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1.   Setting up a Shared Folder and Security Group

1.1   Creating a Shared Folder

1. Sharing folders and files has many advantages, it enables users to collaborate on projects, helps back up documents, and helps protect companies by controlling access to documents. We will be setting up a shared folder on our 216DC machine. First, we will create a folder called PIAT on the root of our C: drive. To do this, navigate to the root of the C: drive by going to **File Explorer>This PC>Local Disk (C:)**. Right click anywhere in the white and highlight over **New** the click on **Folder**.
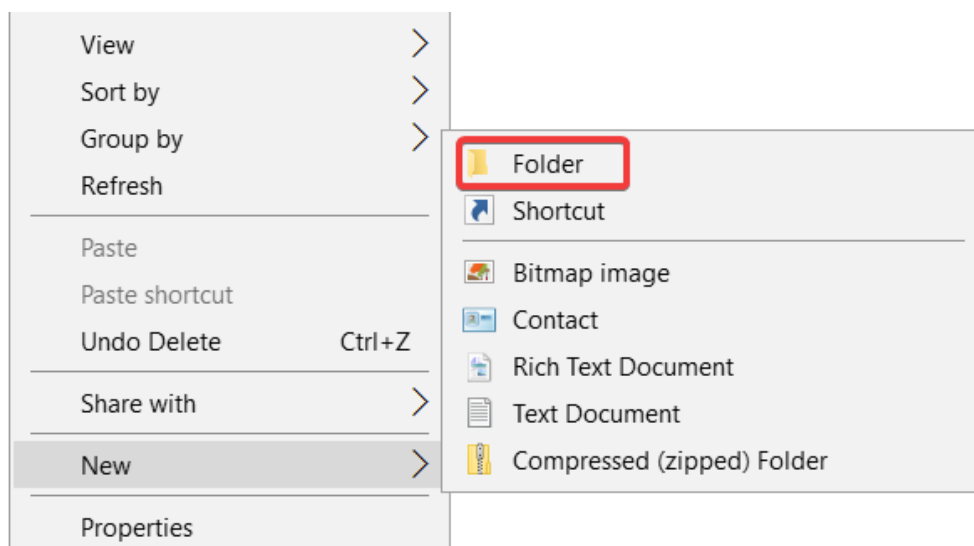
2. Name the folder **PIAT** then right click on the folder and go to **Properties>Sharing.** Click on **Advanced Sharing** and when the Advanced Sharing box pops up put a check in **Share this folder**.
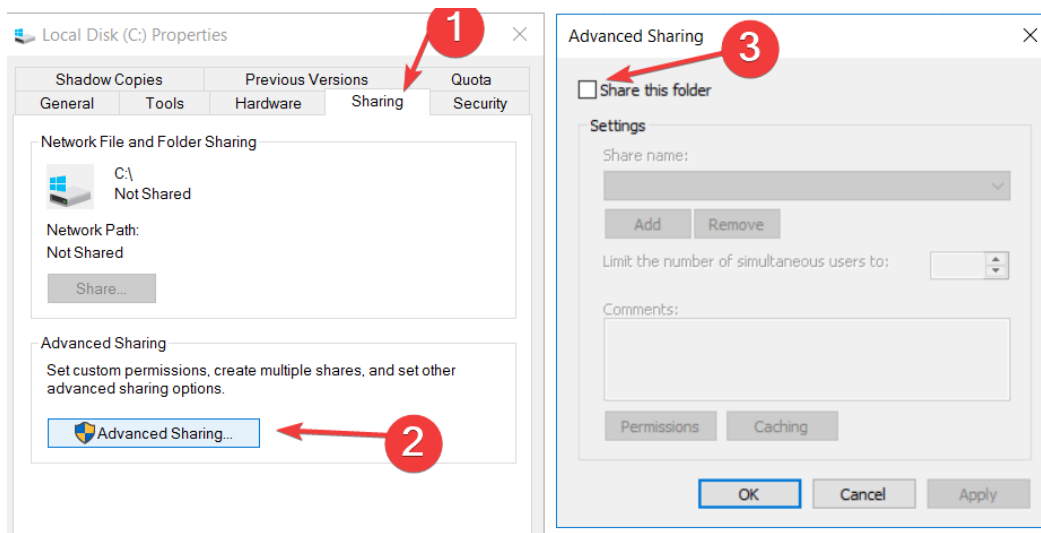

