Lab 3: Server Local User, Group, NTFS Permission, & Share Exercise

The objective of the lab is to familiarize you with the Windows Server 2019 management environment and introduce you to the creation and management of local users and groups on servers, and of shares and NTFS permissions on servers.

This is a team assignment, but you must submit it as individuals, with all submitted work being your own.

Actions

Action 1: From your fellow classmates, form teams of no more than four members. Each team has been assigned a Windows Server 2019 instance.

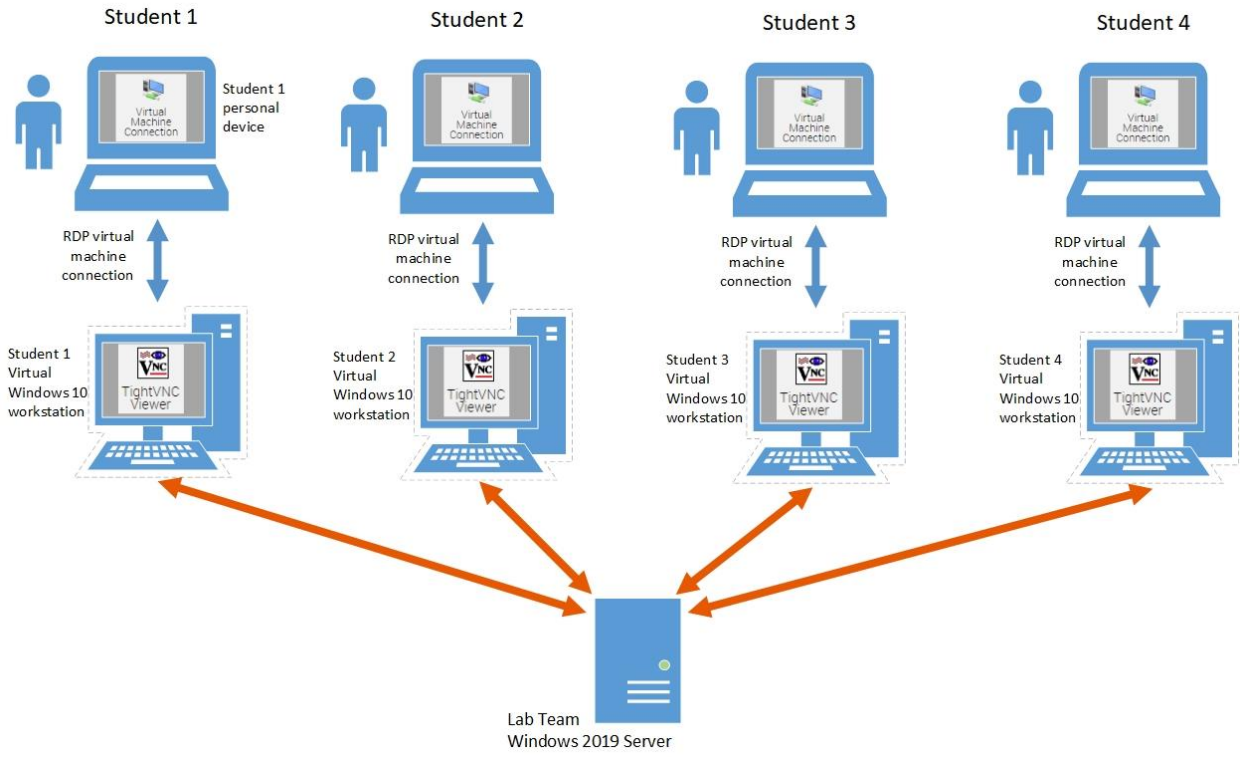
For Deliverable #1, write your name, the number of your team, the name of your partners, and the date.

Connect to the CCI Virtual Environment

Action 2: You will find instructions for connecting to the CCI virtual environment in Actions 1 – 3 of Lab 0: *Access Virtual Lab Environment*.

Connect to your virtual Windows 10 workstation in the same manner as you did in the previous labs.

Once you are connected to your own Windows 10 virtual instance, you will use the TightVNC client on that workstation to connect to your team's Windows 2019 server, as diagrammed below:



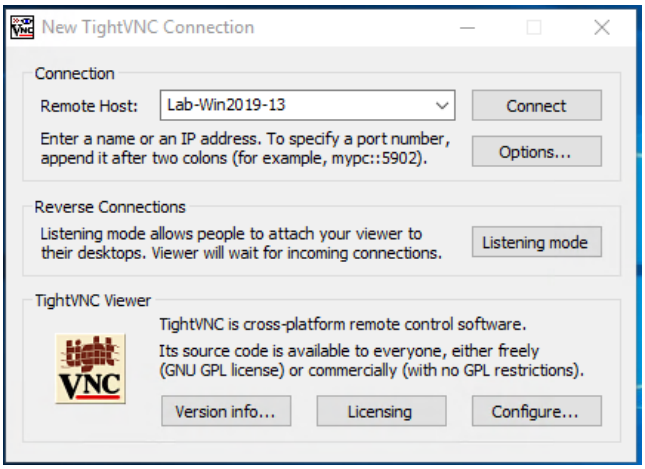
Connect to the CCI Virtual Environment (continued)

The above allows team members to collaborate in real time when working with their shared Windows 2019 Server instance.

Once you are logged into your own Windows 10 virtual instance, you will see on your virtual desktop an icon for the TightVNC viewer:

Click on the TightVNC Viewer icon.

