

Windows Server Fundamentals

Lab Book

Document Revision History

Date	Revision No.	Author	Summary of Changes
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Lab 1. Installing and Configuring Windows Server

Goals	At the end of this lab session, you will be able to: <ul style="list-style-type: none">➤ Performing a Local Media-Based Installation➤ Configuring Windows Server
Time	60 minutes

Lab Scenario

The first task in your new job as junior server administrator is to perform the initial installation and configuration of a new server for the Research and Development department of Contoso, Ltd. In this instance, the company decided a local media-based installation should be performed. Once the installation is complete, you will configure the server's post-installation settings as per the supplied documentation.

Supporting Documentation

E-mail message from your boss, Jim Hance.

Jeff Price

From: Jim Hance [Jim@contoso.com]

Sent: 1 May 2010 17:00

To: Jeff@contoso.com

Subject: New Server Installation

Jeff,

Please use the following information to install the new server for R&D.

Installation options

Language: English

Time and currency format: English (United States)

Keyboard or input method: US

Product: Windows Server 2008 R2 Enterprise (Full Installation)

Administrator password: Pa\$\$w0rd

Post-installation configuration options:

Time zone: (UTC-05:00) Eastern Time (US & Canada)

IP address: 10.10.0.100

Subnet mask: 255.255.0.0

Gateway: 10.10.0.1

DNS Servers: 10.10.0.10 and 10.10.0.11

Enable automatic Windows Update

Server name: NYC-SVR1

Domain name: Contoso.com (use the Contoso\Administrator account with a password of Pa\$\$w0rd when prompted for credentials)

Please let Lisa from the Sr. Server Admin team know when you're finished, she'll finish the configuration and get the server to R&D.

Thanks,

Jim

Exercise 1: Performing a Local Media-Based Installation Scenario

You have installed the new server.

The main tasks for this exercise are as follows:

1. Read the server installation instructions.
2. Install Windows Server 2008 R2 as specified in the e-mail

Task 1: Read the server installation instructions

- Read the contents of the e-mail message in the lab scenario.

Task 2: Install Windows Server 2008

1. Attach the Windows Server 2008 R2 Installation DVD to MyWinServer using these steps:

- a. Switch to Hyper-V Manager, right click on **MyWinServer** and then click **Settings**.

- b. In the **Settings for MyWinServer** dialog box, click **DVD-Drive** in the Hardware Pane.

- c. In the DVD-Drive pane, select **Image file** and then click **Browse**.

- d. Navigate to **Windows Server2008R2iso** and then click **Open**.

- e. In the **Settings for MyWinServer** dialog box, click **OK**.

2. Start and connect to the **MyWinServer** virtual machine.

3. Install the operating system using the Installation Options section provided in the e-mail from Jim Hance.

Note: Setup will proceed by copying and expanding files, installing features and updates, and complete installation. This phase takes around twenty minutes. Your instructor might continue with other activities during this phase.

Results: After this exercise, you should have installed a new Windows Server 2008 R2 server.

Exercise 2: Configuring Windows Server Scenario

You have been asked to perform post-installation configuration on the recently installed server for the R&D department according to the instructions provided by Jim Hance.

The main tasks for this exercise are as follows:

1. Read the server post-installation configuration instructions.
2. Configure post-installation settings as specified in the Post-installation configuration options section of the e-mail from Jim Hance.

Task 1: Read server post-installation configuration instructions

- Read the contents of the e-mail message in the lab scenario.

Task 2: Configure post-installation settings

1. If necessary, switch to the **MyWinServer** virtual machine.
2. Use the ICT to configure time zone settings as specified in the e-mail.
3. Use the ICT to configure networking settings as specified in the e-mail.
4. Use the ICT to configure automatic updating and feedback settings as specified in the e-mail.
5. Use the ICT to configure computer name and domain settings as specified in the e-mail.

Results: After this exercise, you should have configured post-installation settings using the Initial Configurations Tasks Wizard.