3. Let's call the share name PIAT and click on Permissions.
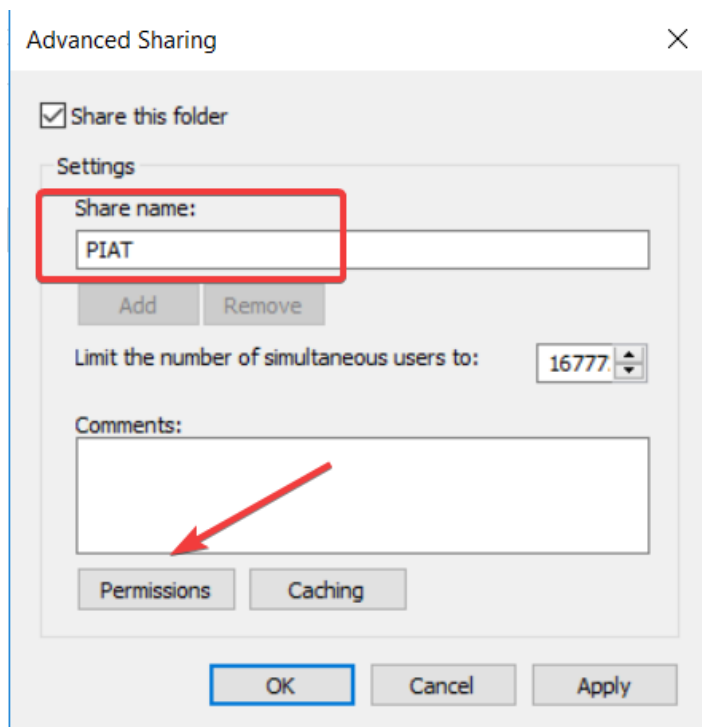
4. For security purposes we will remove the Everyone group, make sure **Everyone** is highlighted and select **Remove**. Now we are going to give the Special Identity group named Authenticated Users the permission of Change when accessing this folder. To do this we need click on the **Add** tab and when Select Users, Computers, Service Accounts, or Groups box pops up we will type **Authenticated Users** in the Enter the object names to select box and click **Check Names** and **OK**.
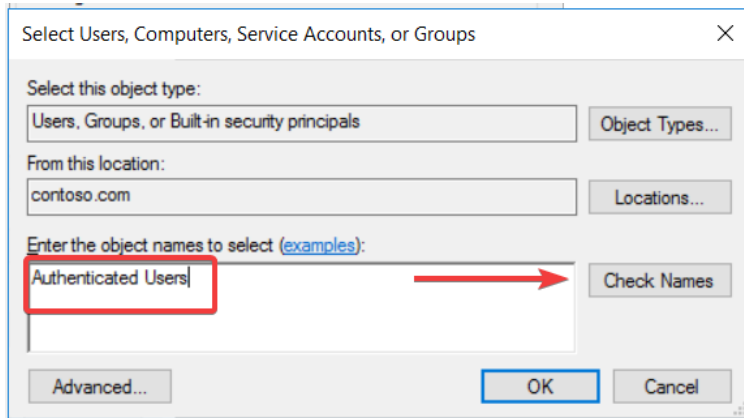