Confirm that the correct name of your team Windows 2019 Server is populated in the *Remote Host* box:

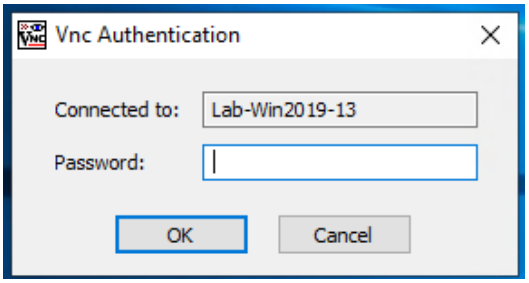


Team 1: Lab-Win2019-01
Team 2: Lab-Win2019-02
Team 3: Lab-Win2019-03
Team 4: Lab-Win2019-04
Team 5: Lab-Win2019-05
Team 6: Lab-Win2019-06
Team 7: Lab-Win2019-07
Team 8: Lab-Win2019-08
Team 9: Lab-Win2019-09
Team 10: Lab-Win2019-10
Team 11: Lab-Win2019-11
Team 12: Lab-Win2019-12

Click *Connect* to connect.

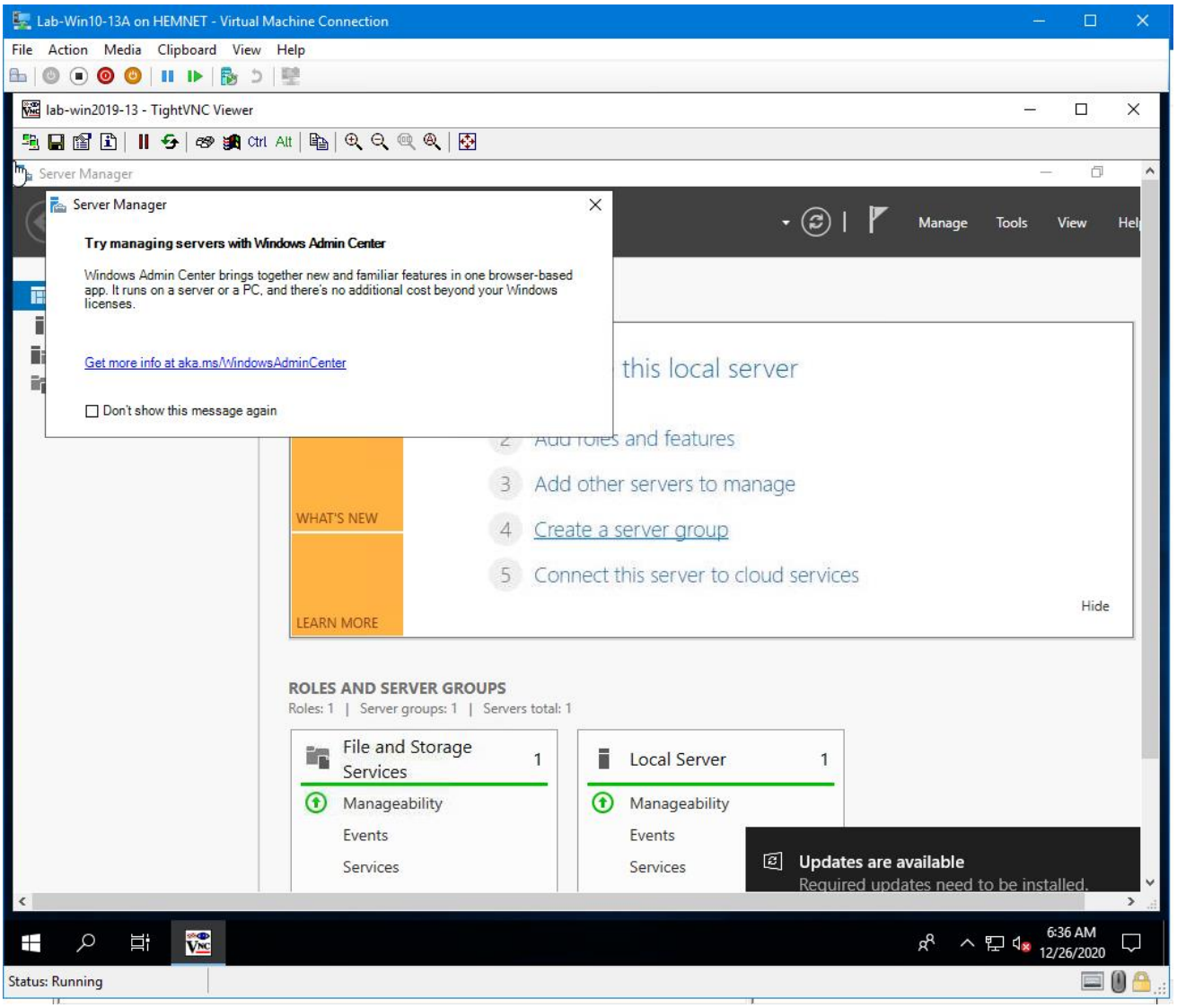
In the example above, the Instructor connects to Instructor Team Windows Server 2019 instance *Lab-Win2019-13*. Note: only one connection at a time can be made to a virtual instance, which is why you are working in teams.

Enter the password you are given in class:

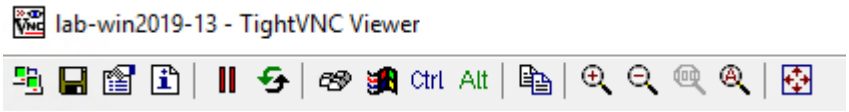


Connect to the CCI Virtual Environment (continued)

You should now be connected in such a way in which you are remote-controlling (via Microsoft RDP virtual machine connection) your Windows 10 virtual instance, which in turn you are using to remote-control (via TightVNC) your team's Windows 2019 Server instance.



Note that the TightVNC Viewer provides for you several controls in the upper-left corner of your screen:



To log into a Windows 2019 Server, for example, you will need to first send a <control><alt><delete> sequence. Note the icon for sending that sequence in the panel above.

Connect to the CCI Virtual Environment (continued)

Be mindful as to which screen you're in at any given time.

Note that your Windows 10 virtual desktop will be inside the screen of the device that you are using to access this class.

