

Practical 4A – Managing File Access

Lab Requirements:

1. Ensure that the **NYP-DC1** and **NYP-CL1** virtual machines are running.

Practice 1

Objectives:

1. Convert the file system to NTFS.

Tasks:

1. On NYP-DC1, create a FAT32 New Simple Volume, size=100MB, label: **FAT32-vol** on Disk1. The drive letter should be **E:**
2. Copy any text file (.txt) to the **E:** drive (Search for *.txt in File Explorer). Verify that the file is in the **E:** drive.
3. Open a Command Prompt.
4. Type **convert e: /fs:ntfs** and then press ENTER.
5. Type **FAT32-vol** as the current volume label and then press ENTER.
6. Type **diskpart** and then press ENTER.
7. Type **list disk** and then press ENTER.
8. Type **select disk 1** and then press ENTER.
9. Type **detail disk** and then press ENTER. Notice that the E drive is now using the NTFS file system.
10. Type **Exit** and then press ENTER.
11. Close the command prompt.
12. Check that the text file in **E:** drive is intact and not affected by the conversion.

Practice 2

Objectives:

1. Create a shared folder using File Explorer.

Tasks:

1. On NYP-DC1, log on with your Administrator account, create a folder in drive E: name **Apps**.
2. Right-click the Apps folder → **Properties** → **Sharing tab** → **Share..** → type **Everyone** and click **Add** → **Share** → **Done**
3. Close the Properties window.
4. To verify that the new shared folder called **Apps** is available over the network, open a command prompt, and at the command line type **net view \\NYP-DC1**. Press **Enter**.

5. All of the shared folders available on your server should be visible, including the new Apps folder just created. Close the command prompt window.
6. Close all open windows.

Practice 3

Objectives:

1. Create and view shared folders using Computer Management.

Tasks:

1. Click **Server Manager → Tools → Computer Management**. The Computer Management tool opens. If necessary, click the plus sign (+) next to **System Tools** to expand it.
2. Click the **Shared Folders** node to expand it. The Shares, Sessions, and Open Files nodes appear.
3. Click the **Shares** folder to view its contents. Notice that the list includes folders that have been manually created (such as Applications), administrative shares (such as C\$), and shared folders used by operating systems communication processes (such as IPC\$). The Share node also provides the complete file system path to the shared folder.
4. Right-click the Shares folder and click **New Share**. The Share a Folder Wizard appears. At the welcome screen, click **Next**.
5. At the Folder Path screen, type **E:\mktgdocs** in the Folder path text box. Click **Next**.
6. When prompted with the dialog box specifying that the folder doesn't exist and asking whether you want to create it, click **Yes**.
7. At the name, Description, and Settings screen, type **Marketingdocs** in the Share name text box and **All Marketing Documentation** in the Description text box. Click **Next**.
8. At the Permissions screen, select the "**Administrators have full access; other users have read-only access**" radio button. Click **Finish**.
9. At the Sharing was Successful screen, review the Summary information and the click **Finish**.
10. Verify that the new **Marketingdocs** shared folder is visible in the details pane of the Shares node in Computer Management.
11. To verify that the Marketingdocs folder is accessible over the network, open the Run command and type **\\WYP-DC1\marketingdocs** in the Open text box and click **OK**. The Marketingdocs folder should open in a new window.
12. Close all open windows.

