

LAB 4

CONFIGURING FILE AND SHARE ACCESS

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This lab contains the following exercises and activities:

- Exercise 4.1** Sharing a Folder
- Exercise 4.2** Testing Share Access
- Exercise 4.3** Working with NTFS Permissions
- Exercise 4.4** Creating Shares with Server Manager
- Exercise 4.5** Creating Work Folders
- Lab Challenge** Creating Shares with Windows PowerShell

BEFORE YOU BEGIN

The lab environment consists of computers connected to a local area network, along with a server that functions as the domain controller for a domain called *adatum.com*. The computers required for this lab are listed in Table 4-1.

Table 4-1
Computers Required for Lab 4

<i>Computer</i>	<i>Operating System</i>	<i>Computer Name</i>
Domain controller	Windows Server 2016	SERVERA
Member server	Windows Server 2016	SERVERB
Member server with three additional SCSI hard drives	Windows Server 2016	SERVERC

In addition to the computers, you also require the software listed in Table 4-2 to complete Lab 4.

Table 4-2
Software Required for Lab 4

Software	Location
Lab 4 student worksheet	Lab04_worksheet.docx (provided by instructor)

Working with Lab Worksheets

Each lab in this manual requires that you answer questions, create screen shots, and perform other activities that you will document in a worksheet named for the lab, such as Lab04_worksheet.docx. It is recommended that you use a USB flash drive to store your worksheets, so you can submit them to your instructor for review. As you perform the exercises in each lab, open the appropriate worksheet file, fill in the required information, and save the file to your flash drive.

After completing this lab, you will be able to:

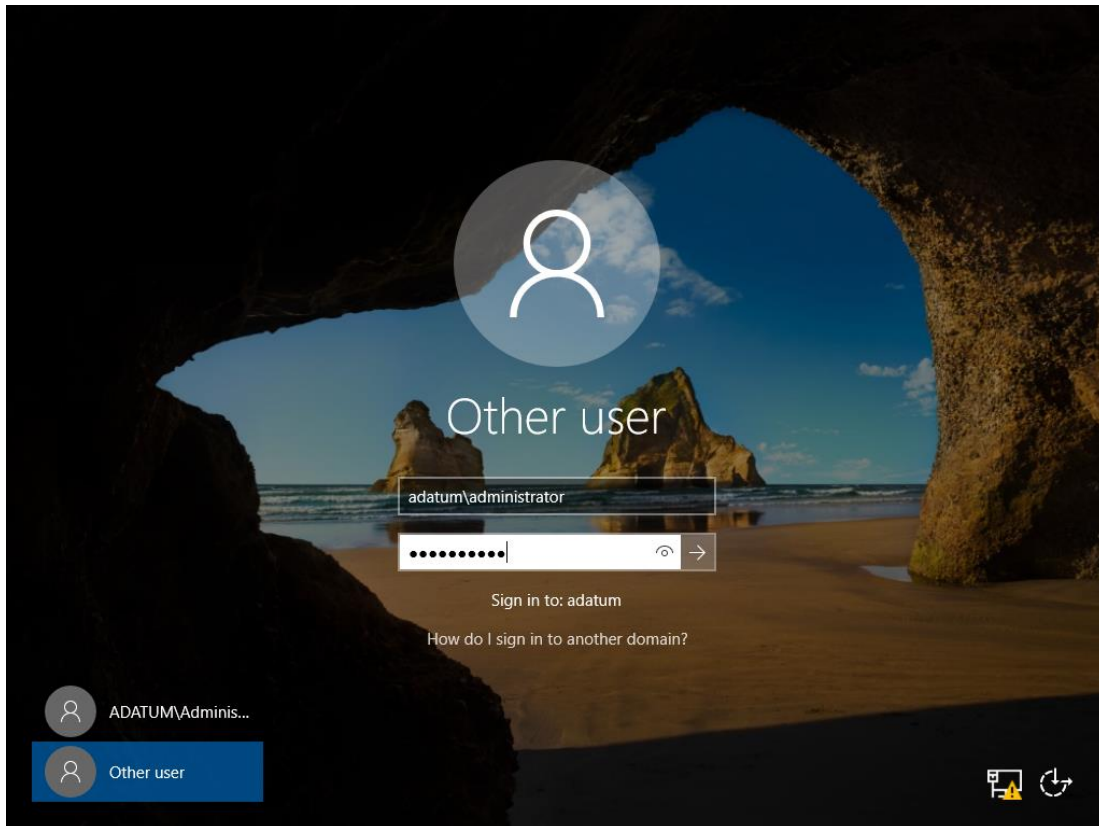
- Share folders using File Explorer
- Share folders using Server Manager
- Configure share and NTFS permissions
- Create work folders
- Create shares with Windows PowerShell

