

Windows Server Part 4

Activities

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How to Create Screenshots: Please use the Windows Snip and Sketch Tool or the Snipping Tool. Paste a screenshot of just the program you are working on. If you are snipping a virtual machine, make sure your focus is outside the virtual machine before you snip.

1. Press and hold down the **Windows key** & **Shift**, then type **S**. This brings up the on-screen snipping tool.
2. Click and Drag your mouse around whatever you want to snip.
3. Release the mouse button. This places the snip into the Windows Clipboard.
4. Go into Word or wherever you want to paste the snip. Hold down **CTRL**, then type **V** to paste the snip.

Figure It Out

There will be times in any assignment where you may miss a step or the instructions are not quite correct or as clear as they could be. Research and figure out what is needed to complete the assignment. Explain what you did and why. I am looking for evidence of understanding. Directions in IT are not always complete or accurate. They need interpretation and research. Take the concepts of that we are learning and figure out an answer.

1. Google it
2. Watch the videos
3. Read the book
4. Ask for help

Activity 4-1: Setup and Configure Folder Permissions

Time Required: Approximately 15 minutes

Objective: Setup folders and configure permissions on a folder so that users can modify its contents.

Description: You will setup data storage folders on the server that will become file shares for the users, and eventually network drives for ease of access. You will configure NTFS and share permissions.

1. Logon to Server1 with your administrator account.
2. Open File Explorer (click its icon in the taskbar), if it is not already open.
3. Create a Data folder. The local path will be c:\Data.
4. Right-click the new **Data** folder → **Properties**, → **Security** tab.
5. **What users and groups already have permissions to access the folder?**

Click or tap here to enter text.

6. Insert a screenshot:

Click or tap here to enter text.

7. Click each group and user to determine what permissions they have.
8. Click the **Edit** button. Click each group and user again, and notice that some boxes are checked and deactivated because they represent inherited permissions.
9. Close the window.

10. Create 5 new folders under c:\Data for each of your business units/OU's.

Accounting, Administration, Operations, Research, and Sales.

11. Right Click **Data**, Click **Properties**. Look at the default inherited permissions. This is fine for the root folder, we will change that for each of the other folders. Click Cancel.

Follow these steps for each folder, with the appropriate security groups.

1. Right Click **Sales**, Click **Properties**, Click the **Security** Tab. Click **Advanced**.
2. Click **Disable inheritance**.
3. Click Convert inherited permissions into explicit permissions on this object. Click OK.
4. In the **Security** Tab, Click **Edit**. Remove **Creator Owner** and **Users**. Leave **System** and **Administrators** alone.
5. Click **Add**. Type **DL_Sales**. Click OK. Note that the default permission are Read & execute, List folder contents, and Read.
6. Set **Modify** permissions for **DL_Sales**. Click OK to finish setting the local NTFS permissions.
7. Click the **Sharing** tab. Click **Advanced Sharing**.
8. **How can you change the name of the share?**

[Click or tap here to enter text.](#)

9. **How can you set the limit of users who can access the share at the same time?**

[Click or tap here to enter text.](#)

10. **How can you configure offline use?**

[Click or tap here to enter text.](#)

11. Select **Share this folder** → **Permissions** → **Full Control** for the **Everyone** group.
12. Click OK. Click OK. Close the Sales Properties window.

Repeat the setup instructions for each of your business units. Only answer the questions for the first folder.

13. In the File Explorer address bar → Type [\\server1](#)

14. You should see all 5 of your new shares.

15. **Insert a screenshot:**

[Click or tap here to enter text.](#)

16. Right Click the Start button and Click Computer Management. Go to **Shared Folders**, then **Shares**.

17. **Insert a screenshot:**

Click or tap here to enter text.

18. Close Computer Management.

Client computers can now access the shared folder through the network, such as through the Network window in File Explorer.

Activity 4-2: Working with Group Policies

Time Required: 10 minutes

Objective: Create a GPO (Group Policy Object) and see how policies you configure affect user objects in the OU to which the GPO is linked.

Required Tools and Equipment: Server1

Description: You want to see how some group policy settings affect users in your domain. You know that you want to restrict some users' access to Control Panel, so you decide to start with this policy. Because you want the policy to affect certain users, you configure it in the User Configuration node.