Lab 2. Implementing Active Directory Domain Services

Goals	At the end of this lab session, you will be able to: <ul style="list-style-type: none">➤ Promoting a New Domain Controller➤ Creating an Organizational Unit➤ Configuring Accounts➤ Creating a GPO
Time	90 minutes

Lab Scenario

Contoso, Ltd. has created a new department ahead of a merger with the A Datum Corporation. Ed Meadows has asked you to create a new OU in AD DS to support this new department and populate it with the users, groups, and computers to support the new staff

Exercise 1: Promoting a New Domain Controller Scenario

Ed thinks that having more users will place additional load on the existing domain controller in New York. He has asked you to promote an existing member server as a new domain controller.

The main task for this exercise is as follows:

1. Add an additional domain controller.

Task: Add an additional domain controller

1. Switch to the **MyWinServer** computer.
2. Run **dcpromo** and wait while the AD DS binaries are installed.
3. Complete the Active Directory Domain Services Installation Wizard using the following information:
 - a. Operating system compatibility: **accept defaults**
 - b. Choose a Deployment Configuration: **Existing forest: Add a domain controller to an existing domain**
 - c. Network credentials: **accept defaults**
 - d. Select a domain: **<YourDomain>.com** (default)
 - e. Additional domain controller options: **accept defaults**
 - f. Acknowledge the DNS warning message.
 - g. Location for database, log files, and SYSVOL: **accept defaults**
 - h. Directory Services Restore Mode Administrator Password: **Pa\$\$w0rd**
 - i. Select the **Reboot on completion** check box.

Results: After this exercise, you will have promoted a new domain controller.

Exercise 2: Creating an Organizational Unit

Scenario

You must now create the required organizational unit for team members.

The main task for this exercise is as follows:

1. Create an organizational unit.

Task: Create an organizational unit

1. Once NYC-SVR2 has restarted, log on using the following credentials:
 - User name: **Administrator**
 - Password: **Pa\$\$w0rd**
 - Domain: **Contoso**
2. In Active Directory Users and Computers, in the Navigation pane, click **Contoso.com**.
3. Create a new organizational unit in the Contoso.com domain called **A DatumMerger Team**.

Results: After this exercise, you will have created a new organizational list.

Exercise 3: Configuring Accounts

Scenario

Ed has asked that you create the necessary users accounts and groups, and move the users' computer accounts into the OU. You need two groups, one for all teammembers and one for the manager, Tony Allen. You will then grant Tony Allen the ability to reset user passwords on all user accounts in the A Datum CorporationMerger Team OU.

The main tasks for this exercise are as follows:

1. Add user accounts.
2. Create groups.
3. Add members to the groups.
4. Move a computer account.
5. Delegate control of the OU.

Task 1: Add user accounts

1. In Active Directory Users and Computers, create the following user accounts in the **A Datum Merger Team** OU using the following information to complete the process:
 - a. Configure users' first names and last names.
 - b. User logon name is first name.
 - c. Password is **Pa\$\$w0rd**.
 - d. Clear the **User must change password at next logon** option.
2. Users to create are:

- a. Christian Kemp
- b. Tony Allen
- c. Pia Lund
- d. Soha Kamal
- e. Oliver Cox

Task 2: Create groups

- In the **A Datum Merger Team OU**, create the following Global Security groups:
- **Mergers and Acquisitions**
- **Merger Team Management**

Task 3: Add members to the groups

1. Add all new users in the **A Datum Merger Team OU** to the **Mergers and Acquisitions** group.
2. Add only **Tony Allen** to the **Merger Team Management Group**.

Task 4: Move a computer account

- In Active Directory Users and Computers, in the **Computers** folder, move the **MYWINCLIENT** computer to the **A Datum Merger Team OU**.

Task 5: Delegate control of the OU

- Using the Delegation of Control Wizard, grant the **Merger Team Management** global security group the right to **Reset user passwords and force passwordchange at next logon** on the **A Datum Merger Team OU**.

Results: After this exercise, you will have created the necessary users accounts and groups, and moved the users' computer accounts into the OU.