Estimated lab time: 60 minutes

Exercise 4.1 Sharing a Folder	
Overview	In this exercise, you create a folder share using the File Explorer interface.
Mindset	How familiar are you with the traditional tools for creating and managing shares?
Completion time	15 minutes

Log in as domain administrator, not local administrator.

This means your **SERVERA** needs to be running. Click “Other user” and type “adatum\administrator”.



1. On the **SERVERC** computer, click the File Explorer icon on the taskbar. A File Explorer window appears.
2. In File Explorer, select the E: drive and create a new folder called **Accounting**.
3. In the navigation pane, select the Accounting folder you just created. Then, right-click anywhere in the contents pane and, from the context menu, select **New > Rich Text Document**. Give the file the name **Budget** and double-click it to open the file in WordPad.
4. Type your name in the file and close the WordPad window, saving the changes to the file when prompted to do so.
5. Right-click the **Accounting** folder you created and, from the context menu, select **Properties**. The Accounting Properties sheet appears.
6. Click the **Sharing** tab, and then click **Advanced Sharing**. The Advanced Sharing dialog box appears.

7. Select the **Share This Folder** check box.
8. In the Share Name text box, change the default value (Accounting) to **Spreadsheets**.
9. Click **Permissions**. The Permissions for Spreadsheets dialog box appears.
10. For the Everyone special identity, clear all check boxes in the Allow column.
11. Click **Add**. The Select Users, Computers, Service Accounts, or Groups dialog box appears.
12. In the Enter the object names to select box, type **Domain Admins** and click OK (log in with Administrator/Pa\$\$w0rd if necessary). The Domain Admins group appears in the Group or user names list in the Permissions for Spreadsheets dialog box.

Question
1

What share permissions does a newly added group receive by default?

13. With the Domain Admins group highlighted, select the **Full Control** check box in the Allow column, which selects the Change check box as well. Click Apply.
14. Using the same procedure, add the **Domain Users** group to the object names to select list, and assign it the Allow Read permission only.
15. **[SCREEN SHOT 1]** Take a screen shot of the “Permissions For Spreadsheets” dialog box by pressing Alt+Prt Scr, and then paste the resulting image into the Lab 4 worksheet file in the page provided by pressing Ctrl+V.
16. Click OK to close the Permissions for Spreadsheets dialog box.
17. Click OK to close the Advanced Sharing dialog box.
18. Click Close to close the Accounting Properties sheet.

End of exercise. Close any open windows before you begin the next exercise.

Exercise 4.2 Testing Share Access

Overview	In this exercise, you demonstrate the use of share permissions to limit access to file system shares.
Mindset	What are the capabilities of share permissions, and what do you, as an administrator, want to make use of them?
Completion time	15 minutes

Preparation: Log into SERVERA as domain administrator, create **Student** account, set the password **Pa\$\$w0rd**. Student should be a domain user.

1. On **SERVERB**, log on using the domain account **Student** with the password **Pa\$\$w0rd**.
2. On **SERVERB**, click the **Windows PowerShell** button in the taskbar (or find it in **Start** menu). The Windows PowerShell window appears.
3. At the Windows PowerShell prompt, type **explorer \\ServerC\Spreadsheets** and press Enter. A File Explorer window appears, displaying the contents of the share you created in the previous exercise.
4. Double-click the Budget file to open it in WordPad.
5. Add today's date in the Budget file and click File > Save. A message box appears, stating that access to the file is **denied**.

