Redirecting mobile
profiles in Windows
UDS Enterprise
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Introduction

The personalization of the operating system, applications and base files (documents, images, music, video, favourites…) made by each user is considered as a profile. Therefore, each user has its own profile: desktop background, position of the icons, Word templates, position of the toolbars, documents, images…

When the user logs into a machine for the first time, **his folder** with subfolders and customized files are created. This folder is named **profile**.

The profile is divided into two sections:

- **Configuration data.** Contains part of the registry, temporary files, and application configuration files.
- **User data.** It contains the data generated by the user: my documents, images, videos, music.

In this documents we'll show through an example how to configure the Redirection of Mobile Profiles in Windows in a simple way.

Why performing profile redirection?

Before starting, we'll provide some questions with their answers to understand how profiles redirection is carried out.

What happens when a user changes the computer?

When a user changes the computer, a new profile is created again with different files and configurations. Example: if the user created some documents on the computer A, when he moves to computer B these documents are not there. If he put a wallpaper on computer A, on computer B he'll find a different one, etc…

Changing from one computer to another can cause a big problem for the user. But what happens when the computer breaks down? Most times, the user stops working because he no longer has his data, losing his working tool.

And for the administrators?

The thing is even more complicated if users are changing computers. On each new computer a new profile with data will be created. This situation complicates management of information security (who has access, where is the information…), backup copies… Another example would be when a user leaves the company and his data have to be deleted.

What should we do with profiles?

Due to the architecture of the system, the configuration data are needed locally on each computer where the user starts the session. In contrast, user data does not need to be on all computers. They should be in a single place, accessible from any computer by the corresponding user.

The first thing to do is **unlink the profile of each machine**. That means that the profile is unique for each user in all the computers in the network (domain) so that if a user has to change computer his data will travel with him. This is achieved by locating the data in a single place: the file server. The user profile becomes a mobile profile, traveling with the user. To do it correctly you must configure the following section:

Configuration data: It´s the **mobile part**. It is copied in each computer each time the session is started and closed.

Storage of data and permissions

Preparation of the central warehouse

In case of the information of the company, it is advisable to create a security group that groups “real” users to assign permissions to the file system, avoiding as much as possible the Domain users group (which also includes the anonymous users, guests, and services). In this example, the group **“Mobile Profile”** will be used, where the accounts of the different real users that are registered will be added.

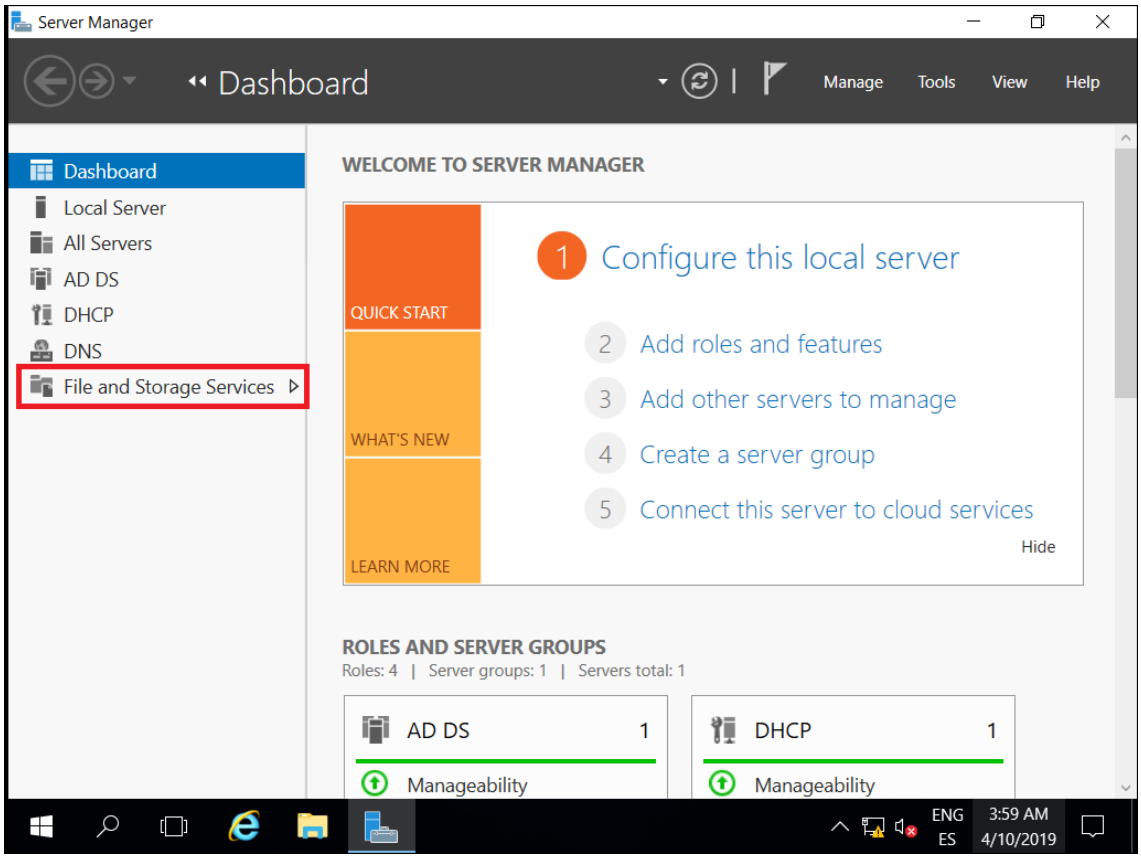
We will create a folder to store user data (in this example we will call it Profiles) on the file server.