Practice 4

Objectives:

1. Control access to resources using shared folder permissions.

Tasks:

1. Login to **NYP-DC1** as Administrator.
2. Open a File Explorer window and access the properties of the **E:\mktgdocs** folder.
3. Click the Sharing tab, and then click the **Advanced Sharing...** button.
4. Click **Permissions** and remove the **Everyone** group.
5. Click the **Add** button and type **Domain Admins** and click **Check Names → OK**. Domain Admins is added to the list with the configured permission of **Read** only.
6. Select Domain Admins and in the **Permissions for Domain Admins**, click **Allow** for **Full Control**.
7. Repeat steps 5 and 6 to add **G Marketing Users** with **Change and Read** Permission Level configured.
8. Click **Apply** and **OK**.
9. Close all open windows.
10. Open File Explorer and go to the **marketingdocs** folder. Create a sub-folder inside called **July Documents**. Close all windows.
11. Login to **NYP-CL1**, as **user1-marketing** with the password **Pa\$\$w0rd**. *(if cannot connect nyp-cl1 to nyp-dc1 see below footnote)*
12. Map to **\\NYP-DC1\marketingdocs** (you can use File Explorer or other means).
13. Attempt to create a new folder called **August Documents** in the Marketingdocs folder. This will be possible because all members of the G Marketing Users group have the Contributor permission to the shared folder.
14. Close all open windows and log off NYP-CL1.
15. Log in to **NYP-CL1** as the **user1-it** account with the password **Pa\$\$w0rd**.
16. At the Run command, type **\\NYP-DC1\marketingdocs** and click **OK**. The user1-it account is not able to access the folder because it lacks sufficient permissions.
17. Close all open windows and log off.

If client cannot connect to Domain Controller – try steps below:

- *Set both client and server network adaptors to local mode.*
- *Check that IP addresses and DNS address are correct.*
- *Turn off Windows firewall on Windows 10 client.*
- *Use ping to confirm that they can detect each other.*

Practice 5

Objectives:

1. Configure and test NTFS permissions on a local folder.

Tasks:

1. Login to NYP-DC1 as Administrator.
2. Open File Explorer, and double-click on drive **E:**. Right-click an area of white space in the window, select **New**, and then click **Folder**. Name the folder **Test**. Right-click on the **E:\Test** folder and click **Properties**.
3. Click the **Security** tab to view the NTFS permissions assigned to users and groups by default. Click each individual entry in the Group or user names list box to view the properties associated with these accounts. Note that although each group is assigned different permissions to the folder, some assigned permissions appear within a gray box and cannot be changed. This is because these permissions have been inherited from a parent folder, in this case the NTFS permissions assigned to drive E.
4. Access the properties of drive **E:** and click the **Security** tab. Notice that the same NTFS permissions that are applied on the test folder are also applied on the E: drive. The difference is that these permissions were assigned directly to the E: drive by default when the partition was created and can be changed.
5. Still in the E: drive Properties/Security window, click **Edit** button and then the **Add** button. In the Select Users, Computers, or Groups dialog box, type **user1-marketing** in the Enter the object names to select (examples) text box, and click **OK**. Ensure that the User1 Marketing user account is only granted the **Allow Read** permission, and click **OK**. When the Security dialog box appears, click **Yes**.
6. Open the **Security** tab of the **test** folder to confirm that the User1 Marketing user account now appears in the list of Group or user names. Click the User1 Marketing account to confirm that it has inherited the permissions assigned in the previous step.
7. In the **E:\Test** folder **Properties**→**Security** window, click on **Edit** button. Click **Add** button and in the Select Users, Computers, or Groups dialog box, type **G Marketing Users** in the “Enter the object names to select (examples)” text box and click **OK**. Note the group is assigned the allow Read & Execute, List Folder Contents, and Read permissions on the folder by default. Click **OK** and **OK**.
8. Open the E:\Test folder. Right-click an area of white space, select **New**, and then click Text Document. Name the file **ntfstest.txt**
9. Right-click the **E:\Test\ntfstest.txt** and click **Properties**.
10. Click the Security tab to view the NTFS permissions associated with this file. Note that the permissions configured for this file have been inherited from the E:\Test folder.
11. Right-click the **E:\Test** and click **Properties**. Go to the **Security** tab.
12. In the Group or user names list box, click **Edit** button, then select **Users** and the click **Remove**. Read the Security dialog box that appears, outlining the fact that the group Users cannot be removed because its settings are inherited from a parent folder. Click **OK**. Click **OK** again.