[SCREEN SHOT 2] Take a screen shot by pressing Alt+Prt Scr, and then paste the resulting image into the Lab 4 worksheet file in the page provided by pressing Ctrl+V.

6. Click OK and close WordPad without saving.

Question 2	Why are you unable to modify the Budget file?
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7. Log off the **SERVERB** server and log on again, but this time use the domain **Administrator** account and the password **Pa\$\$w0rd**.
8. Using File Explorer, try again to open the Budget file by typing **\\SERVERC\Spreadsheets** in the path field. Modify its contents, and then save it.

[SCREEN SHOT 3] Take a screen shot by pressing Alt+Prt Scr, and then paste the resulting image into the Lab 4 worksheet file in the page provided by pressing Ctrl+V.

Question 3	Why are you now able to modify the Budget file?
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End of exercise. Close any open windows before you begin the next exercise.

Exercise 4.3 Working with NTFS Permissions

Overview	In this exercise, you demonstrate the use of NTFS permissions in combination with share permissions.
Mindset	The use of share permissions and NTFS permissions together can be confusing, especially when there are multiple administrators working on the same servers. Permissions should, therefore, be dictated by a company policy adhered to by everyone.
Completion time	15 minutes

1. On **SERVERC**, in File Explorer, right-click the **Accounting** folder you created in Exercise 4.1 and, from the context menu, select **Properties**. The Accounting Properties sheet appears.
2. Click the **Security** tab (see Figure 4-1).

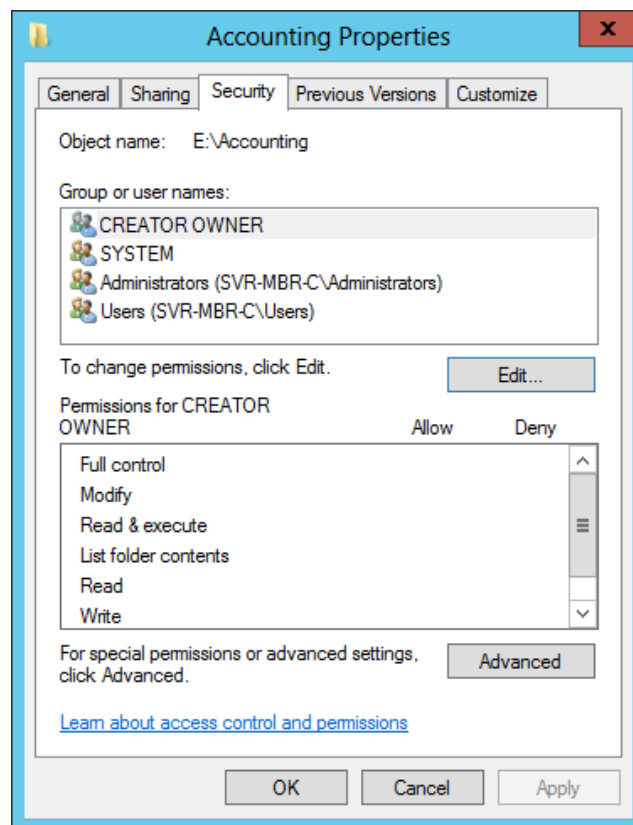


Figure 4-1
The Security tab of the Accounting Properties sheet

3. Click **Edit**. The Permissions for Accounting dialog box appears.

4. Click **Add**. The Select Users, Computers, Service Accounts, or Groups dialog box appears.
5. In the *Enter the object names to select* text box, type **Student**, click “Check Names”, and click OK. The Student user appears in the Group or user names list in the Permissions for Accounting dialog box.

**Question
4**

For the purposes of this lab, you assign permissions directly to the Student user account. How does this differ from standard enterprise networking practice?