5. We want to give Authenticated Users the permission of Change so put a check in **Change**, then click **Apply** and **OK**. This gives us our shared folder.
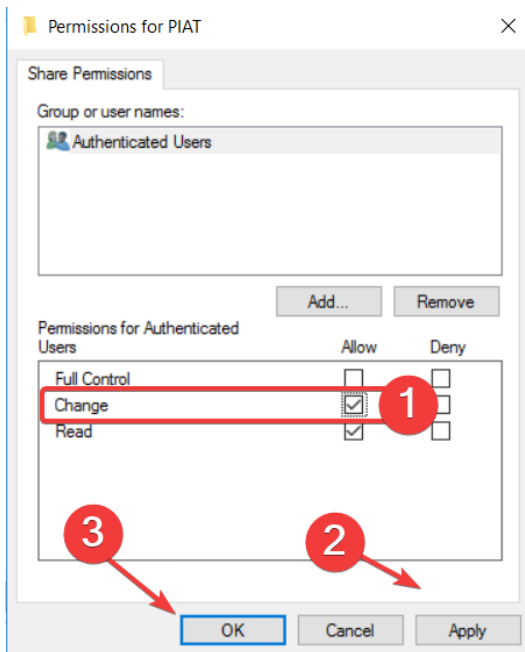
1.2   Creating a User and Security Group

1. Now we will be creating a User and Security Group in our contoso.com domain. To do this navigate to Active Directory Users and Computers by going to **Start>Windows Administrative Tools>Active Directory Users and Computers**. First, we will be creating a new Organization Unit (OU). An OU is a container within an Active Directory domain that can hold users, groups, and computers. To create an OU, right click on **contoso.com** and highlight over **New** and click **Organizational Unit.**
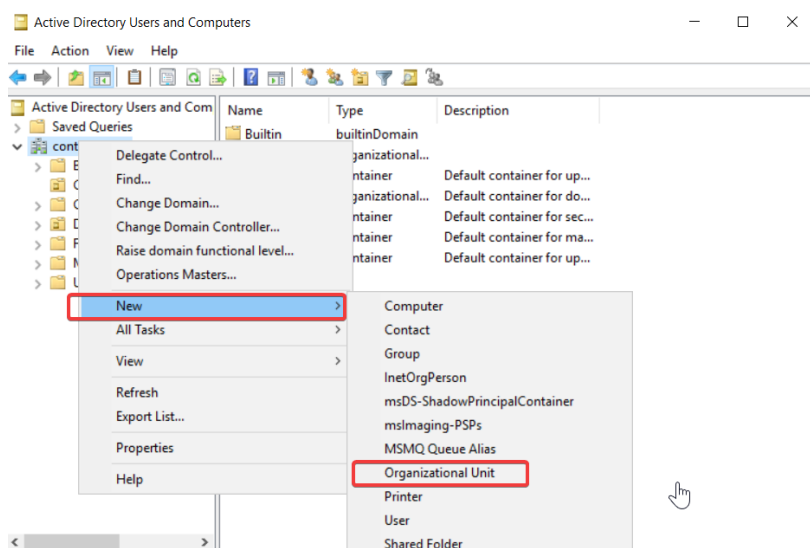
2. Name it **CIS216** an click **OK**.
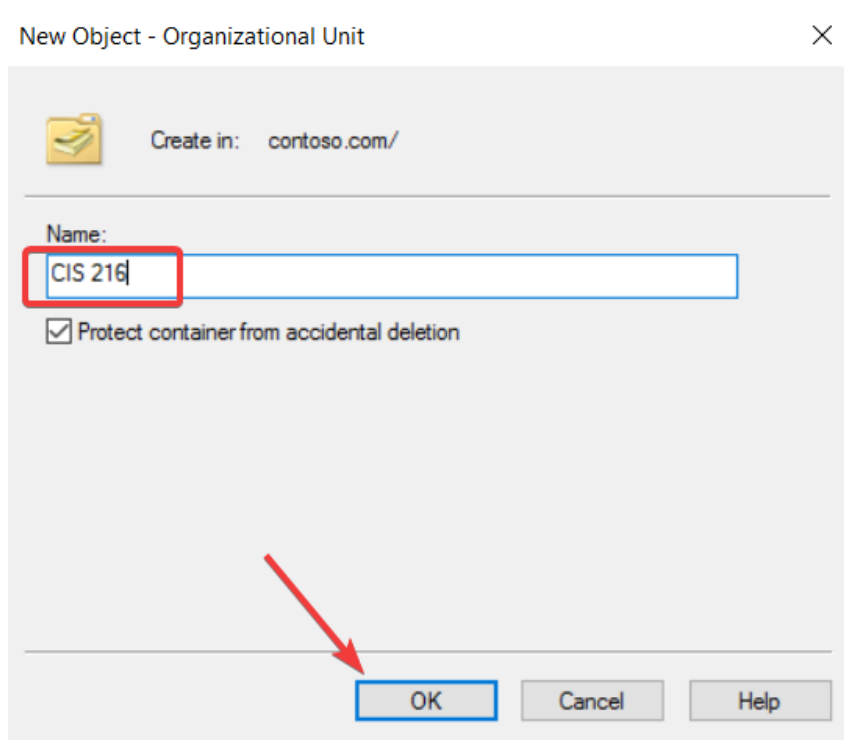
3. Now we are creating a new user account. *A user account is used by Windows to help administer what changes a user can make on a computer, and to distinguish what files and folders that you have access to*. To do this right click on the **CIS216** OU**,** highlight over **New**, and click **User.** I am going to fill in the boxes with my name and for User logon name I will choose P.Mueller. Then click **Next**.