In turn, once you use the TightVNC client to connect to your team's Windows 2019 Server instance, the screen for *it* will be inside the screen for your Windows 10 virtual desktop:

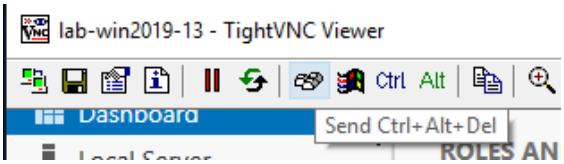
For this lab, only one of your team members needs to log into the Windows 2019 Server instance, as all of your team will be sharing the same screen. At any time, members of your team may assume control of the Windows 2019 Server's keyboard and mouse.

When your Microsoft Windows Server 2019 instance appears, have one team member log in using the following credentials:

username: administrator

password: what is given to you in class (this will be a new password)

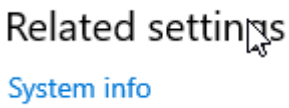
What you will find different than your experience logging in to a Windows 10 instance is that you're required to execute a *Ctrl+Alt+Delete* sequence prior to logging in. Since this is a virtual instance, pressing those keys on your keyboard will activate the sequence on the workstation you are using, rather than the virtual instance.
To enter the *Ctrl+Alt+Delete* sequence on your virtual instance, at the top left of your virtual screen, use the TightVNC taskbar:



Confirm Windows 2019 Server Operation

Action 4: On the Windows 2019 Server instance, have a team member perform the following: From the Start Button, right-click the *Start* button, and from the box that pops up, click *System*:

For some information, you will need to scroll down and click *System info:*



For Deliverable #2, what is the name of your team server? Which versions of which operating system is it using? To which workgroup does it belong?

For Deliverable #3, how much RAM is assigned to it? How many processors?

Confirm Network Connectivity to DNS Server and to Internet

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

Two ways to invoke a Command Prompt are:

1. Right-click the *Start* button and select *Command Prompt* from the pop-up box
2. Right-click the *Start* button, select *Run*, and then enter *cmd*

At the command prompt, enter ping 192.168.50.10 Note: this is the DNS server for the CCI-LAB-DOM network.

At the command prompt, enter ping 4.2.2.2 Note: this is a DNS server located on the Internet

For Deliverable 4, does your team's server have connectivity with the internal DNS server? With the Internet?

At the command prompt, enter *ipconfig /all*

For Deliverable 5, does your team's server have a static IP address, or one assigned via DHCP?

Create a Folder with Content

Action 6: The User Interface (UI) in Microsoft Windows Server 2019 is very similar to that of Windows 10. You may access *File Explorer* in the same manner as you did with *Windows* 10, in *Lab One*.

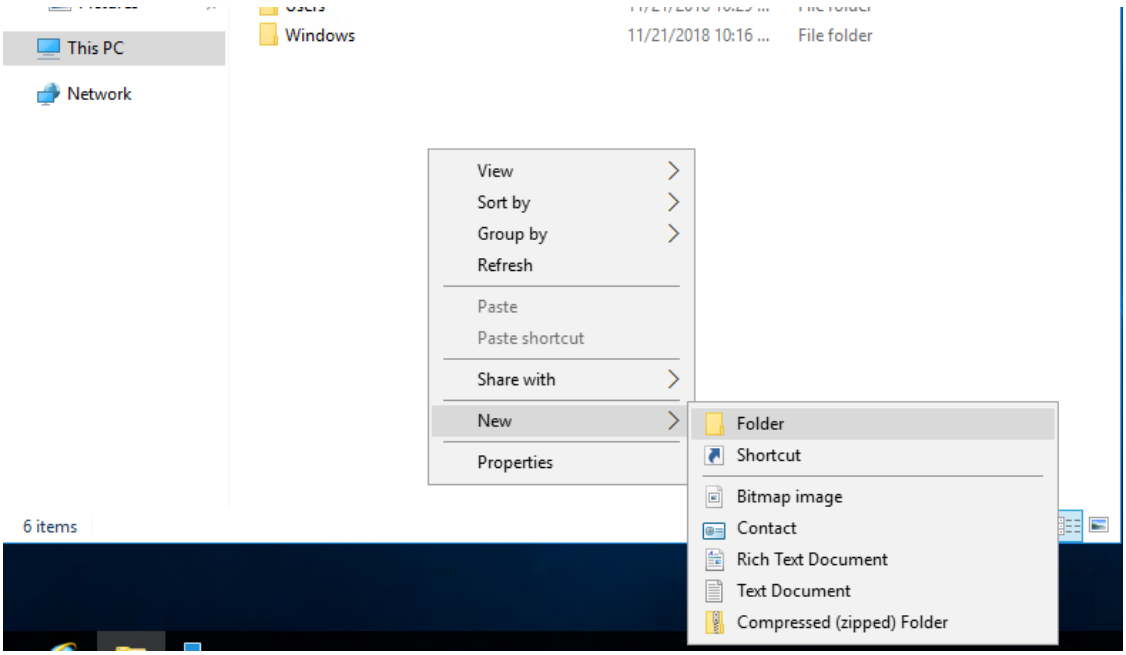
In Microsoft Windows 2019 Server, you will also find a *File Explorer* icon in the taskbar at the bottom of the screen:

↑
File Explorer

Click on the folder icon to open *File Explorer.*

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 this server.

In the whitespace under the folders (e.g. PerfLogs, Program Files, Program Files (x86), Users, Windows, etc.), right-click your mouse and select New → Folder. When prompted, name that folder Our*Share*. 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.