Exercise 4: Creating a GPO

Scenario

You must now create a GPO and link it to the **A Datum Merger Team OU**. The GPO will launch a logon script for users in the new OU. The main tasks for this exercise are as follows:

1. Create a GPO.
2. Link the GPO.
3. Test the GPO.

Task 1: Create a GPO

1. Open Group Policy Management.
2. Create a new **GPO** called **A Datum Merger Team GPO**.
3. Open the **GPO** for editing. Use the following steps to complete the process of creating a logon script for the team:

- a. In the Group Policy Management Editor, expand **User Configuration**, expand **Policies**, expand **Windows Settings**, and then click **Scripts(Logon/Logoff)**.
- b. In the Results pane, double-click **Logon**.
- c. In the **Logon Properties** dialog box, click **Add**.
- d. In the **Add a Script** dialog box, click **Browse**.
- e. In the **Browse** dialog box, right-click in the **No items match your searchbox**, click **New**, and then click **Text Document**.
- f. Highlight the entire filename, including the file extension, and type **logon.vbs** and press ENTER.
- g. In the **Rename** dialog box, click **Yes**.
- h. Right-click **logon.vbs** and then click **Edit**.
- i. In the **Open File – Security Warning** dialog box, click **Open**.
- j. In notepad, type **msgbox “Welcome to the A Datum Merger Team”**.
- k. Click **File** and then click **Save**.
1. Close Notepad.
- m. In the **Browse** dialog box, click **Open**.
- n. In the **Add a Script** box, click **OK**.
- o. In the **Logon Properties** dialog box, click **OK**.
4. Close Group Policy Management Editor.

Task 2: Link the GPO

- Link the **A Datum Merger Team** GPO to the **A Datum Merger Team** organizational unit.

Task 3: Test the GPO

1. Switch to **MYWINCLIENT** and log off.
2. Log on using the following credentials:
 - User name: **Tony**
 - Password: **Pa\$\$w0rd**
 - Domain: **Contoso**
3. Does the script run?

Results: After this exercise, you will have created a GPO and linked it to the A Datum Merger Team OU.

Lab 3. Managing Users

Goals	Understanding how to manage users in Active Directory
Time	30 Minutes

- 2.1: Create User Accounts
- 2.2: Administer User Accounts
- 2.3: Examine User Object Attributes
- 2.4: Manage User Object Attributes
- 2.5: Create Users from a Template
- 2.6: Create and Associate a Managed Service Account

2.1: Create User Accounts

Create User

1. To open Active Directory Users and Computers, click **Start** , click **Control Panel** , double-click **Administrative Tools** , and then double-click **Active Directory Users and Computers** .
2. In the console tree, right-click the folder in which you want to add a user account.
Where?
 - Active Directory Users and Computers\ *domain node* \ *folder*
3. Point to **New** , and then click **User** .
4. In **First name** , type the user's first name.
5. In **Initials** , type the user's initials.
6. In **Last name** , type the user's last name.
7. Modify **Full name** to add initials or reverse the order of first and last names.
8. In **User logon name** , type the user logon name, click the user principal name (UPN) suffix in the drop-down list, and then click **Next** .
9. In **Password** and **Confirm password** , type the user's password, and then select the appropriate password options.

2.2: Administer User Accounts

Reset a User Password:

1. To open Active Directory Users and Computers, click **Start** , click **Control Panel** , double-click **Administrative Tools** , and then double-click **Active Directory Users and Computers** .
2. In the console tree, click **Users** .
Where?
 - Active Directory Users and Computers\ *domain node* \Users

Or, click the folder that contains the user account.
3. In the details pane, right-click the user whose password you want to reset, and then click **Reset Password** .
4. Type and then confirm the password.
5. If you want to require the user to change this password at the next logon process, select the **User must change password at next logon** check box.

2.3: Examine User Object Attributes

1. View the properties of an Active Directory user object. Modify some properties.
2. View all attributes of an Active Directory user object. Modify some attributes.

2.4: Manage User Object Attributes

1. Modify the attributes of multiple user objects by selecting multiple objects and modifying the attributes.

2.5: Create Users from a Template

1. Log on to Server as Administrator.
2. Open the Active Directory Users And Computers and expand the domain.
3. Right-click the Sales OU, choose New, and then select User.
4. In the First Name box, type _Sales, including the underscore character.
5. In the Last Name box, type Template.
6. In the User Logon Name box, type _salestemplate, including the underscore character and click next.
7. Type a complex password in the Password and Confirm Password boxes.
8. Select the Account Is Disabled check box. Click Next.
9. Click Finish
10. Double-click the template account to open its Properties dialog box.
11. Click the Organization tab.
12. In the Department box, type Sales.
13. In the Company box, type igate
14. Click the Member Of tab.
15. Click the Add button.
16. Type Sales, and then click OK.