Profiles. It will contain the folders of each user with the configuration part (mobile part). Remember that the data is copied to each computer in which the user starts session and is updated on the server each time the sessions is closed. We will have a part that will not move from each device and therefore will be different: temporary files.

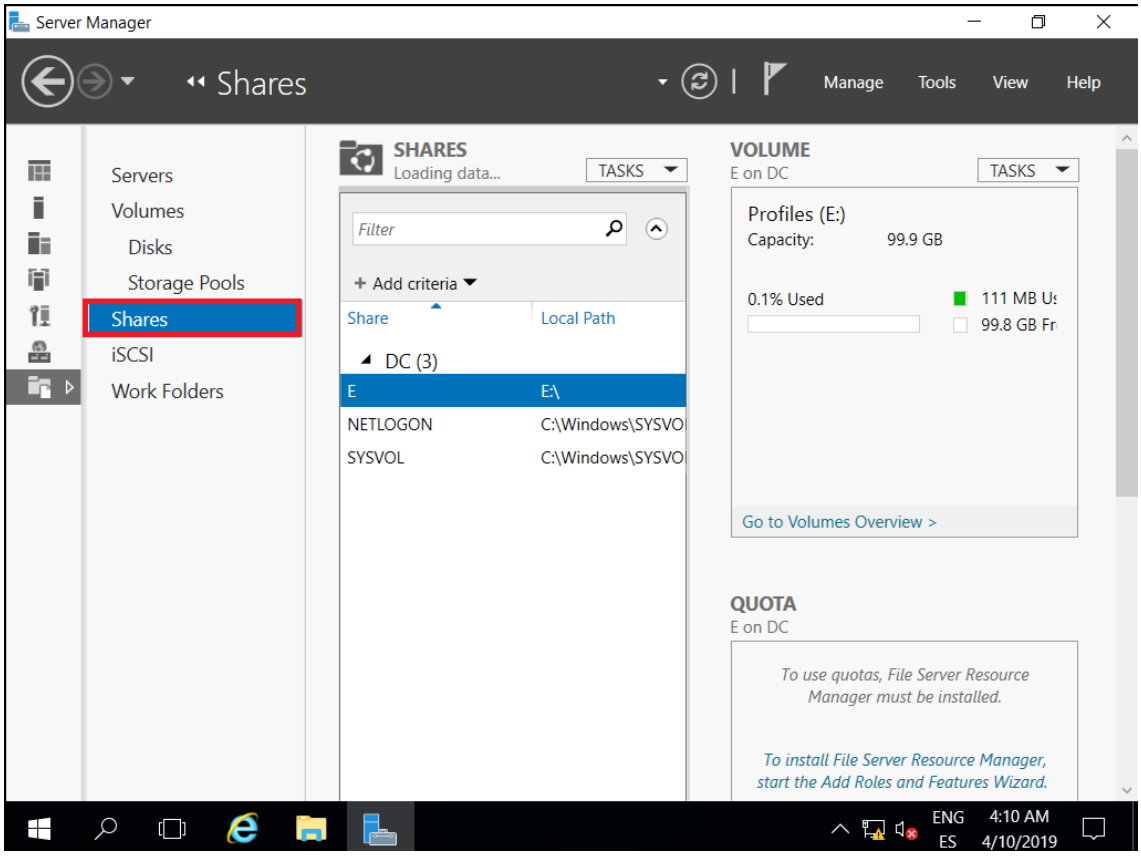
It is important to bear in mind that each folder must have specific permissions. In this way, the system itself generates the folders with no need for the administrator to create them previously.