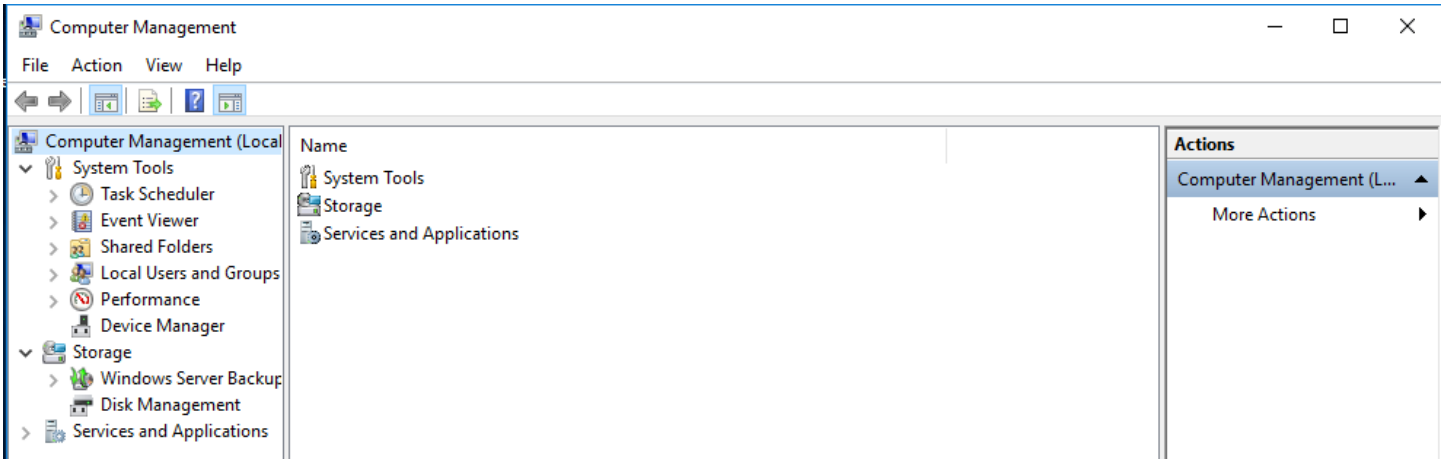
Once created, double-click that document and add a line or two of content to it, and then save the document when you are finished.

You will have created content for sharing, and will later return to the *OurShare* folder to configure sharing.

Click the X to close *File Explorer*.

Create Local Users

Action 7: From the Start Button, select *Computer Management*.



Double-click *Administrative Tools*.

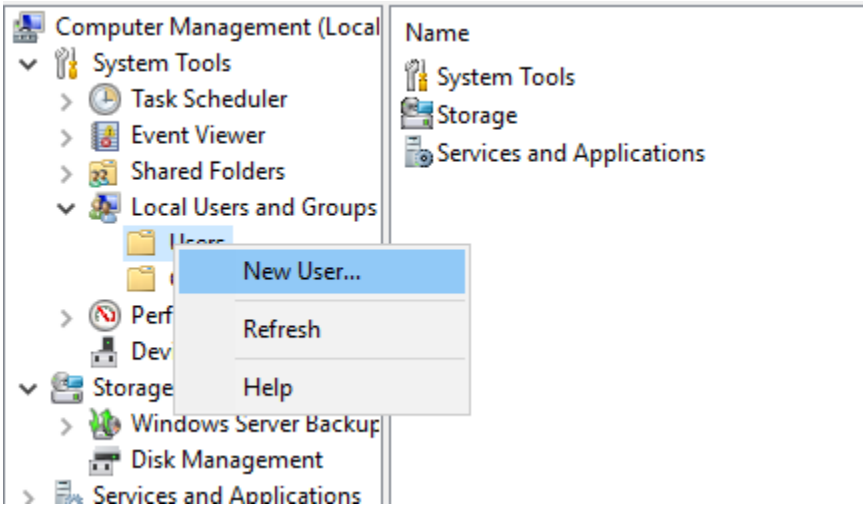
This interface will appear somewhat similar to the interface you encountered while administrating Microsoft Windows 10.

Expand *Local Users and Groups*. You will use this tool to create local users and local groups.

With click *Local Users and Groups* expanded, you will see two folders: Users and Groups.

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

Attention: Each team member will now create a user account for himself or herself. Take turns at the console.



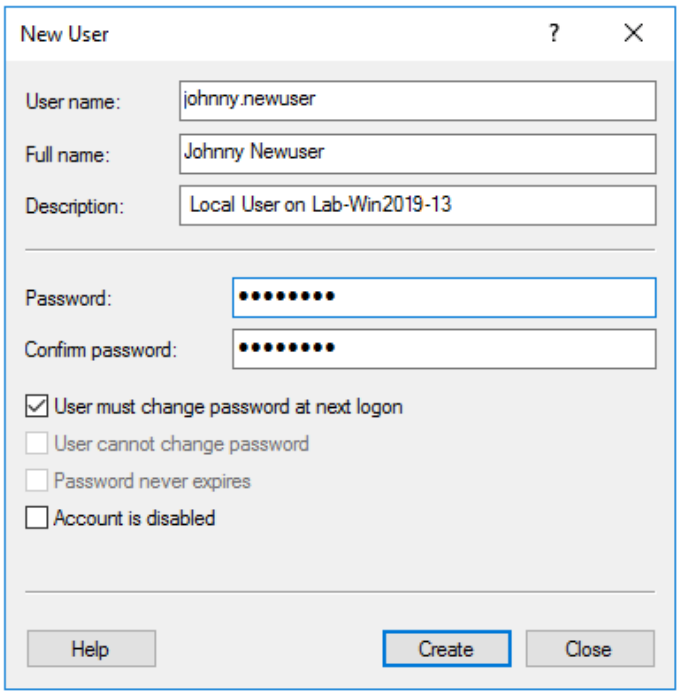
Create Local Users (continued)

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.

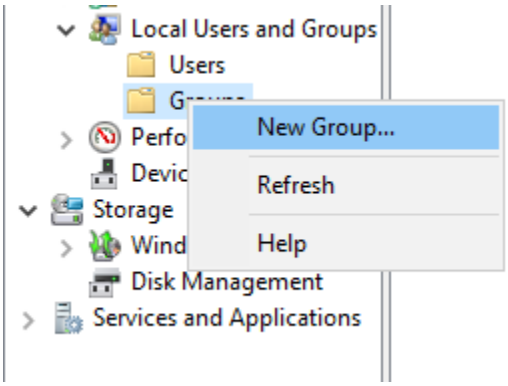
Make note of the checkboxes above, and what they do, and what they are used for in practice.