6. Select the Student user and, in the Permissions for Student box, select the **Allow Full Control** check box and click OK.
7. Click OK again to close the Accounting Properties sheet.
8. On SERVERB, log on using the **Student** account and the password **Pa\$\$w0rd**.
9. Open the Run dialog box and, in the Open text box, type **\\ServerC\\Spreadsheets** and click OK. A File Explorer window appears, displaying the contents of the share you created in Exercise 4.1.
10. Open the Budget file, delete the date you added earlier, and try to save your changes. The system denies you access to the file.

[SCREEN SHOT 4] Take a screen shot by pressing Alt+Prt Scr, and then paste the resulting image into the Lab 4 worksheet file in the page provided by pressing Ctrl+V.

I do need you to answer Question 5 in your submission, because this understanding is critical.

**Question
5**

Why are you unable to modify the Budget file, when you have the Allow Full Control NTFS permission?

11. On SERVERC, log off and then log on again using the **Student** account and the password **Pa\$\$w0rd**.
12. Open File Explorer, browse to the Accounting folder on the E: drive and, as before, try to edit the budget file and save your changes.

**Question
6**

Why are you able to modify the Budget file on this computer, when you were unable to modify it on the other computer?

13. Typical enterprise sharing guidelines call for all access control to be performed using NTFS permissions, not share permissions.

On SERVERC, log off and then log on as adatum\Administrator with the Pa\$\$w0rd password. Modify the share and the NTFS permissions for the Accounting folder you created, to conform to the settings shown in the following table.

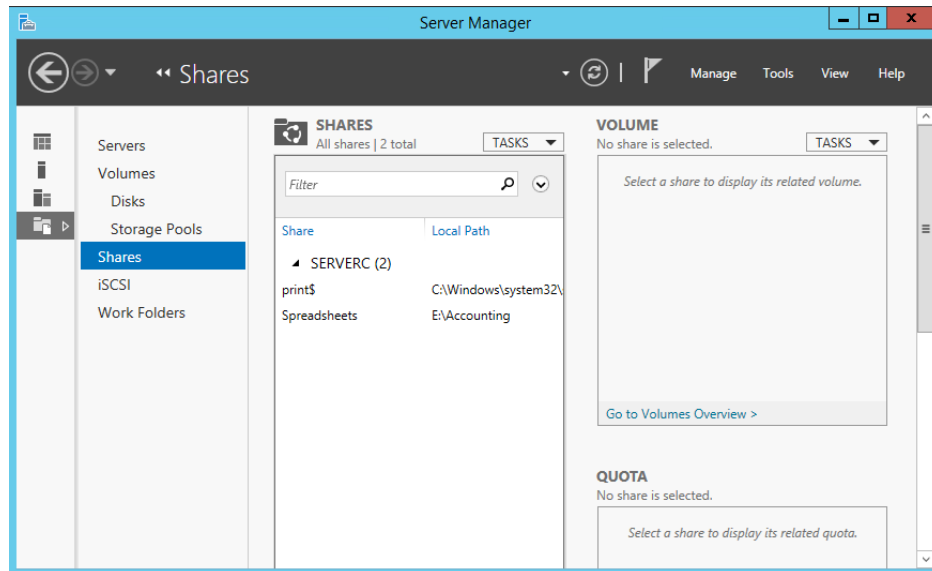
<i>User/Group</i>	<i>Share Permissions</i>	<i>NTFS Permissions</i>
Student	Allow Full Control	<ul style="list-style-type: none"> • Allow Modify • Allow Read & Execute • Allow List Folder Contents • Allow Read • Allow Write
Domain Users	Allow Full Control	<ul style="list-style-type: none"> • Allow Read & Execute • Allow List Folder Contents • Allow Read
Domain Admins	Allow Full Control	<ul style="list-style-type: none"> • Allow Full Control

14. [SCREEN SHOT 5] Take a screen shot of the Security tab on the Accounting Properties sheet, showing the NTFS permissions assigned to the Student user, by pressing Alt+Prt Scr, and then paste the resulting image into the Lab 4 worksheet file in the page provided by pressing Ctrl+V

End of exercise. Close any open windows before you begin the next exercise.

