Lab 2: Workstation User, Group, NTFS Permission, & Share Exercise

The objective of the lab is to familiarize you with the Windows 10 workstation management environment and introduce you to the creation and management of local users and groups, and of shares and NTFS permissions.

This is an individual assignment, and you must submit it as an individual, with all work being your own.

Actions

Action 1: Select a classmate to be a partner for this exercise

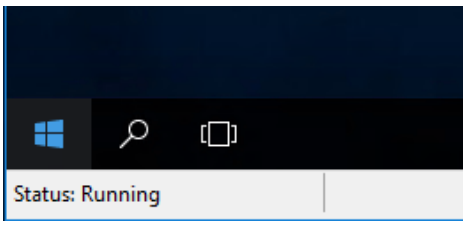
For Deliverable #1, write your name, the name of your partner, and the date.

Connect to the CCI Virtual Environment

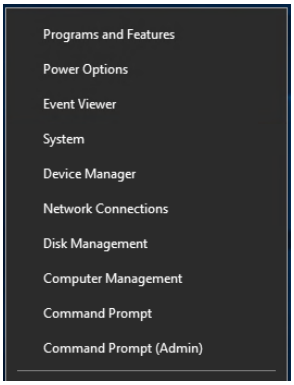
You will find instructions for connecting to the CCI virtual environment in Actions 1 – 3 of *Lab 1: Access Virtual Lab Environment*.

Confirm Machines

Action 4: Right-click the Start button on the lower-left corner of the screen;



The pop-up box that will appear will contain *System*. Click on *System*.



For Deliverable #2, what is the name of your computer? To which workgroup does it belong?
Ask your partner the name of his or her computer.

For Deliverable #3, what is the name of your partner's computer?

Confirm Network Connectivity between Workstations

Action 5: Open the Command Line Interface (CLI).

To do so, right-click the Start button in the lower-left corner of the remote computer screen, and select *Command Prompt (Admin).*

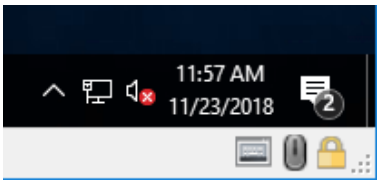
You may also invoke the Command Prompt by entering *cmd* at *Run*.

At the command prompt, enter ping *whateverComputerNameYourPartnerGaveYou*

Note: *whateverComputerNameYourPartnerGaveYou* is whatever computer name your lab partner gave you, i.e. the answer for Deliverable #3.

For Deliverable 4, does your workstation have IP connectivity with your partner's workstation? What do you think its IP address is?

Note: if your workstation's network connection  displays an error, such as an **X** or an **!** over it, you may refresh your DHCP-assigned IP address by entering ipconfig /renew at the CLI command prompt. If this is the case, do so and repeat the workstation ping.

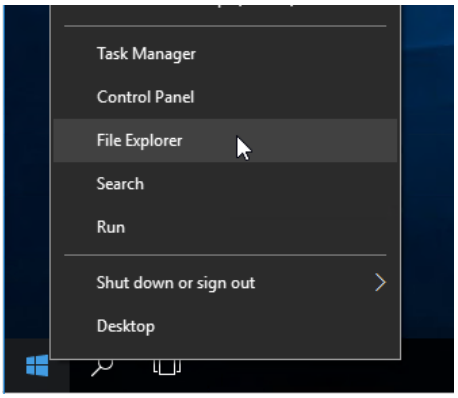


System Tray, Lower right corner of virtual screen: Displays status of network connection

Create a Folder with Content

Action 6: In the lower left corner of your screen, right-click the *Start* button to pull up the options displayed in the graphic below. Select *File Explorer*.

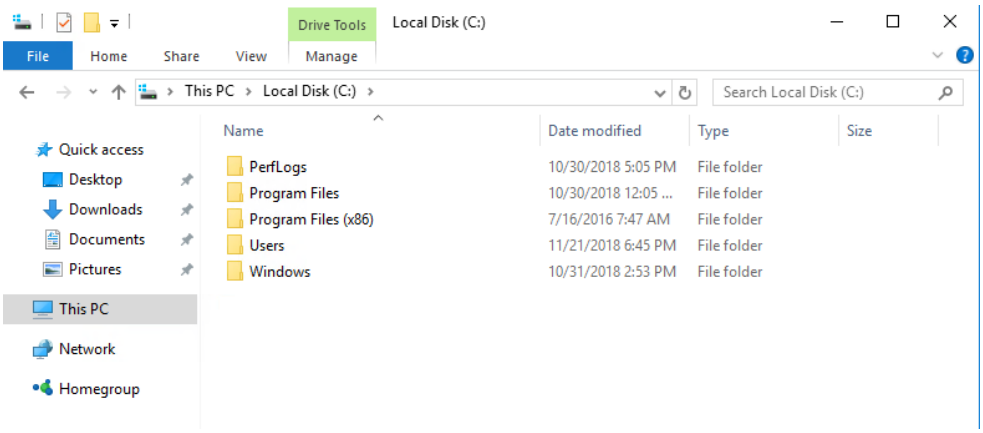
This is a file system browser that is occasionally confused with *Internet Explorer*, which is a Microsoft web browser.



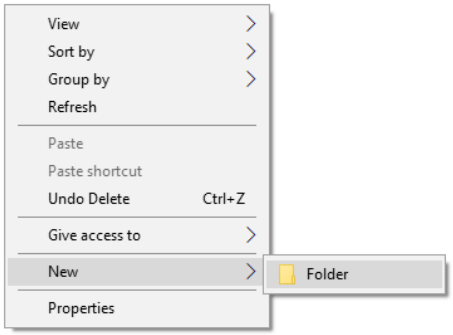
File Explorer, Lower left corner of virtual screen: Allows user to browse file system

Create a Folder with Content (continued)

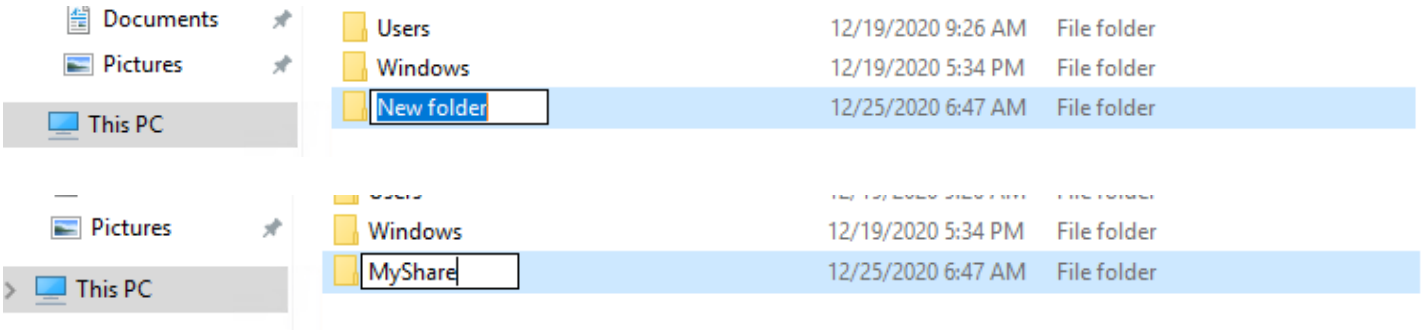
Once *File Explorer* is open, click on *This PC* in the left pane, and then double-click on *Local Disk (C:)* under *Devices and Drives*. You are now browsing the filesystem for your own workstation.