For Deliverable 6, what is the username of the account you created? For this deliverable, each team member will write down his or her own created username.

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 team to represent.

For Deliverable 7, what is the name of the group that you created to place your team members in?

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

Note: While the user names and groups may seem identical to those you create during the last lab, on your individual Microsoft Windows 10 computers, they have nothing to do with one another.

Make a mental note of the contexts in which these user and group objects exist.

Add Local Users to Local Groups

In this exercise, you will use both 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.

For Deliverable 8, name two groups other than the ones you just created. What do you think they do?

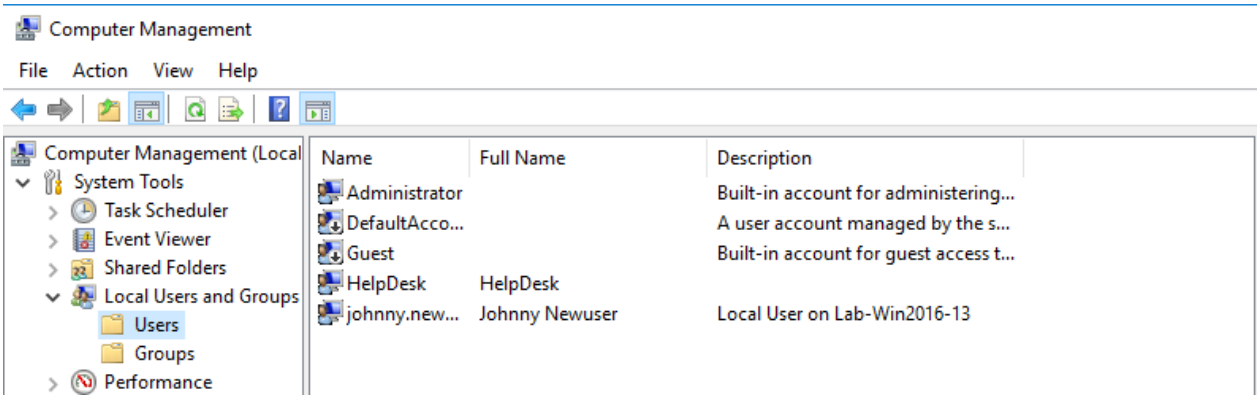
Now you are going to place two of your team members in the group that you just created for your team.

Double-click the group that you created to put your team members. Click *Add* and then in the box under "Enter the object names to select", type the username of the first team member going into that group, 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.

Repeat for the second team member going into this group.

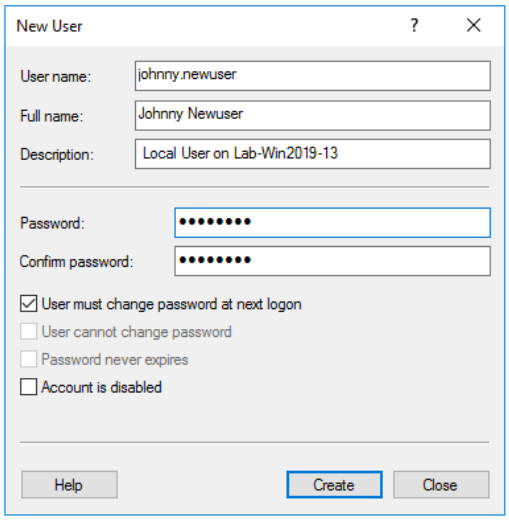
For Deliverable 9, what were the full context names of the two users you chose to place in that group, i.e. *something/somethingelse*?

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



Now you are going to place the remaining members of your team into the *Auditors* group.

Double-click the first of the remaining users.



Add Local Users to Local Groups (continued)

For Deliverable 10, what are some feature tabs that you don't recall seeing in Windows 10 local users properties?

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

Repeat for any remaining members of your team.

Half of your team members should be in one group, and half in the other.

For Deliverable 11, what are the full context names of the users that you placed in the *Auditors* group?

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. You will use a slightly different method than the one you used for your Windows 10 computer share.

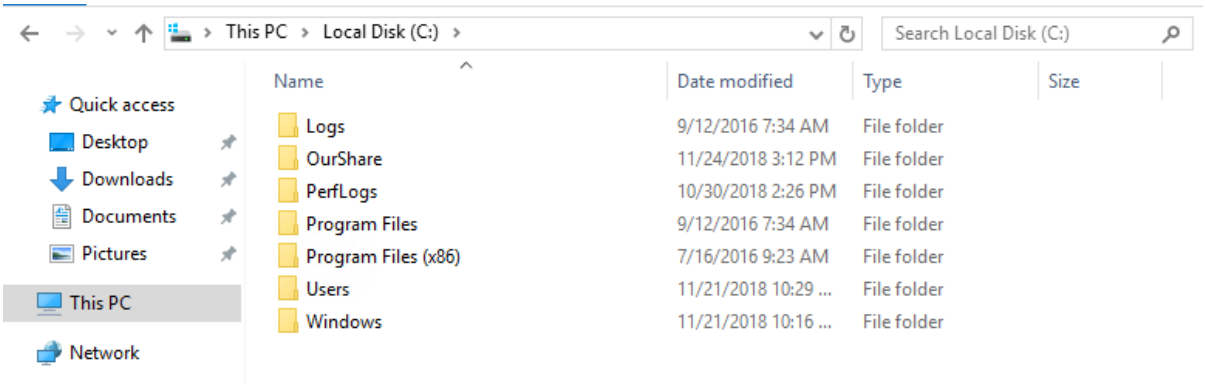
Action 11: In the lower left corner of your screen, you will return to the Taskbar icon that will open *File Explorer*.

