WINDOWS SERVER 2012 - PART 1

Lab: Deploying and Managing Windows Server 2012

Exercise 1: Deploying Windows Server 2012

► *Task 1: Install the Windows Server 2012 R2 server*

1. Open the VirtualBox Manager console.
2. Create New virtual machine named **LON-SVR1** with settings:
   - 1024 MB RAM
   - create dynamic disc (max 25 GB of storage pace)
   - network adapter attached to **Internal network**
   - insert into virtual machine Storage controller DVD **iso** image - **D:\se_lab\en_windows_server_2012_r2_with_update_x64_dvd_4065220.iso**.
3. Click **LON-SVR1**.
4. In the Actions pane, click **Start**.
5. In the Windows Setup Wizard, on the **Windows Server 2012 R2** page, verify the following settings, and then click **Next**:
   - Language to install: **English (United States)**
   - Time and currency format: **Polish (Poland)**
   - Keyboard or input method **Polish (Programmers)**
6. On the **Windows Server 2012 R2** page, click **Install now**.
7. On the **Select the operating system you want to install** page, select **Windows Server 2012 R2 Standard (Server with a GUI)**, and then click **Next**.
8. On the **License terms** page, review the operating system license terms, select the **I accept the license terms** check box, and then click **Next**.
9. On the **Which type of installation do you want?** page, click **Custom: Install Windows only (advanced)**.
10. On the **Where do you want to install Windows?** page, verify that **Drive 0 Unallocated Space** has enough space for the Windows Server 2012 R2 operating system, and then click **Next**.

    Note: Depending on the speed of the equipment, the installation takes approximately 20 minutes. The virtual machine will restart several times during this process.
11. On the **Settings** page, in both the **Password** and **Reenter password** boxes, enter the password **Pa$$word**, and then click **Finish**.

► *Task 2: Change the server name*

1. Sign in to LON-SVR1 as **Administrator** with the password **Pa$$word**.
2. In Server Manager, click **Local Server**.
3. Click the randomly generated name next to **Computer name**.
4. In the **System Properties** dialog box, on the **Computer Name** tab, click **Change**.
5. In the **Computer Name/Domain Changes** dialog box, in the **Computer name** text box, enter the name **LON-SVR1**, and then click **OK**.
6. In the **Computer Name/Domain Changes** dialog box, click **OK**.
7. Close the **System Properties** dialog box.
8. In the **Microsoft Windows** dialog box, click **Restart Now**.

► *Task 3: Change the date and time*

1. Sign in to server LON-SVR1 as **Administrator** with the password **Pa$$word**.
2. On the taskbar, click the time display. A pop-up window with a calendar and a clock appears.
3. In the pop-up window, click **Change date and time settings**.
4. In the **Date and Time** dialog box, click **Change Time Zone**.
5. In the **Time Zone Settings** dialog box, set the time zone to your current time zone, and then click **OK**.
6. In the **Date and Time** dialog box, click **Change Date and Time**.
7. Verify that the date and time that display in the **Date and Time Settings** dialog box match those in your classroom, and then click **OK**.
8. To close the **Date and Time** dialog box, click **OK**.

► *Task 4: Configure the network*

1. On LON-SVR1, in the Server Manager console, click **Local Server**.
2. In the Server Manager console, next to **Ethernet**, click **IPv4 address assigned by DHCP, IPv6 Enabled**.
3. In the **Network Connections** dialog box, right-click **Ethernet**, and then click **Properties**.
4. In the **Ethernet Properties** dialog box, click **Internet Protocol Version 4 (TCP/IPv4)**, and then click **Properties**.
5. In the **Internet Protocol Version 4 (TCP/IPv4) Properties** dialog box, click **Use the following IP address**, enter the following IP address information, and then click **OK**:

- IP address: **172.16.0.101**
- Subnet Mask: **255.255.0.0**
- Default Gateway: **172.16.0.1**
- Preferred DNS server: **172.16.0.10**