1. If necessary, log on to Server1 as your administrator account.
2. In Server Manager, go to **Tools → Group Policy Management**.
3. Click to expand the Forest and Domains nodes and then the domain node, if necessary.
4. Right-click the Sales OU (created earlier).
5. Click Create a GPO in this domain and Link it here.
6. In the New GPO dialog box, type **Remove Control Panel and Settings** in the Name text box, and then click OK.
7. In the left pane, click to expand the Sales OU, and then right-click **Remove Control Panel and Settings** and click Edit to open the Group Policy Management Editor.
8. Go to **User Configuration → Policies → Administrative Templates → Control Panel**.
9. In the right pane, double-click the **Prohibit access to Control Panel and PC settings** policy to open the dialog box.

10. Read the description of the policy in the Help box, and then click the Enabled option button. Note that there are three possible settings: Enabled, Disabled, and Not Configured. If the policy is enabled, users affected by the policy are prohibited from accessing the Control Panel and PC settings. If the policy is disabled, users have access. If the policy is not configured, it has no effect on users' access to the Control Panel and PC settings. Click OK. Notice that the State column in the Group Policy Management Editor for the policy you changed then shows "Enabled."

11. **Insert a screenshot:**

[Click or tap here to enter text.](#)

12. Close the Group Policy Management Editor and Group Policy Management console.

13. Log on to Win11 as **Sales1**.

14. After you're logged on, Click **Start**, type in **Control Panel**, and try to access the Control Panel. In the Restrictions message box stating that the operation has been cancelled because of restrictions on the computer.

15. **Insert a screenshot:**

[Click or tap here to enter text.](#)

16. Click OK.

17. Right-click the desktop and click **Display Settings**. In the same Restrictions message box, click OK. Your policy has clearly taken effect. (If you see an Explorer.EXE message box stating "Unspecified error," click OK.)

18. **Insert a screenshot:**

[Click or tap here to enter text.](#)

19. Go back to Server1 and Group Policy Management.

20. Right Click on **Remove Control Panel and Settings** policy → **Delete**.

21. Log off Server1 and Win11. Shut down the server and the workstation unless you're continuing to the next activities.

In this activity, you might have noticed a delay between setting a policy and the policy taking effect. You can run the command-line program gpupdate.exe, which applies group policies immediately to the computer on which gpupdate.exe is running and to the currently logged-on user. This program is an invaluable tool for testing GPOs because it saves considerable time. As mentioned, computer policies are applied when a computer restarts,

which can take some time, and user policies are applied when a user logs on. GPOs are also updated on domain controllers every 5 minutes and on workstations and servers every 90 minutes, even if the computers don't restart.

Activity 4-3: Mapped Drives by Group Policy Preferences

Time Required: 10 minutes

Mapping drives by Group Policy Preferences allow you to set mapped drives for several users or groups all at once. The reason for preferences, is that some settings can't be changed with Group Policies. Both types of policies are useful, you just need to be aware of the difference.

1. Server1 → In File Manager, go to C:\Data\Accounting. Create a new folder called Payroll. C:\Data\Accounting\Payroll should be the result.
2. Create a GPO named **Accounting Mapped Drives** and link it to the **Accounting OU**.
3. Go to **User Configuration → Preferences → Windows Settings → Drive Maps**
4. Right Click **Drive Maps → New → Mapped Drive**.
 - a. Location: **\\Server1\Accounting**
 - b. Check **Reconnect**.
 - c. Drive Letter **Existing → Z**
 - d. Use the option on the common tab: **Remove this item when it is no longer applied**
 - e. This will change the **Action** to **Replace**.
 - f. Click OK.
5. Right Click **Drive Maps → New → Mapped Drive**.
 - a. Location: **\\Server1\Accounting\Payroll**
 - b. Check **Reconnect**.
 - c. Drive Letter **Existing → Y**
 - d. Use the option on the common tab: **Remove this item when it is no longer applied**
 - e. This will change the **Action** to **Replace**.
 - f. Click OK.
6. **Insert a screenshot of the Group Policy Settings showing the mapped drives.**

[Click or tap here to enter text.](#)

7. Logon to **Win11** with Accounting1. Do a **gpupdate /force**
8. Sign out and sign back into Win11. Your drives should be visible.
9. **Insert a screenshot of the drives that you mapped:**

[Click or tap here to enter text.](#)

10. Save a file to both drives named **Mapped Drives by GPO Preferences**.
11. Unlink Mapped Drive preferences.
12. **Logoff** and **logon** again as **Accounting1**, the drives should be gone.
If they are not, do a **gpupdate /force**.