13. Click the **Advanced** button. The Advanced Security Settings for test dialog box opens.
14. Click **Disable inheritance** button.
15. In the Block Inheritance screen, select **Convert inherited permissions into explicit permissions on this object**.
16. Click each user or group to view the associated NTFS permissions. Note that permissions are now directly applied to users and groups rather than being inherited. This is a result of clicking the Convert selection in the previous step.
17. Click **OK** to return to the Group or user names list box, click **Edit** and select **Users** and then click **Remove**. Notice this time, the Users group is removed without issues. Remove the **Authenticated Users** group too if it exists. Close all open windows.
18. On **NYP-DC1**, log off and then log on again using the **user1-marketing** user account (note: if user1-marketing is unable to login to NYP-DC1, you can login to NYP-DC1 as Administrator and add user1-marketing to the **Backup Operators** group, and then try again)
19. Open File Explorer and attempt to create a new text file in the E:\Test folder. Notice that this action is not possible because the User1 Marketing user account does not have sufficient permissions for the E:\Test folder as a member of the G Marketing Users group.
20. Close all open windows and log off. Log on again using your Administrator account.

Practice 6

Objectives:

1. View effective permissions for a user on an NTFS folder.

Tasks:

1. Login to NYP-DC1 as Administrator.
2. Open File Explorer and right-click the E:\Test folder. Click **Properties** from the shortcut menu, and then click the **Security** tab.
3. Click the **Advanced** button to access the Advanced Security Settings for Test dialog box.
4. Click the **Effective Access** tab.
5. Click the **Select a user**.
6. In the Enter the object name to select (examples) text box, type **user1-marketing** and click **Check Names** → **OK**.
7. Click the **View effective access** button to review the effective NTFS permissions that apply to the User1 Marketing user account.
8. Click the **Select a user** button again and, this time, add the **G Marketing Users** group. Review the effective NTFS permissions that apply to this group.
9. Close all open windows.

Practice 7

Objectives:

1. Determine the impact of combining shared folder and NTFS permissions.

Tasks:

1. Log in to **NYP-DC1** as administrator. Open File Explorer and create a new folder on drive E: named **Combined**.
2. Share the Combined folder with the following settings:
 - Remove Everyone group.
 - Add G Marketing Users group with **Read** only permission.
 - Add G Sales Users group with **Read + Change** permissions.(Click the **Sharing** tab and click the **Advanced Sharing** button. Click the **Share this folder** box. Click the **Permissions** button. Remove the **Everyone** group from the list. Click Add to add the 2 other groups)
Click on the **Security** tab to view the NTFS permission settings. Notice **CREATOR OWNER** has full control.
3. Log in to **NYP-CL1** as **user1-marketing** and open the **Run** command, type **\\NYP-DC1\combined** and then press **Enter**. The Combined window should open.
4. Attempt to create a new folder in **\\NYP-DC1\combined** folder. You are unable to create a new folder because the share permission is **Read**, and when the folder is accessed over the network, this is the effective permission that applies because it is more **restrictive**. Close the **\\NYP-DC1** window.
5. Log in to **NYP-CL1** as **user1-sales** and open the **Run** command, type **\\NYP-DC1\combined** and then press **Enter**. The Combined window should open.
6. Attempt to create a new folder in **\\NYP-DC1\combined** folder. You are able to create a new folder because the share permission is **Read + Change**, and when the folder is accessed over the network, this permission plus the NTFS permission allows the folder creation.
7. Close all open windows.

Exercise 4A

The Freshmilk Pte Ltd has 2 departments – Sales and Finance. The Sales department wants a shared folder on the server called **SalesReports**. The user requirements are as follow:

- i. Only sales staff can access the folder.
- ii. Sales staff can create/edit/delete their own files.
- iii. Sales staff can read other sales staff files but cannot delete or edit them (except their own files).

Configure the shared folder and test it with different accounts.

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