6. Click **Close** to close the **Ethernet Properties** dialog box.
7. Close the **Network Connections** dialog box.

► *Task 5: Add the server to the domain*

1. On LON-SVR1, in the Server Manager console, click **Local Server**.
2. Next to Workgroup, click **WORKGROUP**.
3. In the **System Properties** dialog box, on the **Computer Name** tab, click **Change**.
4. In the **Computer Name/Domain Changes** dialog box, in the **Member Of** area, click the **Domain** option.
5. In the **Domain** box, type **adatum.com**, and then click **OK**.
6. In the **Windows Security** dialog box, enter the following details, and then click **OK**:
   - Username: **Administrator**
   - Password: **Pa$$word**
7. In the **Computer Name/Domain Changes** dialog box, click **OK**.
8. When informed that you must restart the computer to apply the changes, click **OK**.
9. In the **System Properties** dialog box, click **Close**.
10. In the **Microsoft Windows** dialog box, click **Restart Now**.
11. After LON-SVR1 restarts, sign in as **Adatum\Administrator** with the password **Pa$$word**.

Results: After completing this exercise, you should have deployed Windows Server 2012 on LON-SVR1. You also should have configured LON-SVR1, including name change, date and time, and networking.

Exercise 2: Configuring Windows Server 2012 Server Core

Follow the steps from exercise 1 to deploy LON-CORE Windows Server 2012 R2 without GUI (Core version)

► *Task 1: Set computer name*

1. Sign in to LON-CORE as **Administrator** with the password **Pa$$word**.
2. At the command prompt, type **sconfig.cmd** and press Enter.
3. To select **Computer Name**, type **2**, and then press Enter.
4. Enter the computer name **LON-CORE**, and then press Enter.
5. In the **Restart** dialog box, click **Yes**.
6. Sign in to server LON-CORE using the **Administrator** account with the password **Pa$$word**.
7. At the command prompt, type **hostname**, and then press Enter to verify the computer's name.

► *Task 2: Change the computer's date and time*

1. Ensure you are signed in to server LON-CORE as **Administrator** with the password **Pa$$word**.
2. At the command prompt, type **sconfig.cmd**, and then press Enter.
3. To select **Date and Time**, type **9**, and then press Enter.
4. In the **Date and Time** dialog box, click **Change time zone**. Set the time zone to the same time zone that your classroom uses, and then click **OK**.
5. In the **Date and Time** dialog box, click **Change Date and Time**, and verify that the date and time match those in your location. To dismiss the dialog boxes, click **OK** two times.
6. In the Command Prompt window, type **15**, and then press Enter to exit **Server Configuration**.

► *Task 3: Configure the network*

1. Ensure that you are signed in to server LON-CORE using the account **Administrator** and the password **Pa$$word**.
2. At the command prompt, type **sconfig.cmd**, and then press Enter.
3. To configure **Network Settings**, type **8**, and then press Enter.
4. Type the index number of the network adapter that you want to configure, and then press Enter.
5. On the **Network Adapter Settings** page, type **1**, and then press Enter. This sets the Network Adapter Address.
6. To select static IP address configuration, type **S**, and then press Enter.
7. At the **Enter static IP address:** prompt, type **172.16.0.102**, and then press Enter.
8. At the **Enter subnet mask** prompt, type **255.255.0.0**, and then press Enter.
9. At the **Enter default gateway** prompt, type **172.16.0.1**, and then press Enter.
10. On the **Network Adapter Settings** page, type **2**, and then press Enter.
    This configures the DNS server address.
11. At the **Enter new preferred DNS server** prompt, type **172.16.0.10**, and then press Enter.
12. In the **Network Settings** dialog box, click **OK**.
13. To choose not to configure an alternate DNS server address, press Enter.

14. Type **4**, and then press Enter to return to the main menu.
15. Type **15**, and then press Enter to exit sconfig.cmd.
16. At the command prompt, type **ping lon-dc1.adatum.com** to verify connectivity to the domain controller from LON-CORE.