17. Click the Profile tab.
18. In the Profile Path box, type \\server1\profiles\%username%.
19. Click OK.
20. Right-click _Sales Template and choose Copy. The Copy Object – User dialog box appears.
21. In the First Name box, type sam
22. In the User Logon Name box, type sam Click Next.
23. Type a complex password in the Password and Confirm Password boxes.
24. Clear the Account Is Disabled check box.
25. Click Next, and then click Finish.
26. Open the properties of the sam account and confirm that the attributes you configured in the template were copied to the new account.

2.9: Create and Associate a Managed Service Account

1. Use PowerShell to create and associate a managed service account

```
New-ADServiceAccount -Name App1_SVR1
```

```
Add-ADComputerServiceAccount -identity NYC-SVR1 -ServiceAccount  
App1_SVR1
```

2. Install a managed service account on a server

```
Install-ADServiceAccount -Identity App1_SVR1
```

3. Go to the properties of the service to configure the service to run under this managed service account as <DomainName>\App1_SVR1\$.

Lab 4. Managing Groups

Goals	Understanding how to work with Groups in Active Directory
Time	30 Minutes

3.1: Implement Role-Based Management by Using Groups

3.2: Implement Best Practices for Group Management

3.1: Implement Role-Based Management by Using Groups

1. Create a role group named Consultants with Active Directory Users and Computers.

2. Create a role group named Auditors with DSAdd.

`dsadd group <GroupDN>`

3. Add users to the role group.

4. Implement a role hierarchy in which Sales Managers are also part of the Sales role.

5. Create a resource access management group.

6. Assign permissions to the resource access management group.

7. Define which roles and users have access to a resource.

3.2: Implement Best Practices for Group Management

1. Document a group well.

2. Enable accidental deletion protection.

3. Delegate group membership management to another user.

Lab 5. Implementing a Group Policy Infrastructure

Goals	Understanding how to work with Group Policy Infrastructure
Time	

5.1: Exploring Group Policy Settings

5.2: Create, Edit, and Link Group Policy Objects

5.1: Exploring Group Policy Settings

1. Open the GPMC, right-click a GPO, and then click Edit.
2. Spend time exploring the settings that are available in a GPO. Do not make any changes.
3. See the difference between Computer Configuration and User Configuration.

5.2: Create, Edit, and Link Group Policy Objects

1. Create a GPO.

- a) In the GPMC console tree, right-click **Group Policy Objects** in the forest and domain in which you want to create a GPO.
- b) Click **New**.
- c) In the **New GPO** dialog box, specify a name for the new GPO, and then click **OK**.

2. Edit the settings of a GPO.

- a) In the GPMC console tree, double-click **Group Policy Objects** in the forest and domain containing the GPO that you want to edit.
- b) Right-click the GPO, and then click **Edit**.
- c) In the console tree, edit the settings as appropriate.

3. Scope a GPO with a GPO link.

- a) In the Group Policy Management Console (GPMC) console tree, locate the site, domain, or organizational unit (OU) to which you want to link a Group Policy object (GPO)
- b) Do one of the following:

- To link an existing GPO, right-click the domain or OU within the domain, and then click **Link an Existing GPO** . In the **Select GPO** dialog box, click the GPO that you want to link, and then click **OK** .
 - To link a new GPO, right-click the domain or OU within a domain, and then click **Create a GPO in this domain, and link it here** . In the **Name** box, type a name for the new GPO, and then click **OK** .
4. View the effects of Group Policy application.
 5. Explore GPO settings.

Lab 6. Monitoring Server Performance

Goals	At the end of this lab session, you will be able to: <ul style="list-style-type: none">➤ Monitor Server Performance
Time	60 minutes

Perform the Following tasks in your server:

- Task 1: Monitor the performance CPU by using Performance Monitor
Task 2: Monitor the System and Application events using Event Viewer
Task 3: Monitor Network