Activity 4-4: Setting the Default Domain Policy

Time Required: 5 minutes

Objective: Set password and other account policies in the Default Domain Policy.

Required Tools and Equipment: Server1

Description: The management has decided to enforce password and other account policies according to the policies recommended by a security audit.

NOTE: The only settings ever changed in the Default Domain Policy are the account policies. Never add other policies to this GPO.

1. Log on to Server1 as your administrator level account, if necessary.
2. Open the **Group Policy Management** console, if necessary. Right Click and **Edit** the **Default Domain Policy**.
3. Go to **Computer Configuration** → **Windows Settings** → **Security Settings** → **Account Policies**
4. These settings are in **Password Policy**. Change to these settings.
 - a. Maximum password age: 365
 - b. Minimum password length: 14
5. These settings are in **Account Lockout Policy**. Change to these settings.
 - a. Account lockout threshold: 10
 - b. Account lockout duration: 30 minutes
 - c. Reset lockout counter after: 30 minutes
6. **Insert a screenshot of each of these settings.**

[Click or tap here to enter text.](#)

Close the Group Policy Management Editor.

Activity 4-5: Installing the Windows Server Backup Tool

Time Required: Approximately 10 minutes

Objective: Install the Windows Server Backup tool.

Description: Performing regular backups is a critical task for ensuring your organization's working environment. Even if you lose a disk drive or inadvertently delete an important folder, you still have your important information if you have it backed up. You probably won't need to restore from backups often, but when you need to, there is no better feeling than having sound backups. In this activity, you install the Windows Server Backup tool that some server administrators prefer using for backups, because it is native to Windows Server.

1. Start **Server1**. Log on as your administrator account.
2. Open **Server Manager**, if it isn't already open.
3. Click **Add Roles and Features**.
4. If you see the Before you begin window, click Next.
5. In the Select installation type window, ensure that Role-based or feature-based installation is selected and click Next.
6. Make sure your server is selected in the Select destination server window and click Next.
7. Click Next in the Select server roles window.
8. Click the box for **Windows Server Backup** in the Select features window. Click Next.
9. In the Confirm installation selections window, click Install.
10. In the Installation progress window, make sure the installation succeeded and then click Close.
11. Leave Server Manager open for the next activity.

Activity 4-6: Backing Up a Server

Time Required: Approximately 10 minutes

Objective: Perform a Custom backup.

Description: In this activity, you practice starting a custom backup. You will create a second target disk on which to store the backup.

1. In VirtualBox, we are going to create a new virtual hard drive to back up our server.
2. Shut down Server1 if it is running.
3. Right Click **Server1** → **Settings** → **Storage**.



4. Click the **Add Attachment** button as shown above.
5. Click **Hard Disk**.
6. Server 1 – Hard Disk Selector: Click **Create**.
 - a. Hard disk file type: **VDI** Click **Next**.
 - b. Storage on physical hard disk: **Dynamically allocated**. Click **Next**.
 - c. File location and size: Click **Create**.
7. Click **Choose**.
8. Click **OK**.
9. Start **Server1**. Log on as your administrator account.
10. Open Server Manager, if necessary.
11. Click **Tools** → **Computer Management** → **Disk Management**.
12. You should get a message: **Initialize Disk**. Click **OK**.
13. Right Click the **50.00 GB Unallocated** volume.
14. **Welcome to the New Simple Volume Wizard**: Click **Next**.
15. **Specify Volume Size**: Click **Next**.
16. **Assign Drive Letter or Path**: Click **Next**.
17. **Format Partition** → **Volume label** → **Backup**. Click **Next**. Click **Finish**.