4. Create a secure password, then take the check out of **User must change password at next logon** and put a check in **User cannot change password** and **Password never expires**. Then click **Next,** then **Finish** on the next page.

5. Next we will create a Security Group. *A security group is used to help with administering permissions to multiple users, by default a group is a security group*. Right click 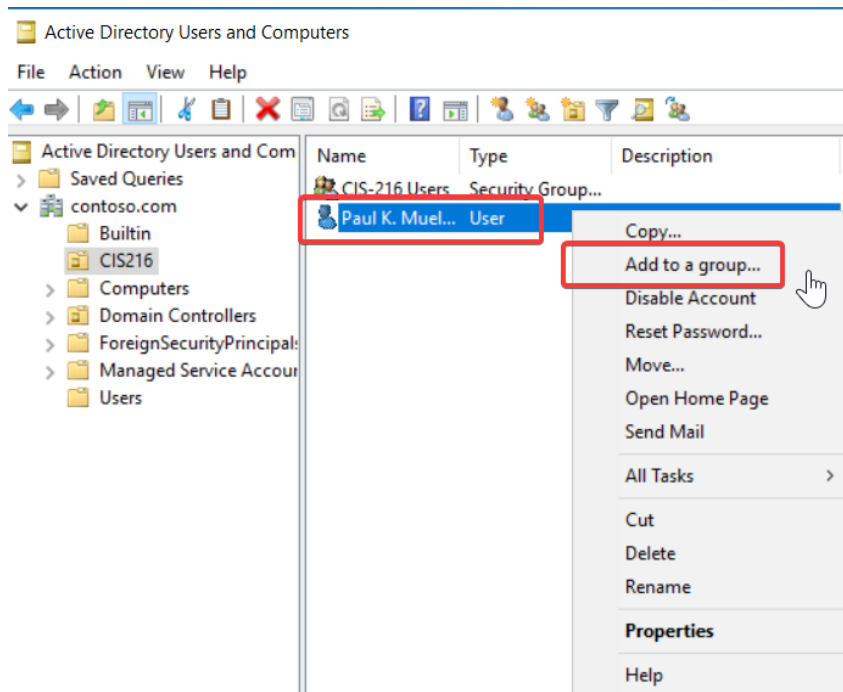on a blank space under our new user we created. Highlight over **New** and click on **Group**. Put a name of **CIS-216 Users** and then click **OK**.
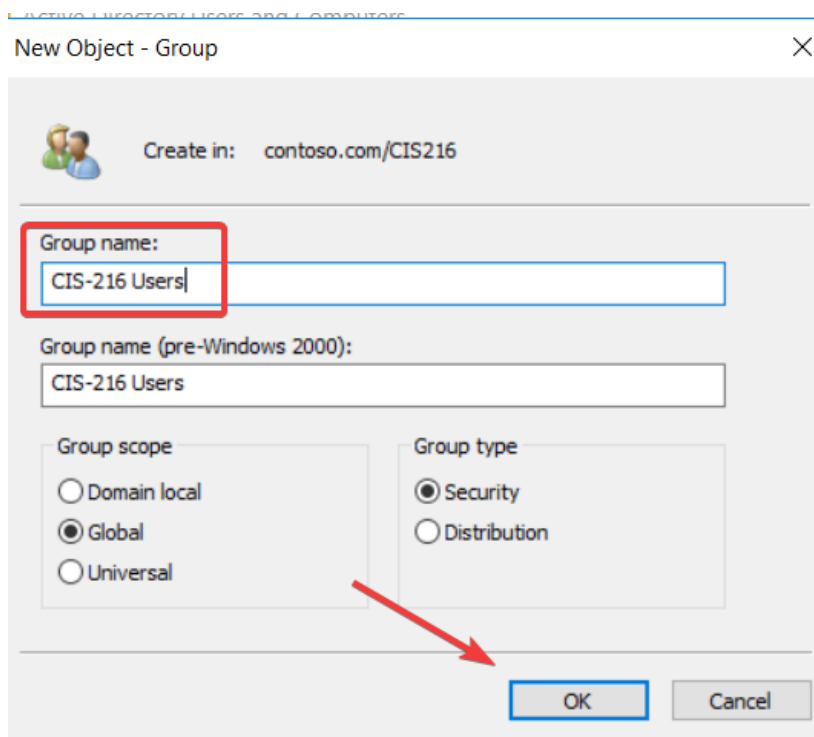