In the whitespace under the folders (e.g. PerfLogs, Users, Windows, etc.), right-click your mouse and select New → Folder.



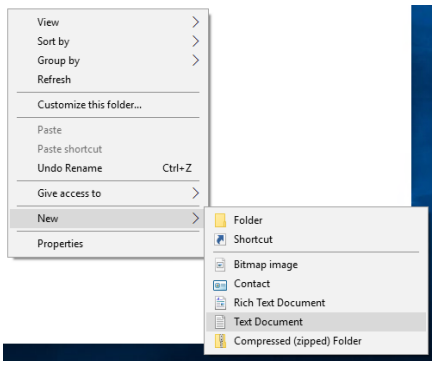
When prompted, name that folder *MyShare*.

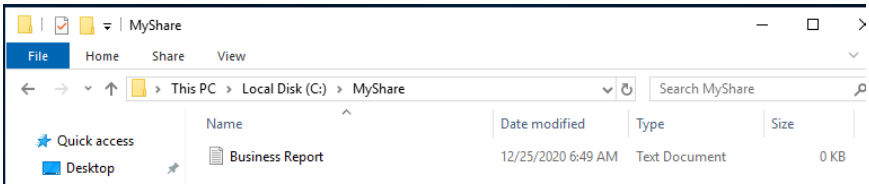


Create a Folder with Content (continued)

Once this folder is created, double-click it to enter it.

In the whitespace in this folder, right-click your mouse, and select New → Text Document. At the prompt, name that document (e.g. “Business Report” or “Class Notes” or something else along those lines.
Once created, double-click that document and add a line or two of content to it, and then save the document when you are finished.

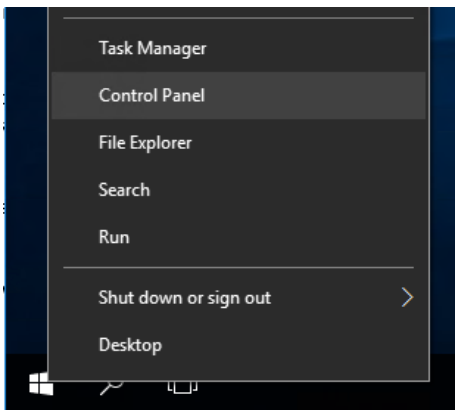




You will have created content for sharing, and will later return to the *MyShare* folder to configure sharing.
Click the X to close Windows Explorer.

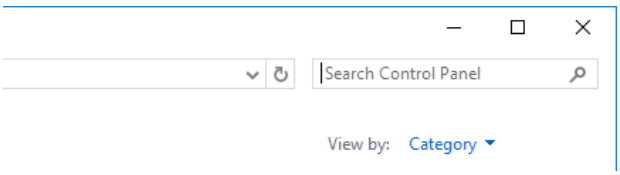
Create Local Users

Action 7: Right-click *Start* button, and select *Control Panel*.

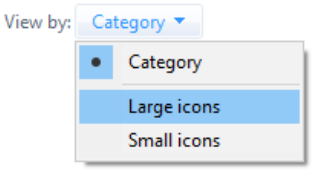


Create Local Users (continued)

Initially the control panel will be in “Category” view. While you may create users in this mode, you will find much more granular tools under the “Large Icons” view.



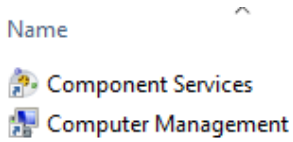
Select “Large Icons” view:



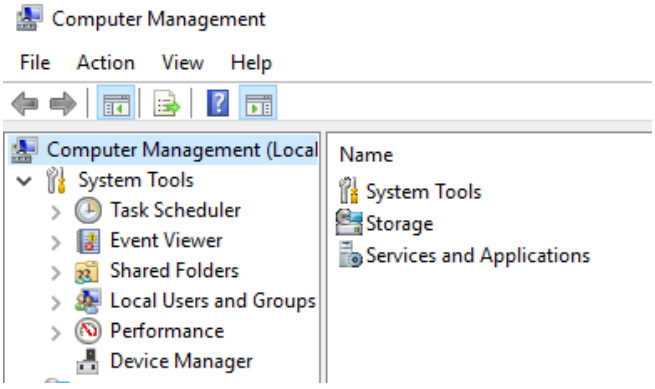
You will now see a much more complex Control Panel, with more options available.

Double-click *Administrative Tools*.

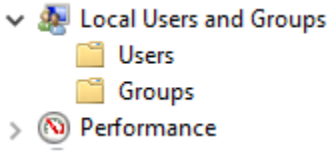
Double-click Computer Management.



Double-click *Local Users and Groups*. You will use this tool to create **local** users and **local** groups. You will learn about global groups when we discuss Microsoft Active Directory and Microsoft Domains.

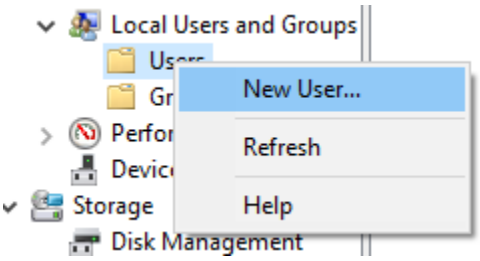


Click the arrow to the left of *Local Users and Groups* to expand *Local Users and Groups*. With *Local Users and Groups* expanded, you will see two folders: *Users* and *Groups*:



Create Local Users (continued)

Right-click folder *Users* and select *New User*. You will now create a local user for yourself.