Click on the folder icon to open *File Explorer.*

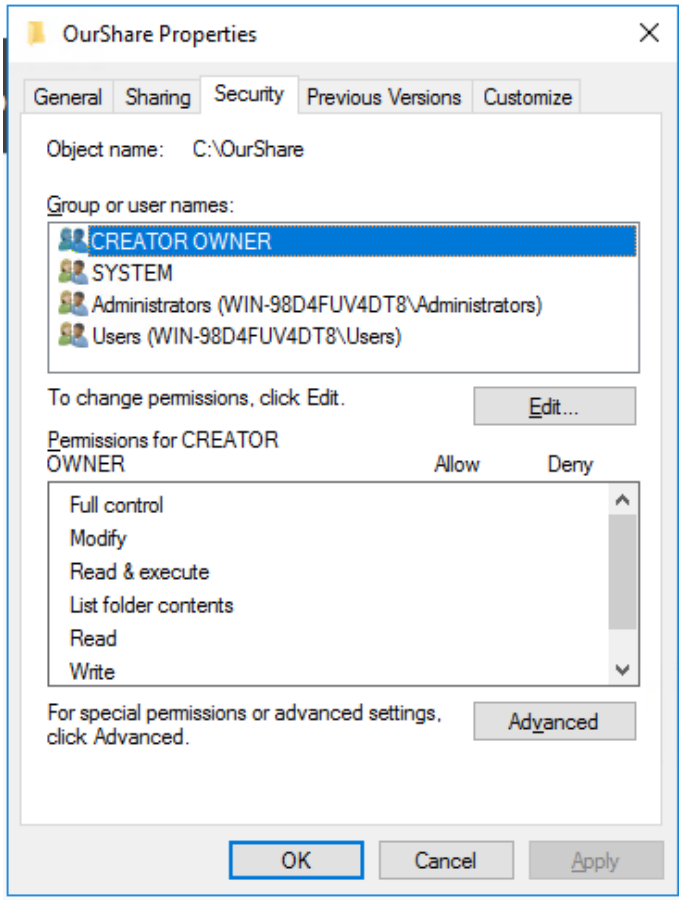
File Explorer

Set NTFS Permissions

Action 12: Once *Windows Explorer* is open, click on *Computer* in the left pane, and then double-click on *Local Disk (C:)* under *Hard Disk Drives*. You are now browsing the filesystem for your own workstation. Browse until you see your *OurShare* folder again:



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



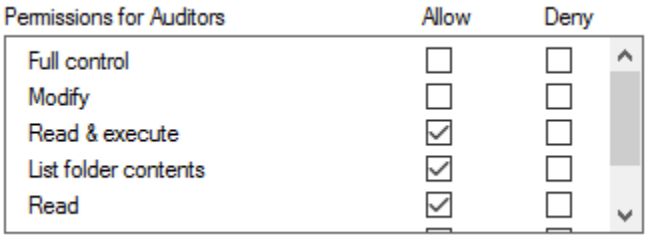
For Deliverable 12, what are members of the *Users* group allowed to do by default?

Set NTFS Permissions (continued)

Action 13: Click the Edit button in the box above.

Click the *Users* group under *Permissions*, and then Click Remove.

For Deliverable 13, what happens when you attempt to remove *Users* from the *OurShare* folder's permissions? Select the correct boxes to give members of that group enough access to read, write, and modify files, but not enough to where members of that group are able to dictate to others which permissions they have.



Click OK when finished.

For Deliverable 14, which boxes did you select?

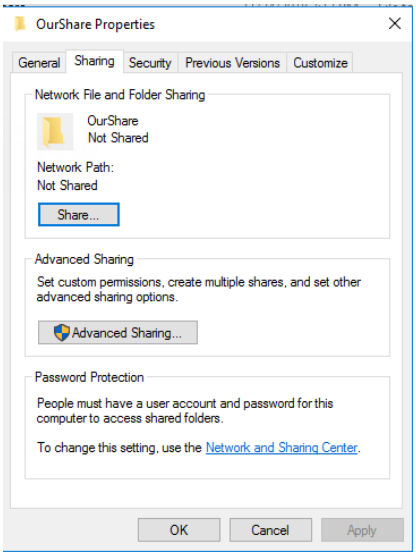
Action 14: add permissions that give members of the *Auditors* group the ability only to read files in the *OurShare* folder, but not to add or delete files, or modify them in any way.

For Deliverable 15, which boxes did you select?

Set Share Permissions

Action 15: Select the *Sharing* tab of the *OurShare* folder's properties:

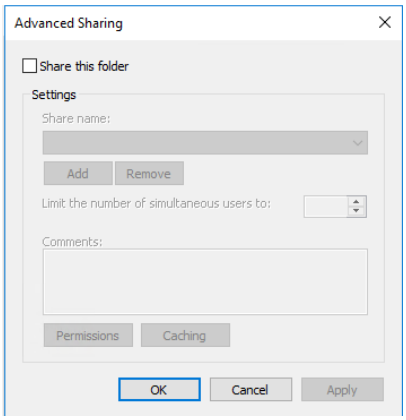
Click the *Add* button, and enter in the name of the non-Auditors group that you created in Action 8 – the one you created to put some of your team members in. Press *Check Names* if you wish to confirm that you're entering it correctly and press *OK* to close the *Select Users and Groups* box and complete the entry.



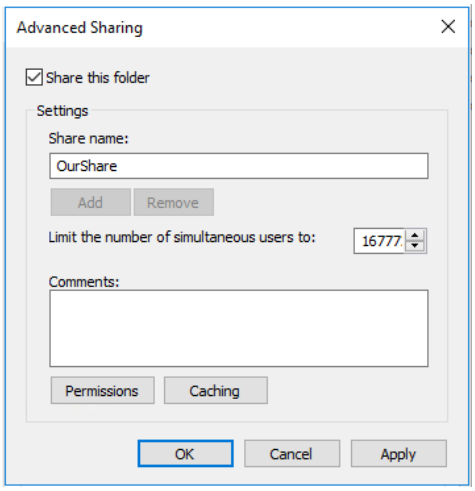
Set Share Permissions (continued)

This time, you are going to take a different approach to creating a share – one that will work *properly* the first time.