Exercise 4.4 Creating Shares with Server Manager	
Overview	In Windows Server 2016, you can create shares directly within the Server Manager console, once you have installed the File and iSCSI Services role service. In this exercise, you install that role service and create a new share.
Mindset	Windows Server 2016 is all about providing administrators with new ways to perform familiar tasks. Which method for creating shares do you find preferable?
Completion time	15 minutes

1. On SERVERC, in Server Manager, click **File and Storage Services > Shares**. The Shares home page appears (see Figure 4-2).

**Figure 4-2**

The File and Storage Services submenu after the installation of File and iSCSI Services

2. In the Shares tile, click **Tasks > New Share**. The New Share Wizard appears, displaying the *Select the profile for this share* page.
3. In the *File share profile* list, select **SMB Share – Quick** and click Next. The *Select the server and path for this share* page appears.
4. In the *Share location* box, select the F: volume and click Next (if the F: share does not exist, please use the E: share instead). The *Specify share name* page appears.
5. In the *Share name* text box, type **Documents** and click Next. The *Configure share settings* page appears.
6. Select the *Enable access-based enumeration* check box and click Next. The *Specify permissions to control access* page appears.
7. Click Next to accept the default permissions. The *Confirm selections* page appears.

Question 7

What access will the Student user have to the Documents share you are creating? How will the users receive that access?

8. Click **Create**. The wizard creates the share and the *View results* page appears.
9. Click **Close**. The Documents share appears in the Shares tile.

- 10. [SCREEN SHOT 6]** Take a screen shot of the Shares home page in Server Manager, showing the two shares you created in this lab, by pressing Alt+Prt Scr, and then paste the resulting image into the Lab 4 worksheet file in the page provided by pressing Ctrl+V.

End of exercise. Close any open windows before you begin the next exercise.

Exercise 4.5 Creating Work Folders	
Overview	In Windows Server 2016, Work Folders enable users to store their files on a server and easily access them using any type of connected device.
Mindset	Windows Server 2016 is all about providing administrators with new ways to perform familiar tasks. Which method for creating shares do you find preferable?
Completion time	15 minutes

1. On SERVERC, in Server Manager, click Manage > Add Roles and Features. The Add Roles and Features Wizard appears, displaying the *Before you begin* page.
2. Click Next. The *Select installation type* page appears.
3. Click Next. The *Select destination server* page appears.
4. Click Next. The *Select server roles* page appears.
5. Expand the **File and Storage Services** role, expand **File and iSCSI Services**, and then select the **Work Folders** check box. The *Add features that are required for Work Folders* page appears.
6. Click Add Features.
7. Click Next. The *Select features* page appears.
8. Click Next. The *Confirm installation selections* page appears.
9. Click Install. The wizard installs the role service.

Wait until the status becomes “Installation succeeded on SERVERC.adatum.com”
10. Click Close. The wizard closes.
11. In Server Manager, in the File and Storage Services submenu, click Work Folders. The *Work Folders* home page appears.

12. In the Tasks list, click **New Sync Share**. The New Sync Share Wizard appears.
13. Click Next. The *Select the server and path* page appears, as shown in Figure 4-3