18. Close Computer Management.
19. In Server Manager: **Tools** → Click **Windows Server Backup**.
20. On the left side → Click **Local Backup**. In the upper right side: Click **Backup Once...**
21. In the Backup Options window: **Different options** should be selected by default. Click **Next**.
22. **Select Backup Configuration**: Choose **Custom**. Click **Next**.
23. **Select Items for Backup**: Click **Add Items**.
24. In the Select Items window, you'll see items such as the following from which to select:
 - a. **Bare metal recovery**—This creates a binary image of the operating system and all files that can be used for a full restore, sort of like taking a full snapshot of the system as it exists in the moment of the backup. Keep in mind that to assure a successful restore from a binary image backup, you will need a machine that is as identical as possible to the original, including the same computer configuration, manufacturer, and BIOS. A binary backup does not give you the option to restore specific folders or files. It's all or none, either you restore everything or you don't do the restore at all.
 - b. **System state**—This saves system state data including the operating system and boot files, plus extra components and information that reflect the currently configured state of the server depending on what roles and features are installed.
 - c. **Hyper-V**—This backs up virtual server information associated with Hyper-V virtual machines. You will not see this on a virtual server, but on a physical server hosting virtual machines.
 - d. **System Reserved**—This backs up information on the Boot and Recovery volumes as well as system volume information (if you have a recovery volume configured).
 - e. Individual disks attached to the server—This backs up specific disks, such as Local disk (C:), with the option to select particular folders and subfolders.
25. Deselect all the options. We don't really need to backup our server. Just a folder to show that it works.

26. In the Select Items window, click the plus sign in front of Local disk (C:), making sure you do not place a checkmark in its box at this time. Drill down until you see the Administrator folder.

27. Select the **Administrator** folder.

28. **Insert a screenshot:**

[Click or tap here to enter text.](#)

29. Click **OK** to return to **Select Items for Backup**.

30. In the Select Items for Backup window, click Advanced Settings. Click the VSS Settings tab.

- a. VSS is Volume Shadow Copy Service. This service takes a snapshot to ensure that files in use can be backed up.

31. Click **Cancel**. Click **Next** in the **Select Items for Backup**.

32. In the **Specify Destination Type** window, leave the default backup destination, which should be Local drives. Click **Next**.

33. **Select Backup Destination**. The volume you created earlier should show be selected as the Backup destination. Click **Next**.

34. In the Confirmation window, notice your selections for Local disk (C:) and System state are listed.

35. **Insert a screenshot:**

[Click or tap here to enter text.](#)

36. Click **Cancel**. You will discontinue your backup practice at this point.

37. Leave the Windows Server Backup tool open for the next activity.

Activity 4-7: Performing a Scheduled Full Server Backup

Time Required: 10 minutes

Objective: Perform a scheduled full server backup.

Required Tools and Equipment: Server1

Description: In this activity, you perform a scheduled full server backup of Server1 to a dedicated backup disk. This activity requires the second disk in Server1 to be unallocated.

1. Start Server1. Log on as your administrator account, if necessary.

2. In the C:\Data folder, create a text file named **restoreme.txt**. We are going to backup, delete, then restore the file.
3. In Server Manager, click Tools, Windows Server Backup, if necessary.
4. In the Actions pane, click Backup Schedule. In the Getting Started window, click Next.
5. In the Select Backup Configuration window, you might normally accept the default option Full server (recommended). As we are using a virtual drive for our backup, we will use Custom, and exclude the Backup volume we created earlier. Click Next.
6. Click Add Items. Add everything except the Backup volume. If you Click Bare metal recovery, the appropriate items should be selected. Click OK.

7. **Insert a screenshot:**

Click or tap here to enter text.

8. Click Next.
9. In the Specify Backup Time window, review the options for scheduling the backup. You can perform the backup once per day or more than once per day, but you don't have any options for specific days of the week. Accept the default option Once a day and 9 PM. Click Next.
10. In the Specify Destination Type window, accept the default option Back up to a hard disk that is dedicated for backups (recommended), and click then Next.
11. In the Select Destination Disk window, only external disks are shown by default. Click Show All Available Disks. In the Show All Available Disks dialog box, click the Virtual HD ATA Device check box, and then click OK.
12. In the Select Destination Disk window, click the check box next to Virtual HD ATA Device. A dialog box will warn you that this drive will be reformatted. Click Yes.