Click *Advanced Sharing*:

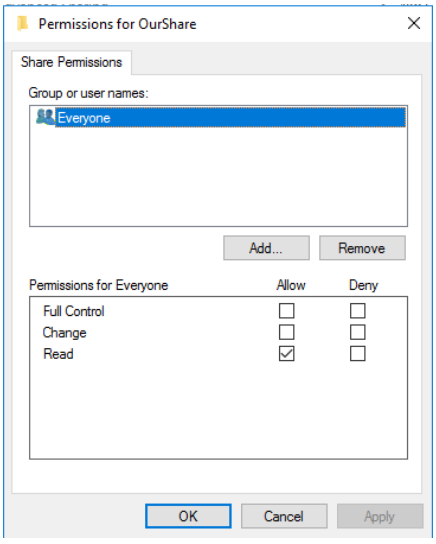


Check the *Share this folder* box.



Note the different number of maximum users allowed to access this share as opposed to what you encountered in Windows 10 sharing.

Click *Permissions*.



Remove all share permissions for group Everyone, and then add the appropriate share permissions for the group that you created for your team, and then the group you created for *Auditors*.

For Deliverable 16, what share permissions did you create for the group you created for your team?

For Deliverable 17, what share permissions did you create for the group *Auditors*?

For Deliverable 18, what is the full name of the Uniform Naming Convention (UNC) for this share? Hint: you may find this information under *OurShare Properties*, under *Network Path*.

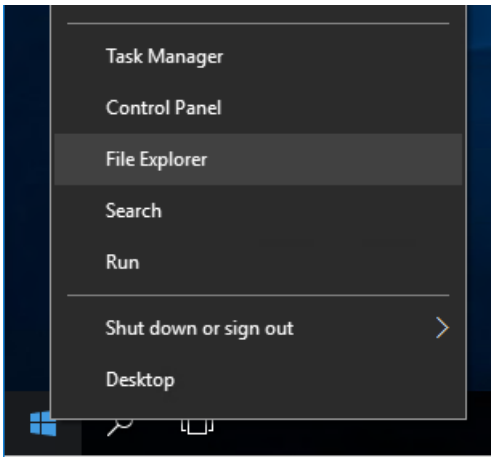
Press OK and then DONE to complete creating the share.

Test the Share that You Have Created: Map a Network Drive from a Windows 10 Workstation

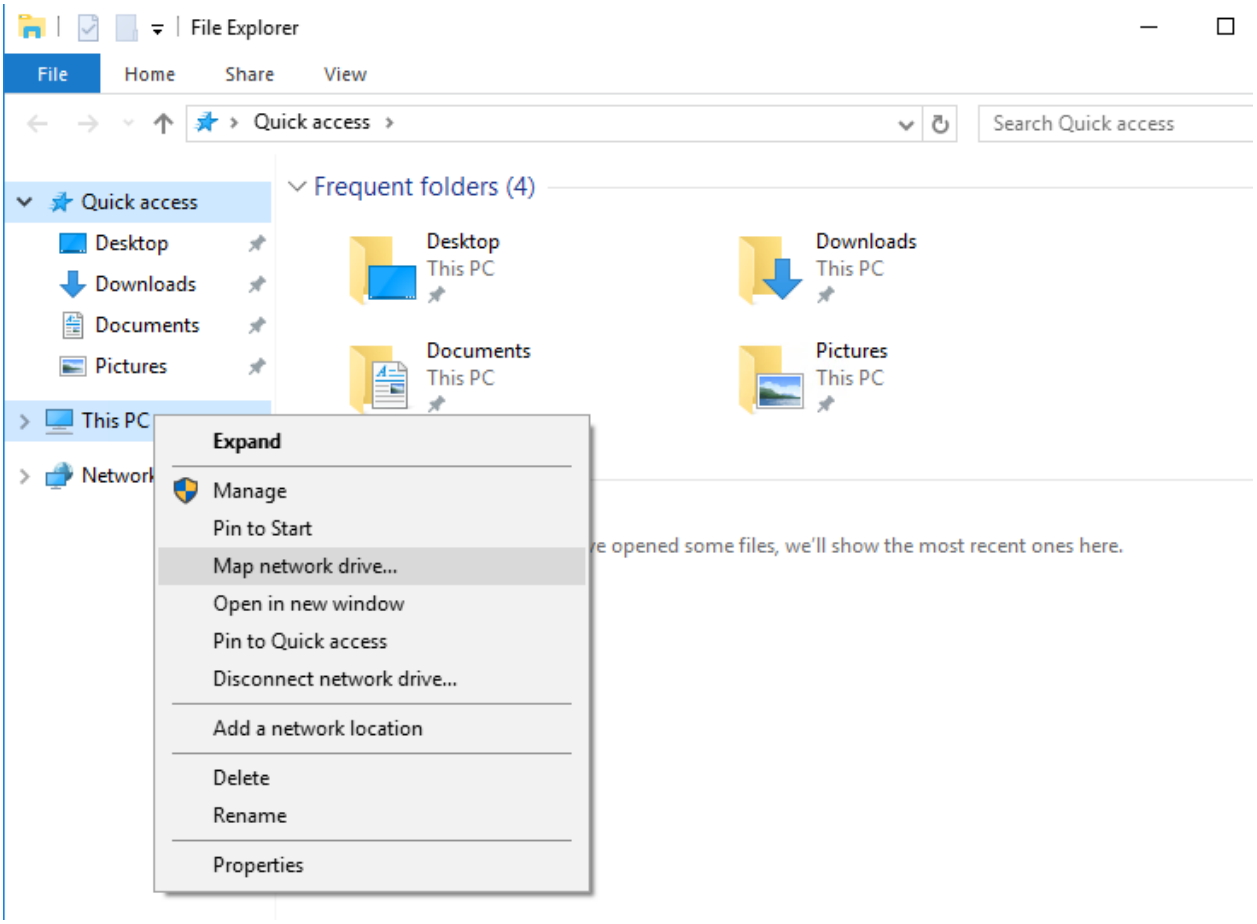
You will now test the share that you have created.