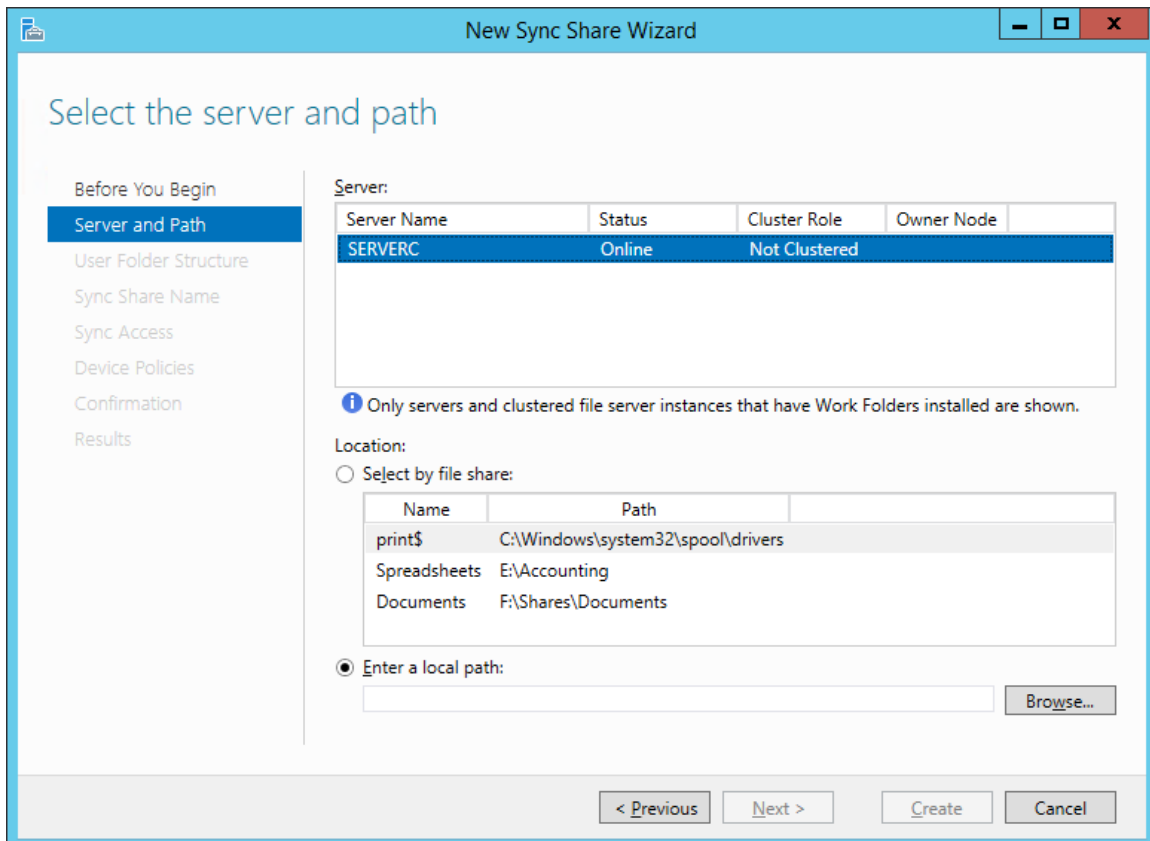


Figure 4-3
The Select Server and Path page in the New Sync Share Wizard

14. Click the Select by file share option, select the Spreadsheets share you created in Exercise 4.1, and then click Next. The *Specify the structure for user folders* page appears.
15. Click Next to accept the default settings. The *Enter the sync share name* page appears.
16. In the Name text box, type **Sheets** and then click Next. The *Grant sync access to groups* page appears.
17. Click Add. The *Select User or Group* dialog box appears.
18. In the Enter the object name to select box, type **Domain Users** and then click OK.
19. Click Next. The *Specify device policies* page appears.

20. Clear the Automatically lock screen and require a password checkbox and then click Next. The *Confirm selections* page appears.
21. Click Create. The wizard creates the sync share.
22. Click Close. The new sync share appears on the Work Folders page.

[SCREEN SHOT 7] Take a screen shot by pressing Alt+Prt Scr, and then paste the resulting image into the Lab 4 worksheet file in the page provided by pressing Ctrl+V.

End of exercise. Close any open windows before you begin the next exercise.

Lab Challenge Creating Shares with Windows PowerShell	
Overview	In addition to the graphical tools provided with Windows Server 2016, you can also manipulate the storage subsystem using Windows PowerShell commands.
Completion time	15 minutes

To complete this challenge, specify the Windows PowerShell command you must use to create a new share called *Xfer* out of the Users folder on the C: drive. Configure the share permissions so that members of the Domain Admins group have Full Access and the members of the Domain Users group have Read access.

End of lab. You can log off or start a different lab. If you want to restart this lab, you'll need to click the End Lab button in order for the lab to be reset.