13. **Insert a screenshot:**

Click or tap here to enter text.

14. In the Confirmation window, review the options you have selected.

15. **Insert a screenshot:**

Click or tap here to enter text.

16. Click Finish.
17. You see a message stating that the disk is being formatted and then a message stating when the backup will occur. Click Close.

18. Continue to the next activity, where you stop the scheduled backup.

Activity 4-8: Performing a One-Time Backup of Selected Files

Time Required: 10 minutes

Objective: Perform a one-time backup of selected files.

Required Tools and Equipment: Server1

Description: In this activity, you will perform a one-time backup of Server1.

1. On Server1. Log on as your administrator account, if necessary. In Server Manager, click Tools, Windows Server Backup, if necessary.
2. In the Actions pane, click Backup Once. In the Backup Options window, you see that you can base the one-time backup on the existing scheduled backup, if one exists. Accept the default option Different options, and then click Next.

3. **Insert a screenshot:**

Click or tap here to enter text.

4. In the Confirmation window, click Backup to start the backup. You see its status in the Windows Server Backup Progress window. When the backup is finished, continue to the next activity.

Activity 4-9: Recovering a File

Time Required: 10 minutes

Objective: Recover a file from backup.

Required Tools and Equipment: Server1

Description: In this activity, you delete one of the files you backed up earlier and then recover it.

1. On Server1, log on as your administrator account, if necessary. Open File Explorer. Delete the **restoreme.txt** you created earlier in C:\Data that you created earlier. Leave File Explorer open.
2. In Server Manager, click Tools, Windows Server Backup, if necessary. Click Recover in the Actions pane. In the Getting Started window, click Next.

3. In the Select Backup Date window, accept the default backup because you have only one backup, and then click Next.
4. In the Select Recovery Type window, accept the default option Files and folders. Review the other recovery types, most of which are grayed out because you don't have a suitable backup to perform them. Click Next.
5. In the Select Items to Recover window, click to expand Server1 and Local disk (C:). Click the Data folder you have. In the right pane, select the file you deleted earlier.

5. Insert a screenshot:

Click or tap here to enter text.

6. Click Next.
7. In the Specify Recovery Options window, you can recover the file to the original location or a new location. You also have the option to create a copy of the file if the original file exists, and you can choose to restore permissions to the file being recovered. Accept the default options, and then click Next.
8. In the Confirmation window, click Recover. In the Recovery Progress window, you see the progress of the recovery.

9. Insert a screenshot:

Click or tap here to enter text.

10. After the recovery is finished, click Close.
11. In File Explorer, verify that the file has been recovered,
12. **Insert a screenshot:**

Click or tap here to enter text.

13. Open Windows Server Backup. Click Backup Schedule. Click Stop Backup.

Activity 4.10: Unjoin Win11 from the Domain

We are done with Server1. Before we remove this Virtual Machine, we will want to remove Win11 from the domain. We want Win11 to be a standalone VM for other exercises.

1. Start Server1 and Win11.
2. Logon to Win11 as an administrator.
3. Right Click the Start button → System.
4. Scroll down to → Domain or workgroup.

5. Click Change.
6. Click the Workgroup radio button.
7. For the Workgroup name: Business
8. Click Ok.
9. You will receive a message that you will need a local account to logon with. Click OK.
10. Enter your Server1 Administrator account and password.
11. Click OK.
12. You should receive a Welcome to the Business Workgroup message.
13. Click OK until asked to Restart. Click Restart.
14. You should be able to logon to your VM with user and Password01. Win11 is no longer connected to the server.

Activity 4-11: Remove Server1 from VirtualBox

1. Shutdown your Server1 Virtual Machine.
2. In VirtualBox Manager → Right Click on Server1 → Click Remove.
3. Click Delete all files.
4. Server1 is gone.

Assignment Submission

Attach this completed document to the assignment in Blackboard.