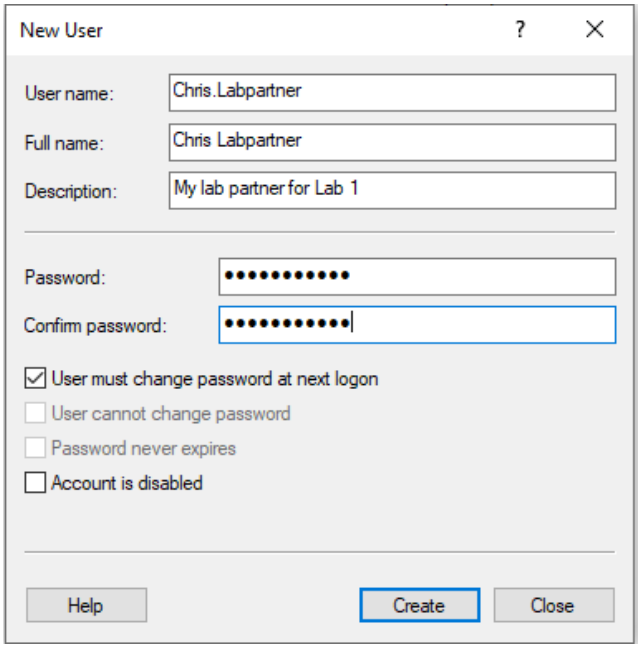
Complete the *New User* form. Decide on a User Name for yourself (e.g. FirstinitialLastname or LastnameFirstinitial or firstname.lastname).

Your Full Name will be your full name: Firstname Lastname.

Under Description, you may put details such as “Comptroller” or “Support Specialist III”.

When selecting a password, remember the rule for this course:

DO NOT, UNDER ANY CIRCUMSTANCE, FOR *ANY* ACCOUNT YOU CREATE IN THIS CLASS, USE THE SAME PASSWORD THAT YOU USE FOR ANY OTHER SYSTEM. THIS IS A TRAINING SYSTEM ACCESSIBLE BY A NUMBER OF STUDENT ADMINSTRATORS, AND *NO* PASSWORD CREATED FOR THIS CLASS SHOULD RESEMBLE ANY PASSWORD THAT YOU USE ANYWHERE ELSE.



Make note of the checkboxes above, and what they do, and what they are used for in practice.

For Deliverable 5, what is the username of the account you created?

Using the same tool as you used to create a user account for yourself, create a user account for your partner.

Create Local Users (continued)

For Deliverable 6, what is the username of the account you created for your partner? What means did you use to coordinate passwords? Did you do anything special to help ensure that you wouldn't continue knowing your partner's password? What was it, if so?

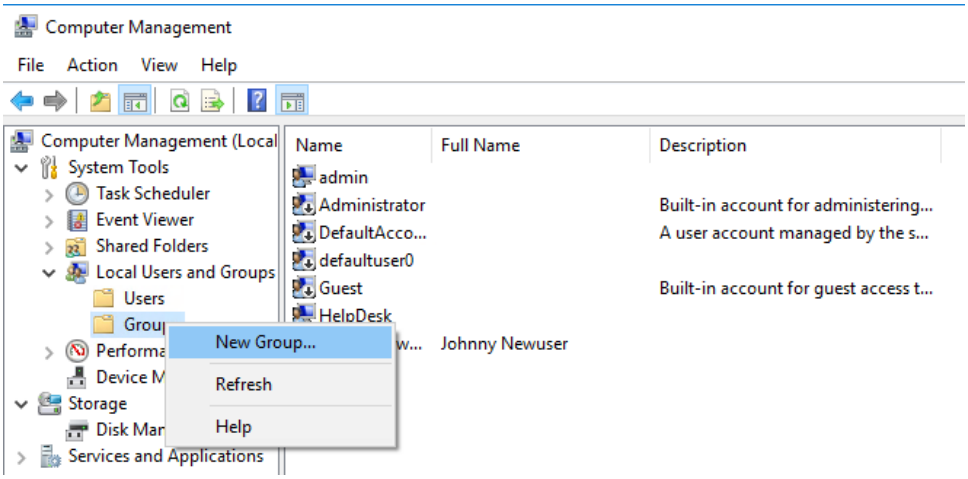
Your partner will have also created a user account for you on his or her own computer. For Deliverable 7, what is the username of the account that your partner created for you?

Using the same tool as you used to create a user account for yourself, create a user account for an imaginary third user. Since this person hasn't yet started working at your organization, For Deliverable 8, did you do anything special to reduce exposure of this person's account prior to his or her first day of work? If so, what was it that you did?

Create Local Groups

Action 8: If you haven't done so already, close the *New User* tool.

Right-click the *Groups* folder under *Local Users and Groups* and select *New Group*.



You will now create two local groups.

Remember that a group is simply a list of other entities, such as users or even other groups.

Create a group named "Auditors", and add a basic description.

Now create a group named for a department, section, or function that you want your partner to be in.

For Deliverable 9, what is the name of the group that you created to place your partner in?

If you haven't done so already, close the *New Group* tool.

Add Local Users to Local Groups

In this exercise, you will use two methods of assigning local users to local groups.

Action 9: Click the *Groups* folder under *Local Users and Groups.* You will see a large number of groups in the right pane - some that were default system groups, and the two that you just created.

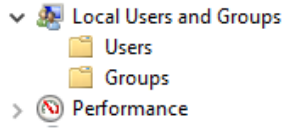
Double-click the *Users* group in the right pane. For Deliverable 10, what users do you see as members in the *Users* group? Do you see any groups as members of the *Users* group?

Click *Cancel* to leave *Users Properties* for the *Users* group.

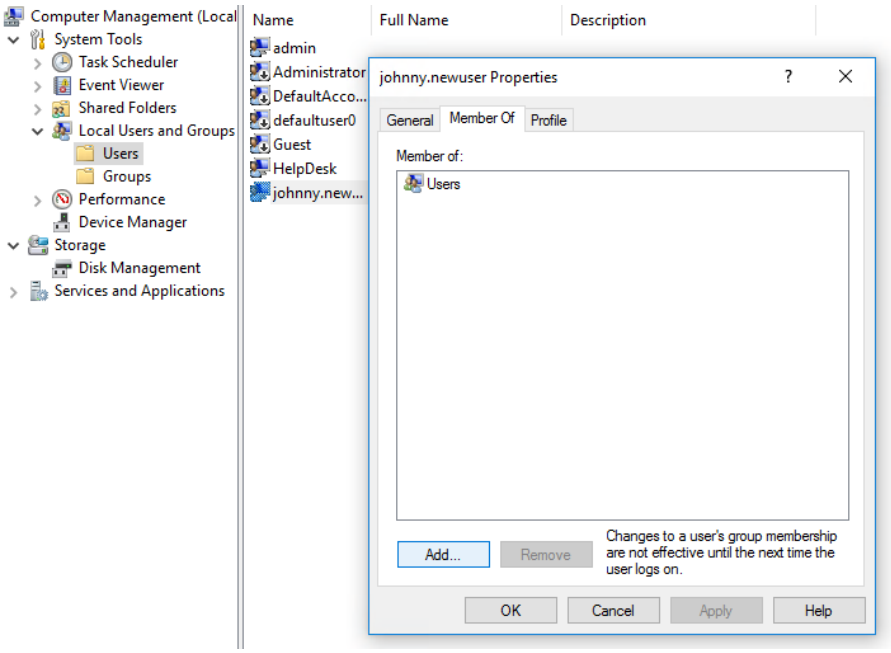
Double-click the group that you created to put your partner in. Click *Add* and then in the box under "Enter the object names to select", type the username of your partner, and click *Check Names*. Make note of the context of the username added to this box. Click *OK* to add the user to the member list for the group. Click OK again at the group Properties box to complete the task.