▶ *Task 4: Add the server to the domain*

1. Ensure that you are signed in to server LON-CORE using the account **Administrator** with the password **Pa$$word**.
2. At the command prompt, type **sconfig.cmd**, and then press Enter.
3. To switch to configure Domain/Workgroup, type **1**, and then press Enter.
4. To join a domain, type **D**, and then press Enter.
5. At the **Name of domain to join** prompt, type **adatum.com**, and press Enter.
6. At the **Specify an authorized domain\user** prompt, type **Adatum\Administrator**, and then press Enter.
7. At the **Type the password associated with the domain user** prompt, type **Pa$$word**, and then press Enter.
8. At the **Change Computer Name** prompt, click **No**.
9. In the **Restart** dialog box, click **Yes**.
10. Sign in to server LON-CORE with the **Adatum\Administrator** account and the password **Pa$$word**.

Results: After you complete this exercise, you should have configured a Windows Server 2012 Server Core deployment and verified the server's name.

Exercise 3: Managing Servers

▶ *Task 1: Create a server group*

1. Sign in to LON-DC1 with the **Administrator** account and the password **Pa$$word**.
2. In the Server Manager console, click **Dashboard**, and then click **Create a server group**.
3. In the **Create Server Group** dialog box, click the **Active Directory** tab, and then click **Find Now**.
4. In the **Server group** name box, type **LAB-1**.
5. Use the arrow to add **LON-CORE** and **LON-SVR1** to the server group. Click **OK** to close the **Create Server Group** dialog box.
6. In the Server Manager console, click **LAB-1**. Press and hold the Ctrl key, and then select both **LON-CORE** and **LON-SVR1**.
7. Scroll down, and under the **Performance** section, select both **LON-CORE** and **LON-SVR1**.
8. Right-click **LON-CORE**, and then click **Start Performance Counters**.

▶ *Task 2: Deploy features and roles to both servers*

1. In Server Manager on LON-DC1, click **LAB-1**.
2. Scroll to the top of the pane, right-click **LON-CORE**, and then click **Add Roles and Features**.
3. In the Add Roles and Features Wizard, click **Next**.
4. On the **Select installation type** page, click **Role-based or feature-based installation**, and then click **Next**.
5. On the **Select destination server** page, verify that **LON-CORE.Adatum.com** is selected, and then click **Next**.
6. On the **Select server roles** page, select **Web Server (IIS)**, and then click **Next**.
7. On the **Features** page, select **Windows Server Backup**, and then click **Next**.
8. On the **Web Server Role (IIS)** page, click **Next**.
9. On the **Select role services** page, add the **Windows Authentication** role service, and then click **Next**.
10. On the **Confirm installation selections** page, select the **Restart the destination server automatically if required** check box, and then click **Install**.
11. Click **Close** to close the Add Roles and Features Wizard.
12. In Server Manager, right-click **LON-SVR1**, and then click **Add Roles and Features**.
13. In the Add Roles and Features Wizard, on the **Before you begin** page, Click **Next**.
14. On the **Select installation type** page, click **Role-based or feature-based installation**. Click **Next**.
15. On the **Select destination server** page, verify that **LON-SVR1.Adatum.com** is selected, and then click **Next**.
16. On the **Server Roles** page, click **Next**.
17. On the **Select features** page, click **Windows Server Backup**, and then click **Next**.
18. On the **Confirm installation selections** page, select the **Restart the destination server automatically if required** check box, and then click **Install**.
19. Once the install commences, click **Close**.
20. In Server Manager, refresh the view, click the **IIS** node, and then verify that LON-CORE is listed.

