigation pane, as shown in Figure 1-5.
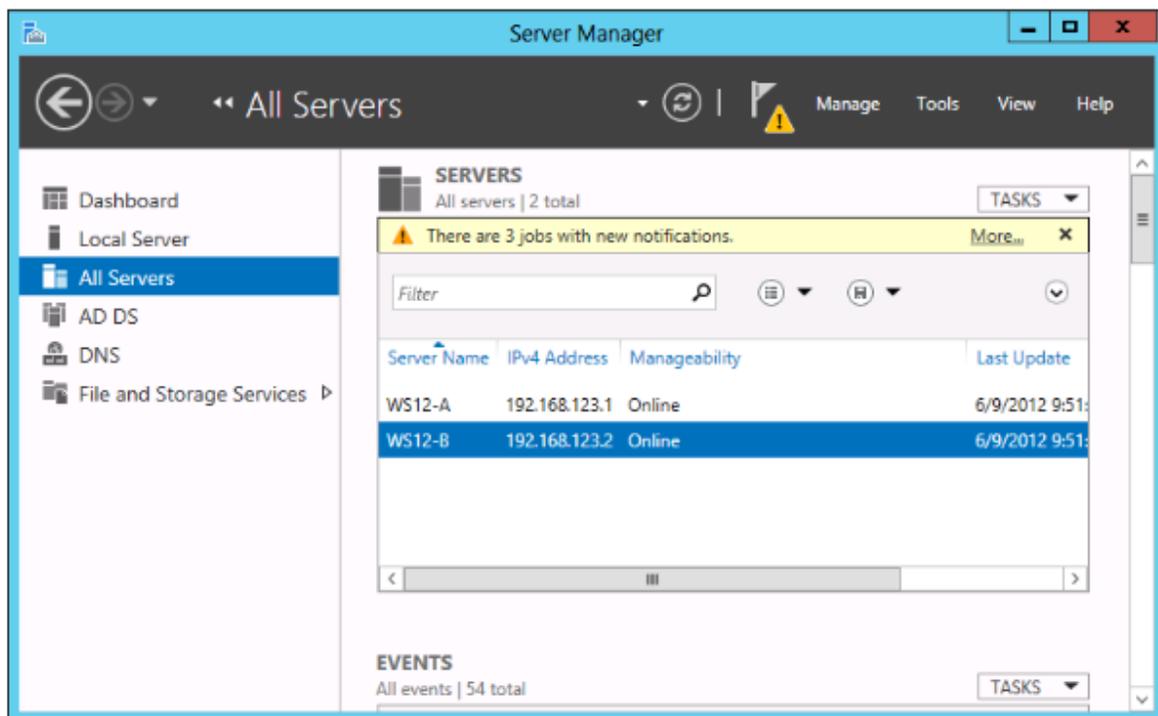

FIGURE 1-5 The remote server WS12-B has been added in Server Manager.

After you have added the remote server to the server pool, you can deploy features to it as you would to the local server.

To install roles and features on a remote server by using Server Manager, follow these steps:

1. From the Manage menu of Server Manager, select Add Roles And Features.

2. On the Before You Begin page, verify that your destination server and network environment are prepared for the role and feature you want to install. Click Next.

3. On the Select Installation Type page, select Role-Based Or Feature-Based Installation to install all parts of roles or features on a single server, or Remote Desktop Services Installation to install either a virtual machine–based desktop infrastructure or a session-based desktop infrastructure for Remote Desktop Services. The Remote Desktop Services Installation option distributes logical parts of the Remote Desktop Services role across different servers as needed by administrators. Click Next.

4. On the Select Destination Server page, select a server from the server pool. After you have selected the destination server, click Next.

5. Select roles, select role services for the role if applicable, and then click Next to select features.

6. On the Confirm Installation Selections page, review your role, feature, and server selections. If you are ready to install, click Install.

You can also export your selections to an XML-based configuration file that you can use for unattended feature installations with Windows PowerShell. To export the configuration you specified in this Add Roles And Features Wizard session, click Export Configuration Settings, as shown in Figure 1-6, and then save the XML file to a convenient location.
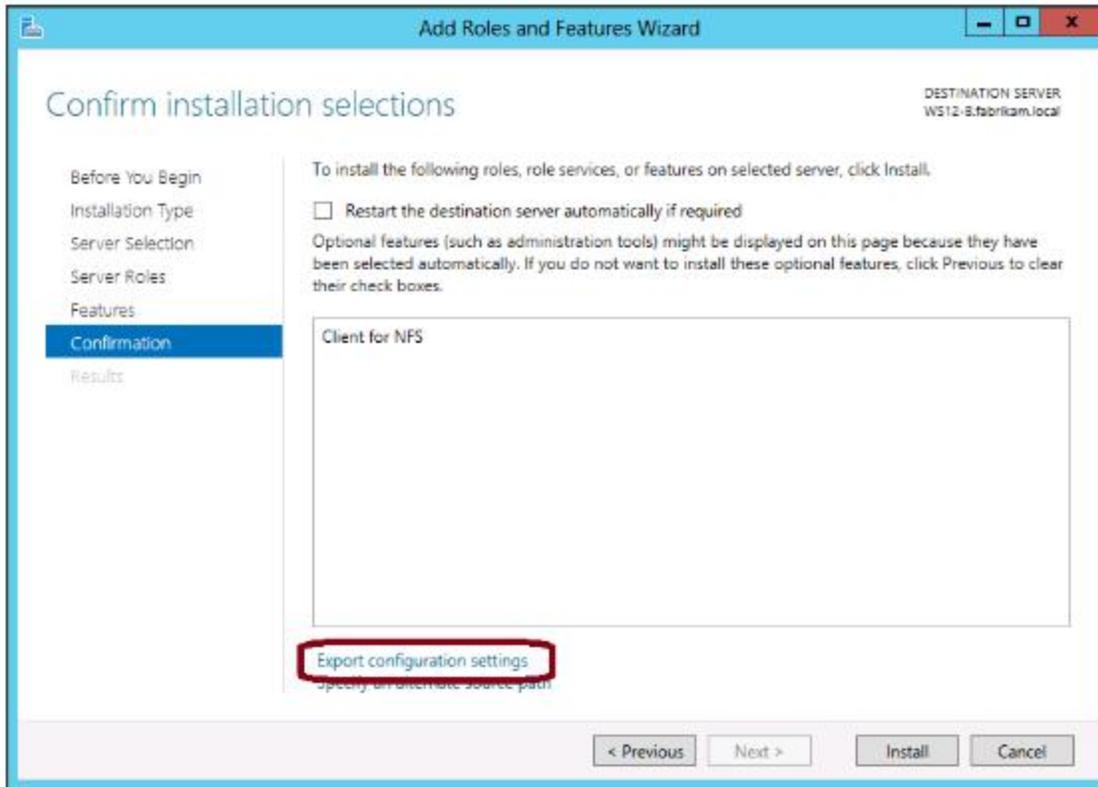
FIGURE 1-6 Exporting an XML configuration file for use with Windows PowerShell.

EXAM TIP

Remember that you can use the Add Roles And Features Wizard to create server configuration files that can later be used to perform unattended feature installations with Windows PowerShell.

7. After you click Install, the Installation Progress page displays installation progress, results, and messages such as warnings, failures, or postinstallation configuration steps that are required for the roles or features that you installed. In Windows Server 2012, you can close the Add Roles And Features Wizard while installation is in progress and view installation results or other messages in the Notifications area at the top of the Server Manager console. Click the Notifications flag icon to see more details about installations or other tasks that you are performing in Server Manager.