For Deliverable 11, what was the full context name of the user, i.e. something/somethingelse?

Action 10: Click the *Users* folder under *Local Users and Groups*.



Double-click the imaginary third user that you created for Deliverable 8. This person will be an auditor when he or she begins work, so this person will need to be added to the *Auditors* group. Select the *Member Of* tab:

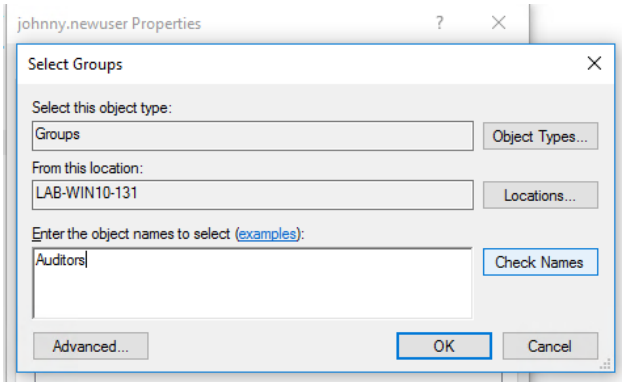


Click the *Add* button, and in the "Enter the object names to select" box, type name of the group – Auditors - that you need to add this user to. Click Check Names, and note again the full context of the group added.

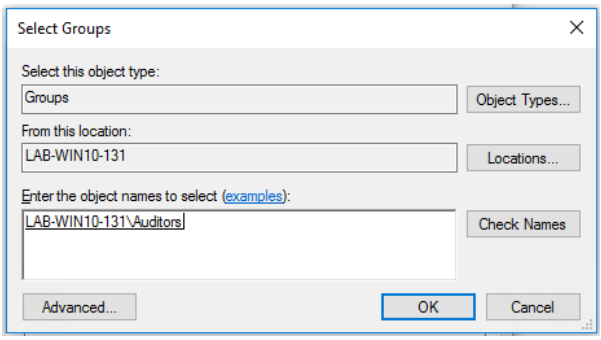
Click *OK* to add the group to the list of groups in which this user is a member.

Add Local Users to Local Groups (continued)

Click OK again at the group Properties box to complete the task.



For Deliverable 12, what was the full context name of the group, i.e. something/somethingelse? Do you think that context of user or group has any significance? Is user Machine-1\Administrator the same entity as user Machine-15\Administrator?



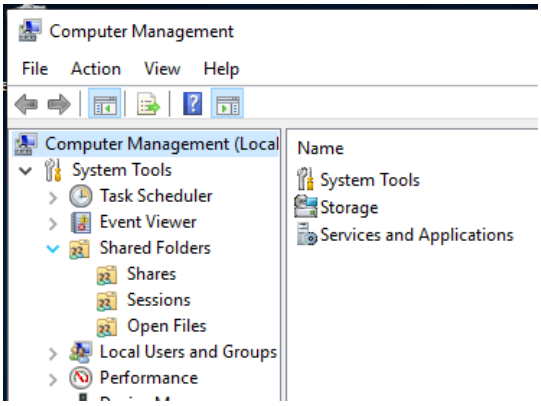
example

Action 11: Check the members of the *Administrators group*. For Deliverable 13, which entities are members of this group? Of the entities listed, which of the two cannot be deleted, only renamed?

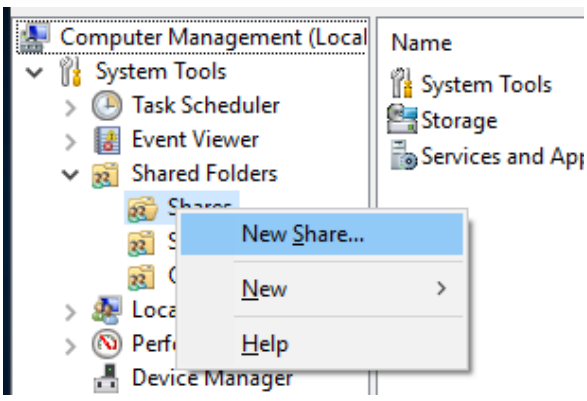
Share the Content Folder You Created Earlier to Entities You Just Created

In this exercise, you will now create a share for the content folder you created earlier, and you will assign selective permissions for each entity.

Action 12: Under *Computer Management*, expand *Shared Folders*.



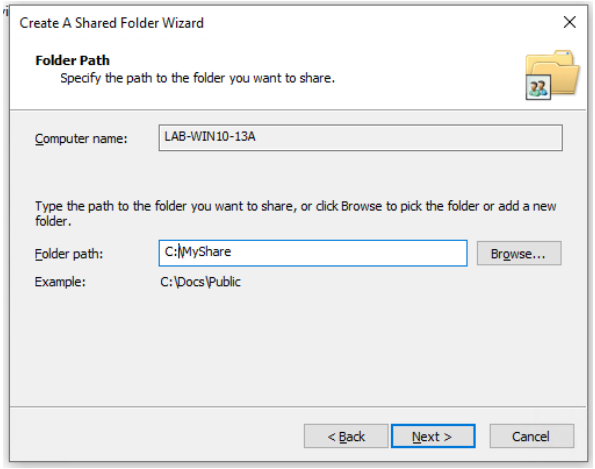
Right-click *Shares*, and select *New Share*:



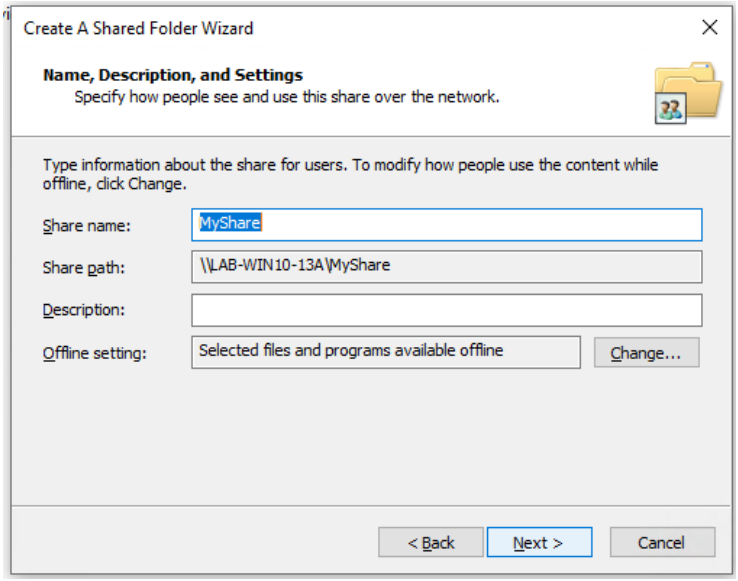
Share the Content Folder You Created Earlier to Entities You Just Created (continued)

This will start the Create a Shared Folder Wizard:

Enter *Folder Path*: in this instance, it will be C:\MyShare.