6. Now I want to add Paul K. Mueller to the CIS-216 Users group. To do this I want to right click on **Paul K. Mueller** and go to **Add to a group**.

7. Type in **CIS-216** under Enter the object names to select and click **Check Names**, the name should change to **CIS-216 Users** and click **OK**.
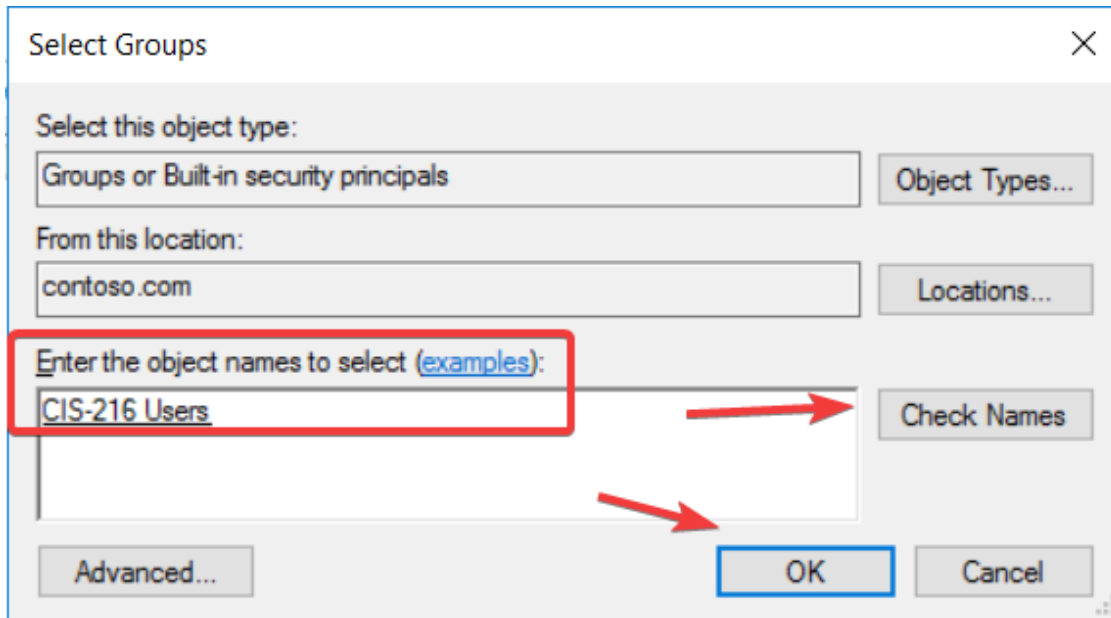
8. Now we want to assign NTFS Permissions to the CIS-216 Users security group to our shared PIAT folder. To do this navigate back the root of C: and right click the **PIAT folder** and go to **Properties** then the **Security** tab. The Security tab is where you configure your NTFS permissions. Click on **Edit**, then on the Permissions for PIAT page, select **ADD**, and enter **CIS-216 Users** and click **Check Names** and **OK**.
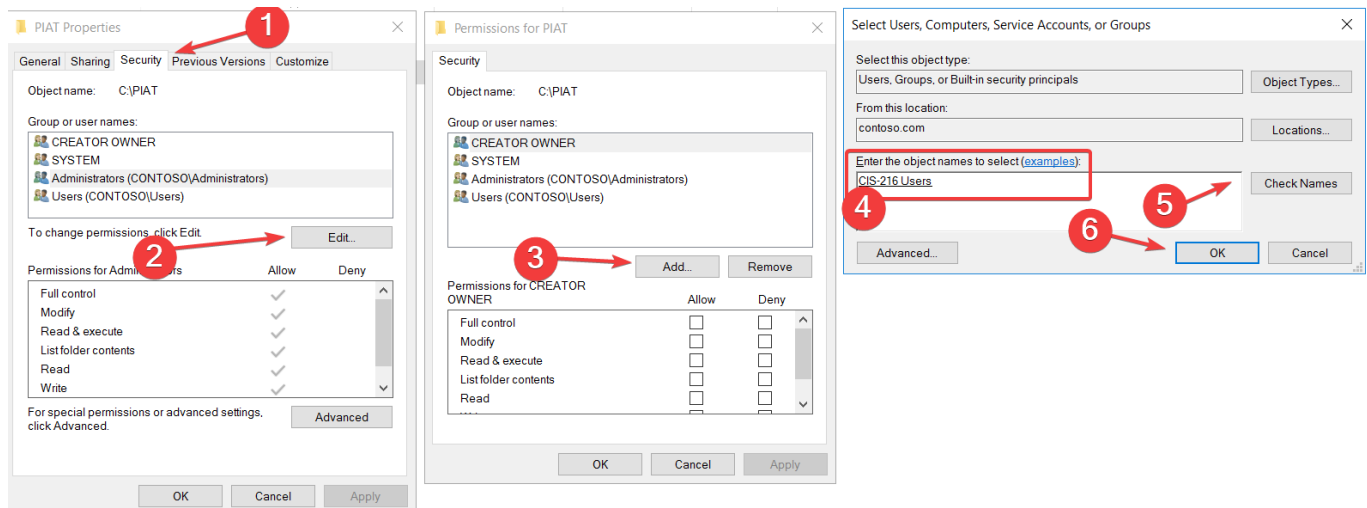
9. We are going to give our CIS-216 Users the Permission of Modify so put a check in **Allow** under **Modify**, then click **Apply** and **OK**.
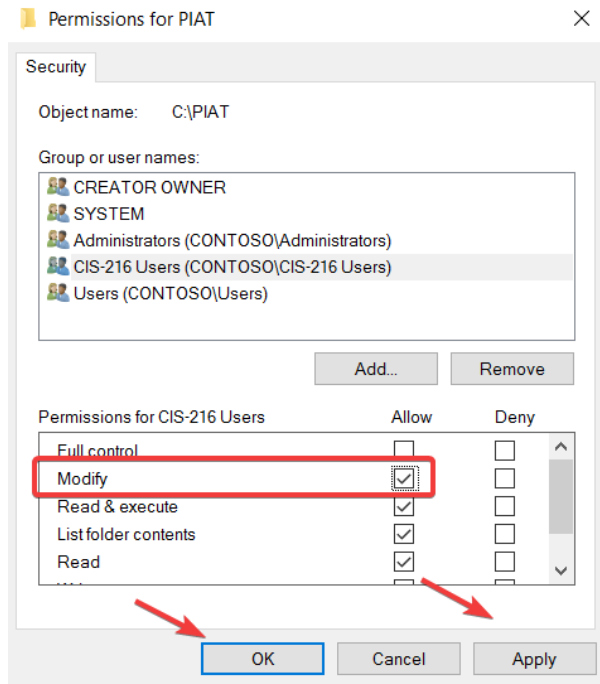
2. Mapping a Network Drive and Configuring Shadow Copies and Quotas