Have each of your team members return to his or her own workstation, and then open a virtual Windows 10 instance in the manner that you did for *Labs 1 and 2*.

Action 17: Right-click the *Start* button of your Windows 10 instance to open the pop-up box below:



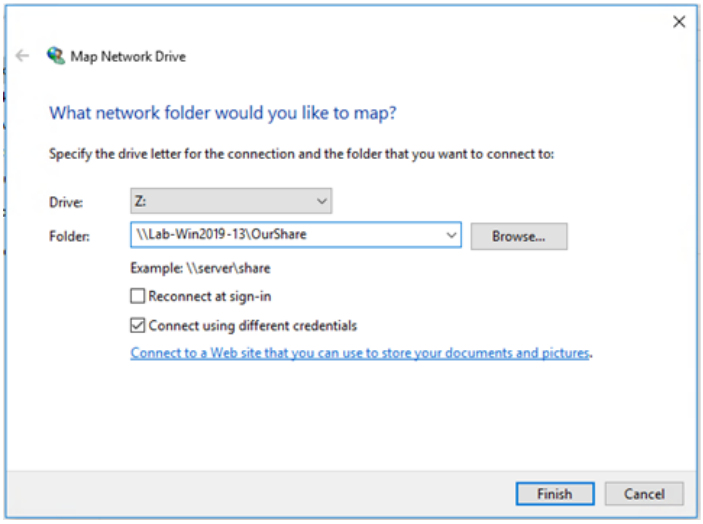
Click *File Explorer*, right-click *This PC*, and click *Map Network Drive*.



\

Test the Share that You Have Created: Map a Network Drive from a Windows 10 Workstation (continued)

Under *Folder*, type the UNC of the share you created on your Microsoft Windows 2019 Server server.
Note: you will find this information in Deliverable 18.



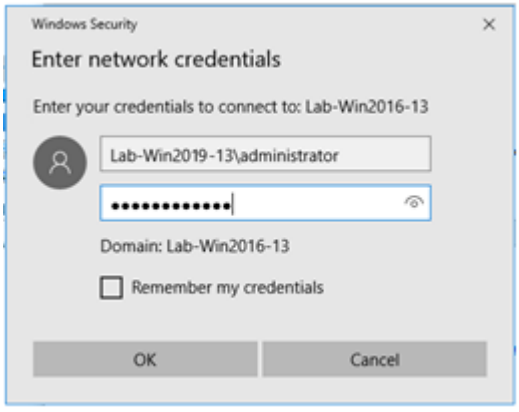
In the example above, Team 13 is mapping Drive Z on Windows 10 computer *Lab-Win10-13A* to the *Auditors* share created on Windows 2019 Server computer *Lab-Win2019-13*. Yours will be different, according to your team.

Remember this time that whatever credentials you used to log into your Windows 10 instance have *absolutely nothing to do* with the credentials you need to log into the Windows 2019 Server server so that you can access the share.

Check the box *Connect using different credentials*.

Click *Finish*.

You will now be asked for credentials, by the Windows Server 2019 computer.



Note the name of the "Domain" that appears when being asked for your credentials: this will be the name of the Windows 10 workstation from which you are attempting to connect to the share. This is incorrect: you'll need to use the credentials of the Windows 2019 Server computer on which you created the share today.

Test the Share that You Have Created: Map a Network Drive from a Windows 10 Workstation (continued)

Enter the username and password that you created for yourself in Action 7.

Under *User Name*, however, you'll need to specify the correct full context:

*ServerName**theUserNameThatYouCreatedForYourselfEarlier*

You wrote down *ServerName* for Deliverable 2.

The share should now appear. You will also see the share mapped as a drive in *File Explorer*: your workstation now thinks that this share is just another of its drives.

For Deliverable 19, do you see a file in this folder? What is its name? What is its contents?

Deliverables

Deliverable 1: From Action 1, write your name, the number of your team, the name of your partners, and the date.

Deliverable 2: From Action 4, what is the name of your team server? Which versions of which operating system is it using? To which workgroup does it belong?

Deliverable 3: From Action 4, how much RAM is assigned to it? How many processors?

Deliverable 4: From Action 5, does your team's server have connectivity with the internal DNS server? With the Internet?

Deliverable 5: From Action 5, does your team's server have a static IP address, or one assigned via DHCP?

Deliverable 6: From Action 7, what is the username of the account you created? For this deliverable, each team member will write down his or her own created username.

Deliverable 7: From Action 8, what is the name of the group that you created to place your team members in?

Deliverable 8: From Action 9, name two groups other than the ones you just created. What do you think they do?

Deliverable 9: From Action 9, what were the full context names of the two users you chose to place in that group, i.e. *something/somethingelse*?

Deliverable 10: From Action 10, what are some feature tabs that you don't recall seeing in Windows 10 local users properties?

Deliverable 11: From Action 10, what are the full context names of the users that you placed in the *Auditors* group?

Deliverable 12: From Action 12, what are members of the *Users* group allowed to do by default?

Deliverable 13: From Action 13, what happens when you attempt to remove *Users* from the *OurShare* folder's permissions?

Deliverable 14: From Action 13, which boxes did you select?

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

Deliverable 16: From Action 15, what share permissions did you create for the group you created for your team?

Deliverable 17: From Action 15, what share permissions did you create for the group *Auditors*?

Deliverable 18: From Action 15, what is the full name of the Uniform Naming Convention (UNC) for this share?

Deliverable 19: From Action 17, do you see a file in this folder? What is its name? What is its contents?