By default, a share is named after the folder shared, but you may change it to something else. Make note of the Share path: it forms something called a UNC (Uniform Naming Convention). The UNC is how shares are referred to over Microsoft and other SMB networks.



Click *Next*.

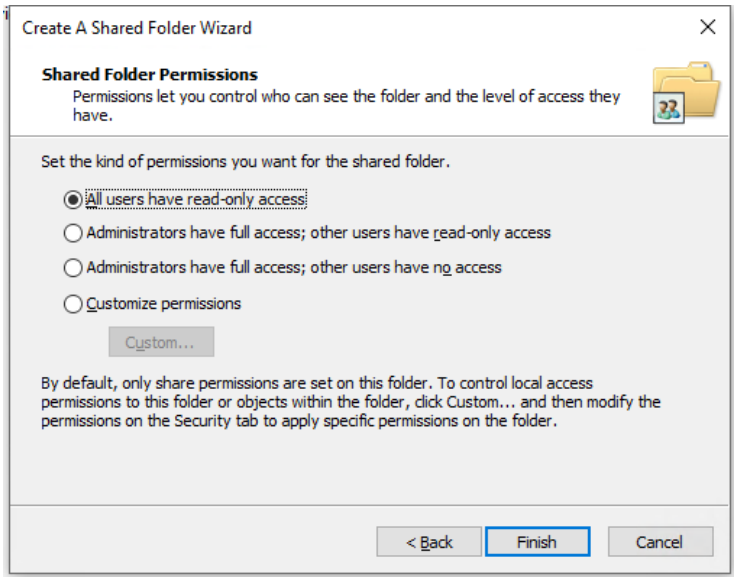
Set Share and NTFS Permissions

Action 13: Windows file shares are protected by two sets of permissions: Share permissions and NTFS permissions.

Share permissions are extremely basic: XXX, XXX, and only control access through the network share itself. Share permissions do not limit access to users and processed operating from the computer itself – the one on which the share resides. This means that anything from operator error to ransomware can affect files protected only by share permissions.

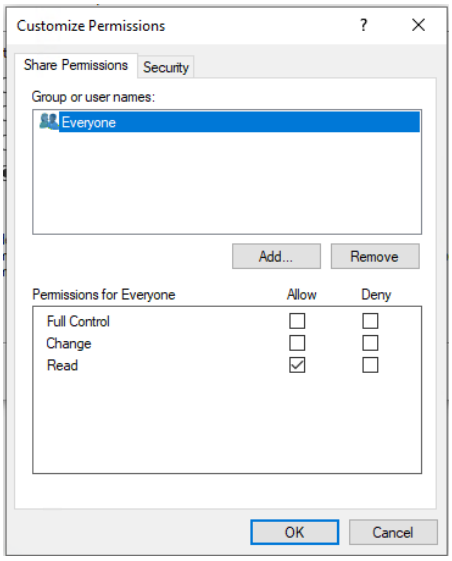
NTFS permissions, on the other hand, are much more specific and granular, and can be applied to folders or even individual files.

The Create a *Shared Folder Wizard* can set permissions for you:



Using the wizard, you may set three common access schemes, or you may customize permissions.

For this exercise, select *Customize permissions*, and then click *Custom…:*

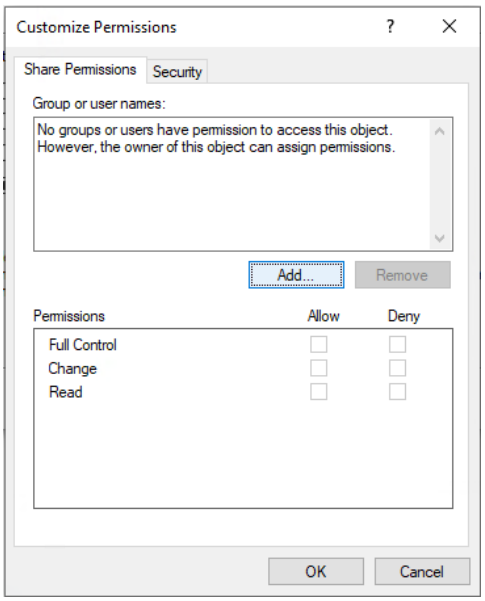


There are three Share permissions: *Full Control*, *Change*, and *Read*.
Full Control allows a user to set share folder permissions, as well as Change and Read share folder contents.
Change allows a user to create, delete, and modify share folder contents.
Read allows a user to list and real folder contents.

Note that by default, user Everyone is given Read permission. This would be problematic should that folder contain sensitive contents.

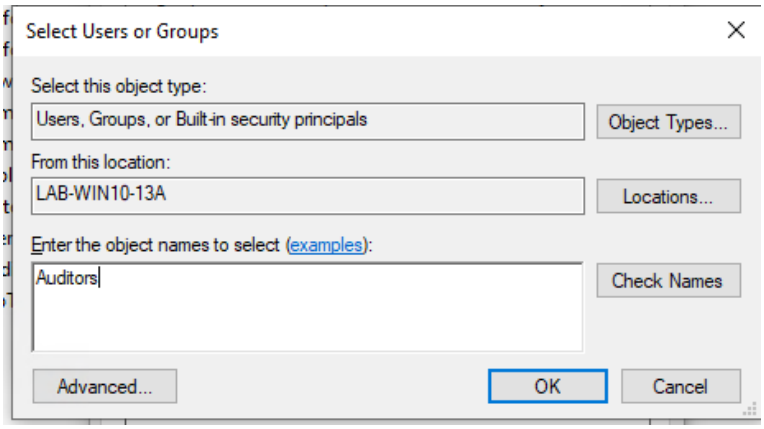
Click *Remove* to remove the ability for *Everyone* to *Read* share folder contents.