2.1   Mapping the PIAT Folder to a Network Drive with PowerShell

1. To create our Network Drive that can be shared across the network, we need to log on to our 216 Client machine and login as the new user we created in the above steps. Once logged in open PowerShell and type any one of these commands:

New-SmbMapping -LocalPath X: -RemotePath \\216DC\PIAT -Persistent $true

https://docs.microsoft.com/en-us/powershell/module/smbshare/new-smbmapping?view=win10-ps

New-PSDrive -Name "X" -PSProvider FIleSystem -Root "\\216DC\PIAT" -Persist

https://docs.microsoft.com/en-us/powershell/module/microsoft.powershell.management/new-psdrive?view=powershell-7

net use W: \\216DC\PIAT /Persistent:Yes

https://www.howtogeek.com/118452/how-to-map-network-drives-from-the-command-prompt-in-windows/

2. Restart the 216Client and navigate to **File Explorer>This PC** to verify that the network drives are persistent and will remain mapped after a reboot.
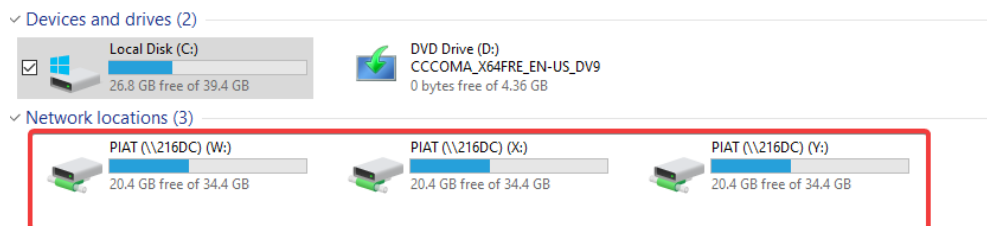