▶ *Task 3: Review services and change a service setting*

1. Sign in to LON-CORE with the **Adatum\Administrator** account and the password **Pa$$word**.
2. In the Command Prompt window, type the following two commands, and press Enter after each one:

```
netsh.exe advfirewall firewall set rule group="remote desktop" new enable=yes
netsh.exe advfirewall firewall set rule group="remote event log management" new enable=yes
```

3. Sign in to LON-DC1 with the **Adatum\Administrator** account and the password **Pa$$word**.

4. In Server Manager, click **LAB-1**.
5. Right-click **LON-CORE**, and then click **Computer Management**.
6. In the Computer Management console, expand **Services and Applications**, and then click **Services**.
7. Right-click the **World Wide Web Publishing** service, and then click **Properties**. Verify that the **Startup type** is set to **Automatic**.
8. In the **World Wide Web Publishing Service** dialog box, on the **Log On** tab, verify that the service is configured to use the **Local System account**.
9. On the **Recovery** tab, configure the following settings, and then click the **Restart Computer Options** button:
   - First failure: **Restart the Service**
   - Second failure: **Restart the Service**
   - Subsequent failures: **Restart the Computer**
   - Reset fail count after: **1** days
   - Restart service after: **1** minute
10. In the **Restart Computer Options** dialog box, in the **Restart Computer After** box, type **2**, and then click **OK**.
11. Click **OK** to close the **World Wide Web Publishing Services Properties** dialog box.
12. Close the Computer Management console.

Results: After you complete this exercise, you should have created a server group, deployed roles and features, and configured the properties of a service.

Exercise 4: Using Windows PowerShell to Manage Servers

▶ *Task 1: Use Windows PowerShell to connect remotely to servers and view information*

1. Sign in to LON-DC1 with the **Adatum\Administrator** account and the password **Pa$$word**.
2. In the Server Manager console, click **LAB-1**.
3. Right-click **LON-CORE**, and then click **Windows PowerShell**.
4. At the command prompt, type the following, and then press Enter:
```
Import-Module ServerManager
```
5. To review the roles and features installed on LON-CORE, at the command prompt, type the following, and then press Enter:
```
Get-WindowsFeature
```
6. To review the running services on LON-CORE, at the command prompt, type the following, and then press Enter:
```
Get-service | where-object {$_.status -eq "Running"}
```
7. To view a list of processes on LON-CORE, at the command prompt, type the following, and then press Enter:
```
Get-process
```
8. To review the IP addresses assigned to the server, at the command prompt, type the following, and then press Enter:
```
Get-NetIPAddress | Format-table
```
9. To review the most recent 10 items in the security log, at the command prompt, type the following, and then press Enter:
```
Get-EventLog Security -Newest 10
```
10. Close Windows PowerShell.

▶ *Task 2: Use Windows PowerShell to remotely install new features*

1. On LON-DC1, on the taskbar, click the **Windows PowerShell** icon.
2. To verify that the XPS Viewer feature has not been installed on LON-SVR1, type the following command, and then press Enter:
```
Get-WindowsFeature -ComputerName LON-SVR1
```
3. To deploy the XPS Viewer feature on LON-SVR3, type the following command, and then press Enter:
```
Install-WindowsFeature XPS-Viewer -ComputerName LON-SVR1
```
4. To verify that the XPS Viewer feature has now been deployed on LON-SVR1, type the following command, and then press Enter:
```
Get-WindowsFeature -ComputerName LON-SVR1
```
5. In the Server Manager console, from the **Tools** drop-down menu, click **Windows PowerShell ISE**.
6. In the Windows PowerShell ISE window, in the Untitled1.ps1 script pane, type the following, pressing Enter after each line:
```
Import-Module ServerManager
Install-WindowsFeature WINS -ComputerName LON-SVR1
Install-WindowsFeature WINS -ComputerName LON-CORE
```
7. Click the **Save** icon.
8. Select the root of **Local Disk (C:)**.
9. Create a new folder named **Scripts**, and then save the script in that folder as **InstallWins.ps1**.
10. To run the script, press the F5 key.

Results: After you complete this exercise, you should have used Windows PowerShell to perform a remote installation of features on multiple servers.