Set Share and NTFS Permissions (continued)

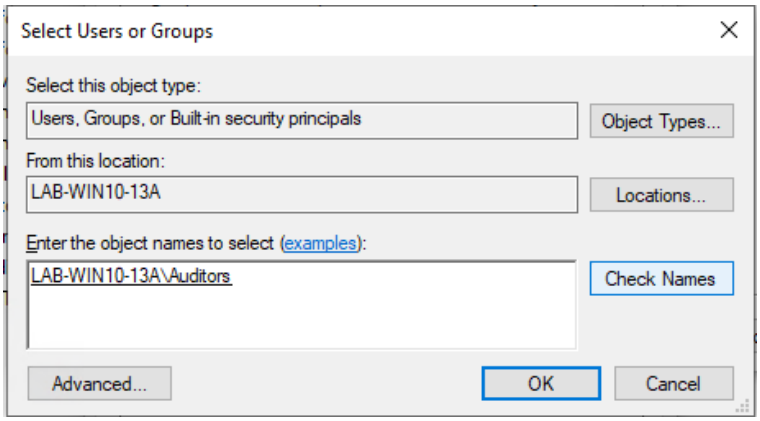


Now that you have revoked Read permission for Everyone, you will now grant permissions for other entities:

Click *Add*. First, grant *Read* permission to the Auditors group you created previously:

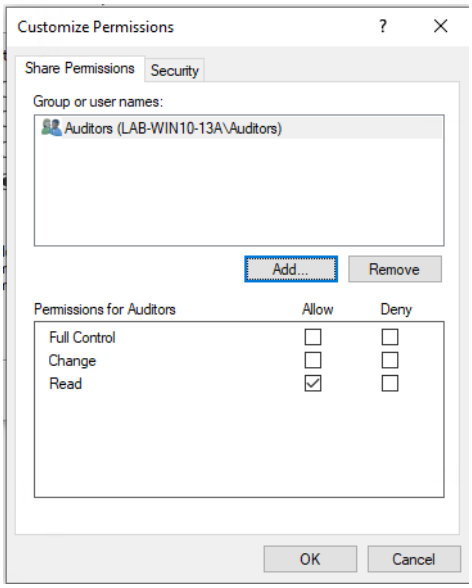


Clicking Check Names will confirm that you've entered the name correctly, as well as displaying the context of the name. For this lab, we are creating and using only local users and groups, on your own Windows 10 lab instance. In the example below, we have selected the group Auditors on the machine Lab-Win10-13A.

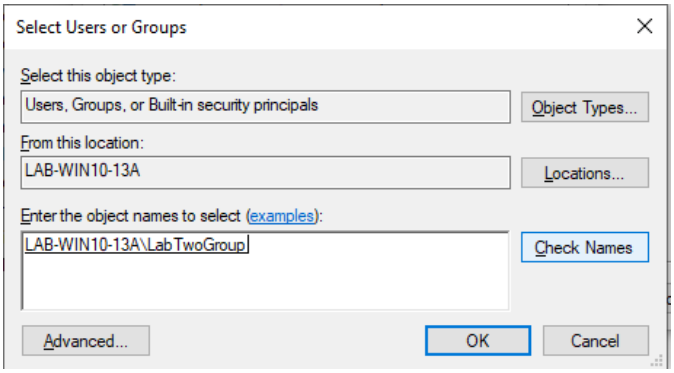


Click *OK* to continue.

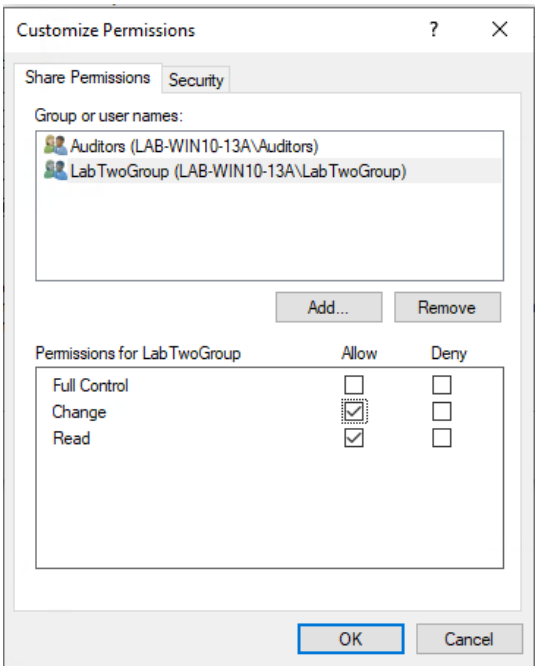
Set Share and NTFS Permissions (continued)



Auditors now has Read Access to the share.
This is what you want for this exercise.



Click *Add* again, to add permissions for another group, which will be the one you created earlier, and the one in which you placed the account that you created for your lab partner. In the example below, local group *LabTwoGroup* is added:



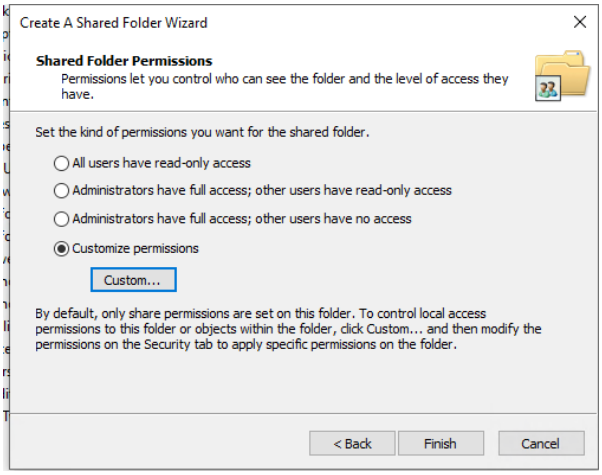
Give members of that group, which includes your lab partner, ability to both *Read* and *Change* share folder contents:

Click *OK*.

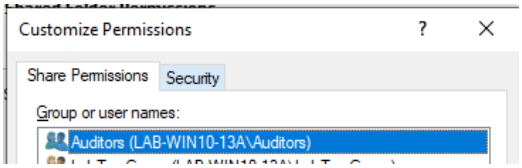
Set Share and NTFS Permissions (continued)

Now that you have set Share permissions, you will now set NTFS permissions.

Click *Custom…* again:

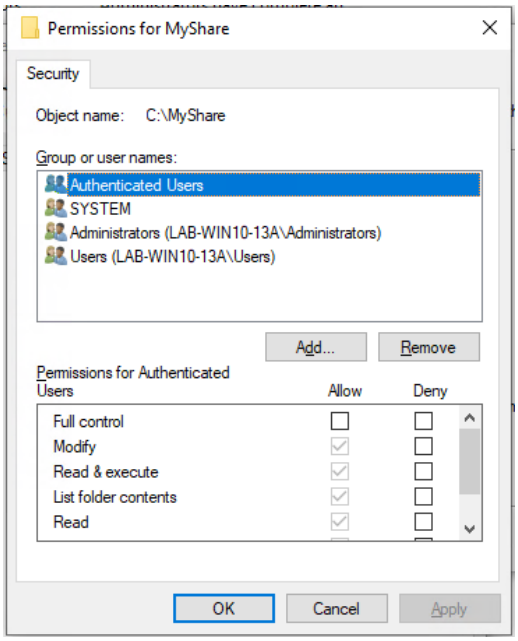


Select the Security tab:



Right-click *MyShare*, select *Properties*, then select the *Security* tab:

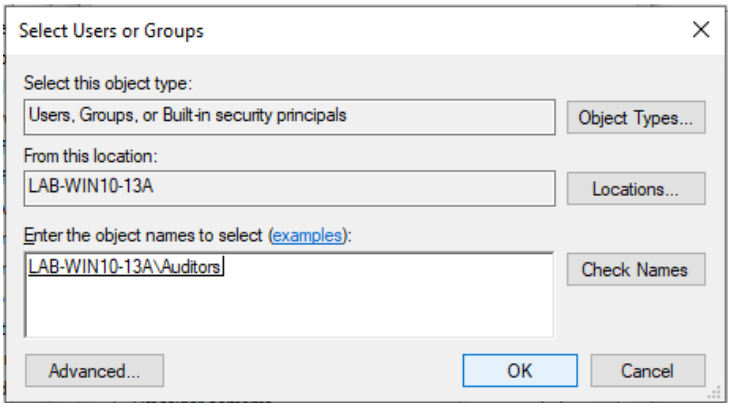
Select Edit:



For Deliverable 14, what are members of the *Authenticated Users and Users* groups allowed to do by default?

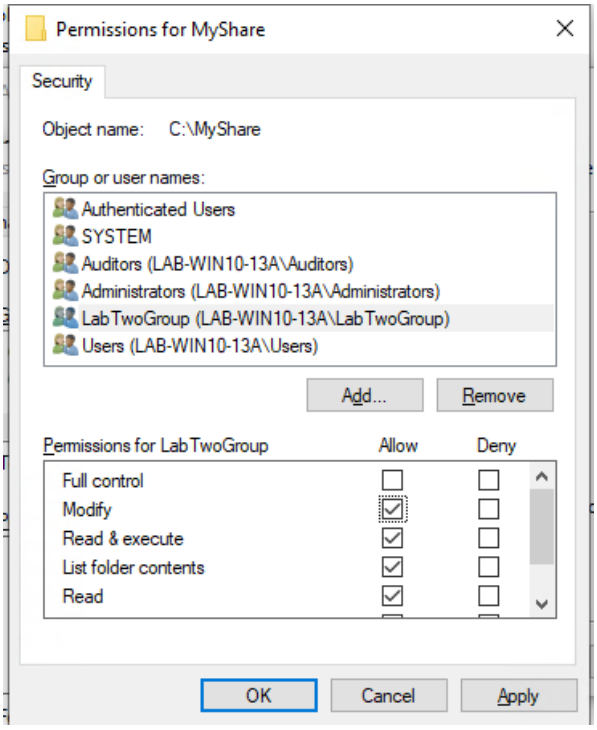
Action 14: Click the *Add* button.

First, ensure that the *Auditors* group has the correct NTFS permissions: *Read & execute*, *List folder contents*, and *Read*.



Click *Apply* when complete.

Next, complete the settings to give the group that you created in Action 8 – the one you created to put your lab partner in – the ability to both read and write share folder contents. *Read & execute*, *List folder contents*, and *Read* will be checked by default, and you will want to add Modify:

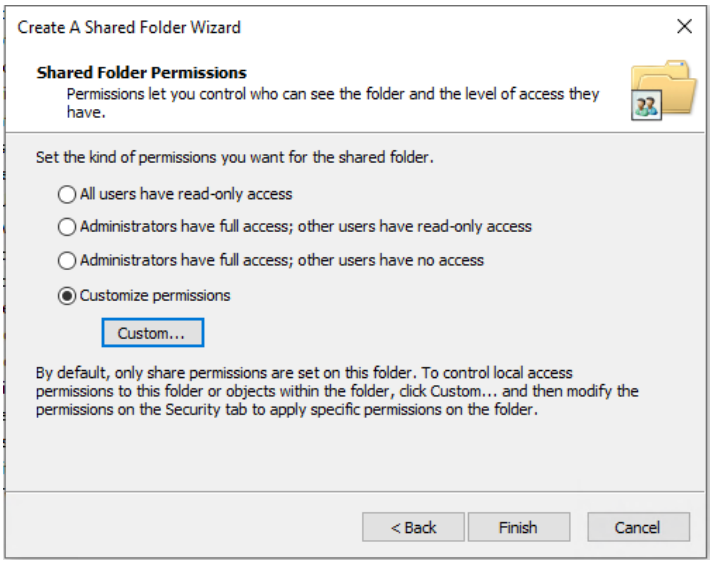


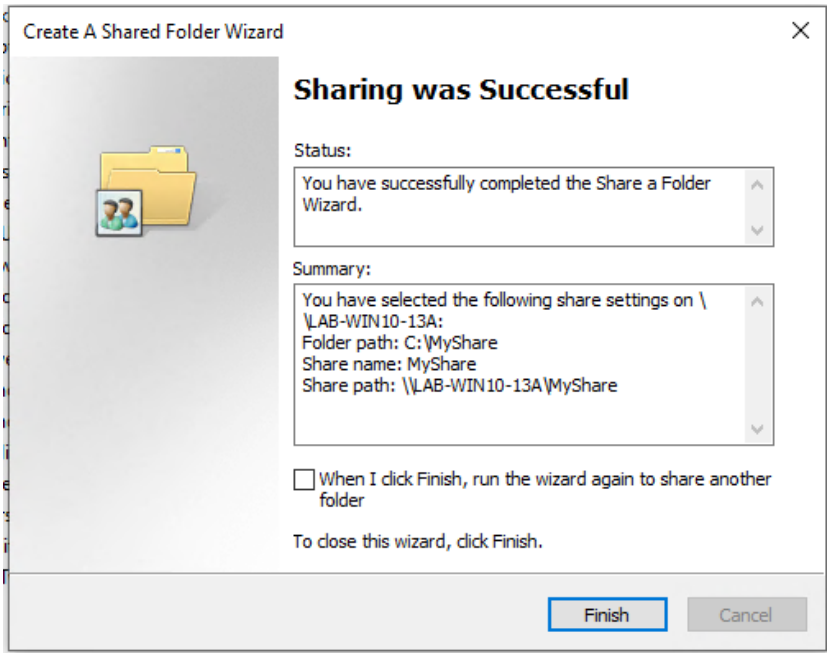
For Deliverable 15, which boxes did you select?

Click *OK* and then *OK* again, to return to the Wizard.