2.2 Create and Configure Shadow Copies

1. Now I will be creating and configuring Shadow Copies. *Shadow Copies allow you to recover deleted or overwritten files.* Create a folder on the desktop named **Shadow Copy Test**. Now to create a Shadow Copy, right click the **C:** drive on the 216DC machine. Go to the **Shadow Copies** tab and click **Enable**. Click **Yes** when it tells you that Windows will use the default schedule and settings. Once enabled it should create a Shadow Copy. You can also click **Create Now** to create a Shadow Copy.
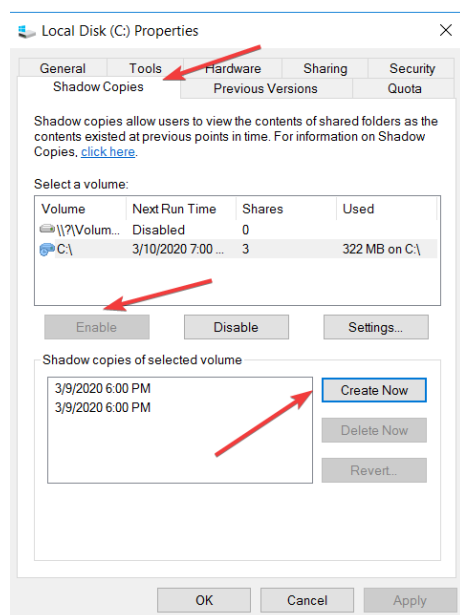
2. To view Previous Versions of Shadow Copies click on the **Previous Versions** tab at the top. To show how Shadow Copies work, delete the folder we created on the desktop named "Shadow Copy Test". Now click on one of the Shadow copies in the "Folders Version" box and click **Open**.
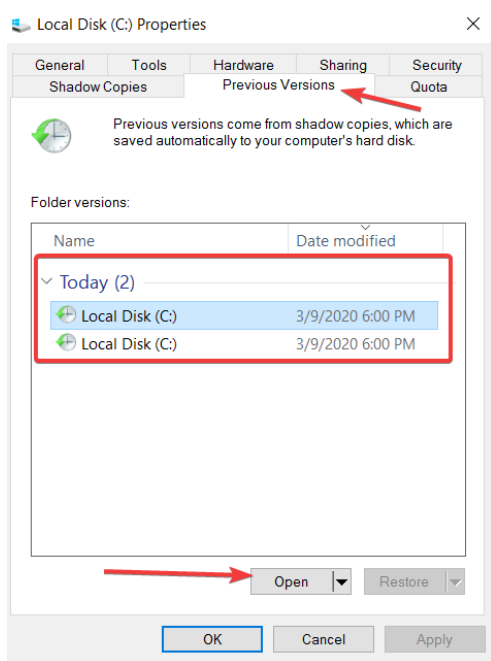
3. Navigate to **Users>Administrator>Desktop** and you should notice the Shadow Copy Test folder that we just deleted. You can right click on this folder and copy it to paste the folder back on to the desktop. This is how you can restore a deleted file or a previous version of a file or folder.
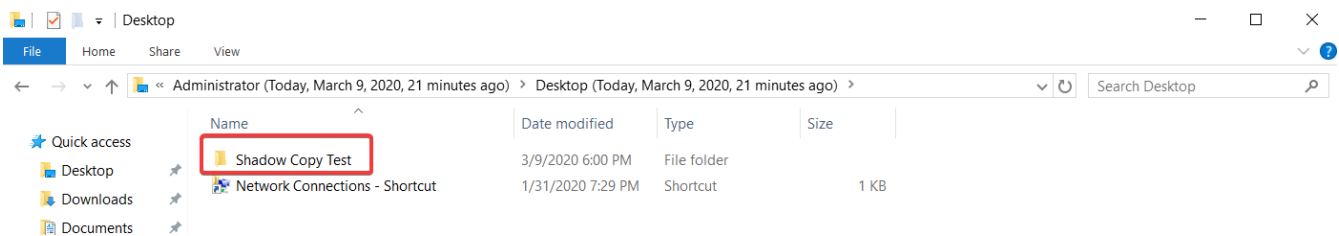
2.3   Creating and Configuring Quotas

1. Now I will be creating a Quota. *Quotas allow administrators to limit the amount of storage a user has on a specific volume*. To do this right click on the **C:** drive and select the **Quotas** tab. Put a check in the **Enable quota management** and on "Select the default quota limit for new users on this volume", select **Limit disk space to**, click the drop down box and select **EB** (exabyte). Put a check in **Log event when a user exceeds their warning**

level. Then click **Apply**. Click **OK** when the box pops up stating You should enable the quota system only if you intend to use quotas on this disk volume.