Complete Share and NTFS Permissions

Action 15: Click Finish to complete the Wizard process:





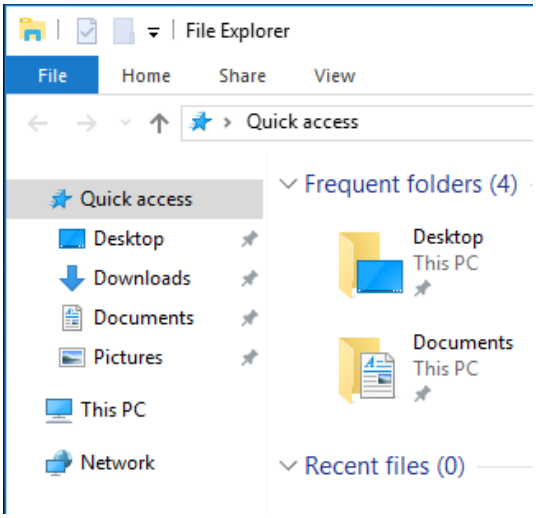
For Deliverable 16, what is the full name of the Uniform Naming Convention (UNC) for this share?
Hint: the UNC is the same as the Share path.

Press *Finish* to complete creating the share.

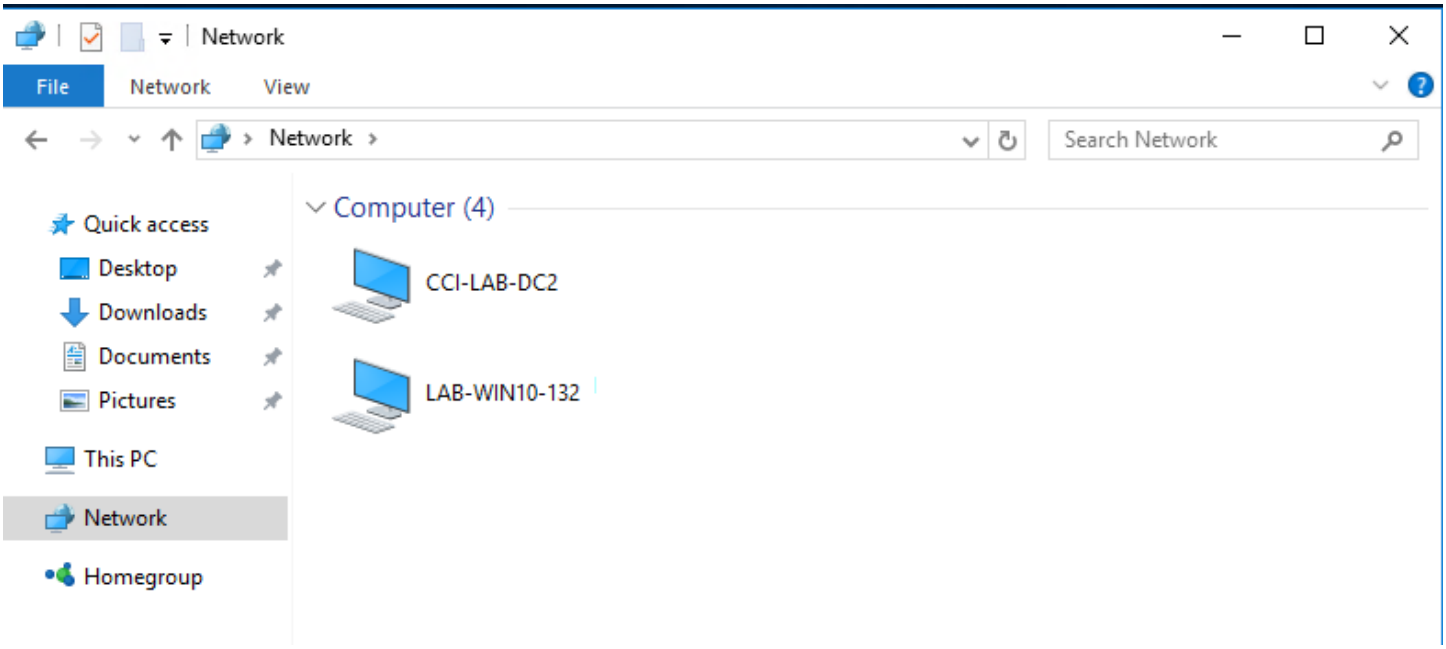
Test the Shares that You Have Created

You will now test the share that you have created.

Action 16: Right-click the *Start* Button, then click *File Explorer*.



Double-click Network, and then locate in the Workgroup that appears, your partner's computer. Double-click your partner's computer when you see it.



For the Instructor example, Instructor's workstation is *LAB-WIN10-13A*, and the Instructor's (imaginary) partner is *LAB-WIN10-132*.

For Deliverable 17, what do you think this share's UNC would be? (i.e. \\something\something)

Double-click the *MyShare* share.

For Deliverable 18, do you see a file in this folder? What is its name? What are its contents?

Extra Credit (Four Points)

Recall whether you were asked for credentials when accessing your partner's share. If you were able to access files anyway, why do you suppose this was?

Hint: Try going back to the *Sharing* Properties for the *MyShare* folder:

Advance Sharing and then *Permissions* should reveal why:

For four points extra credit, describe what you might change in your answer to Deliverable 17.

Deliverables

Deliverable 1: From Action 1, write your name, the name of your partner, and the date

Deliverable 2: From Action 2, what is the name of your computer?

Deliverable 3: From Action 4, what is the name of your partner's computer?

Deliverable 4: From Action 5, does your workstation have IP connectivity with your partner's workstation? What do you think its IP address is?

Deliverable 5: From Action 7, what is the username of the account you created?

Deliverable 6: From Action 7, what is the username of the account you created for your partner? What means did you use to coordinate passwords? Did you do anything special to help ensure that you wouldn't continue knowing your partner's password? What was it, if so?

Deliverable 7: From Action 7, what is the username of the account that your partner created for you?

Deliverable 8: From Action 7, did you do anything special to reduce exposure of this person's account prior to his or her first day of work? If so, what was it that you did?

Deliverable 9: From Action 8, what is the name of the group that you created to place your partner in?

Deliverable 10: From Action 9, what users do you see as members in the *Users* group? Do you see any groups as members of the *Users* group?

Deliverable 11: From Action 9, what was the full context name of the user, i.e. something/somethingelse?

Deliverable 12: From Action 10, what was the full context name of the group, i.e. something/somethingelse? Do you think that context of user or group has any significance? Is user Machine-1\Administrator the same entity as user Machine-15\Administrator?

Deliverable 13: From Action 11, which entities are members of the] [Adminstrators] group? Of the entities listed, which of the two cannot be deleted, only renamed?

Deliverable 14: From Action 13, what are members of the *Authenticated Users and Users* groups allowed to do by default?

Deliverable 15: From Action 14, which boxes did you select?

Deliverable 16: From Action 15, what is the full name of the Uniform Naming Convention (UNC) for this share? what do you think this share's UNC would be? (i.e. \\something\something)

Deliverable 17: From Action 16, what do you think this share's UNC would be? (i.e. \\something\something)

Deliverable 18: From Action 16, do you see a file in this folder? What is its name? What are its contents?

Extra Credit: Answer the question pertaining to access.