In this example, we’ll start by creating a shared resource, which is where all the information of the users will be stored, (Desktop, Documents, Images…) and everything we want to redirect.

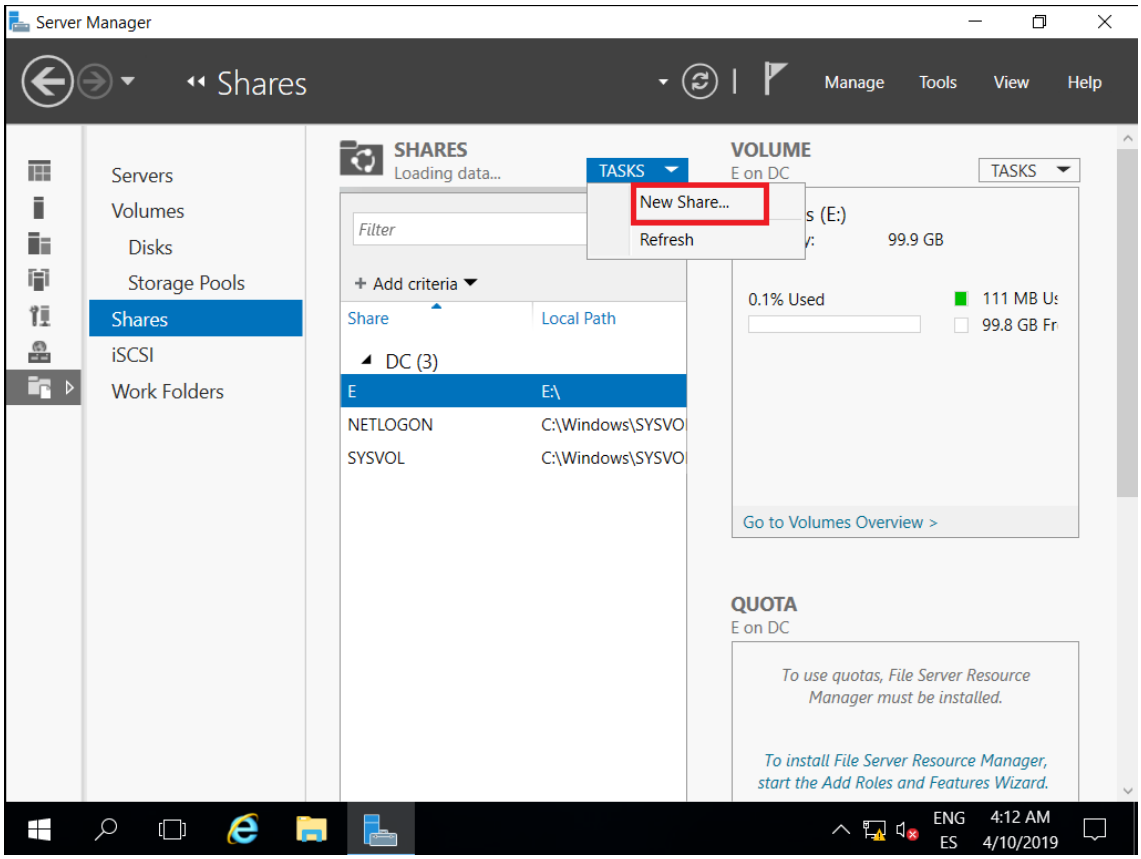
To do this, we open our **Server Manager** and select the **File and Storage Services**, as it is shown in the following image:



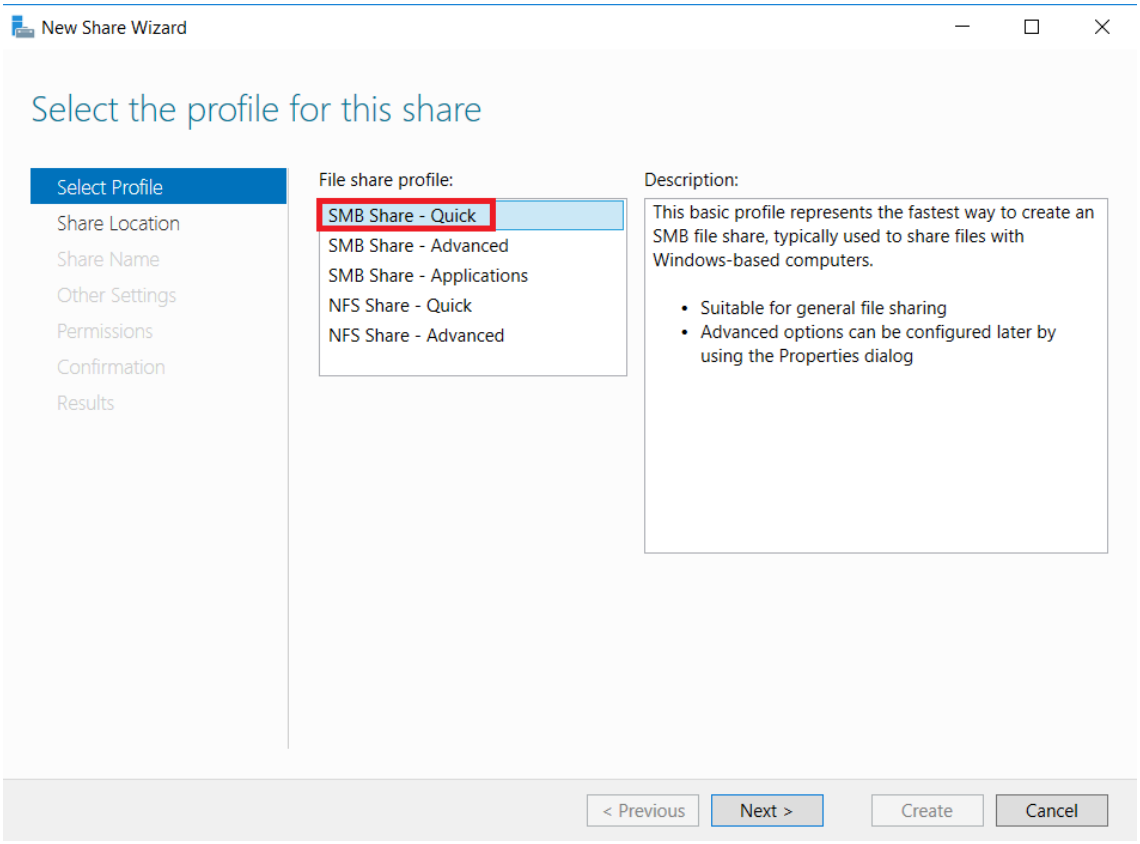
Once inside the panel, we will select the option **Shares**. We recommend having a unit or partition to host the profiles of the users. In this example we have the unit **E:** in which we will store the information. If we do not want to have a specific partition, we can do it in the same way in the partition in which the installation was made (**C:**). But we have to take into account that in this unit there is all the information of the profiles and it could be increased, leaving this unit without free space.



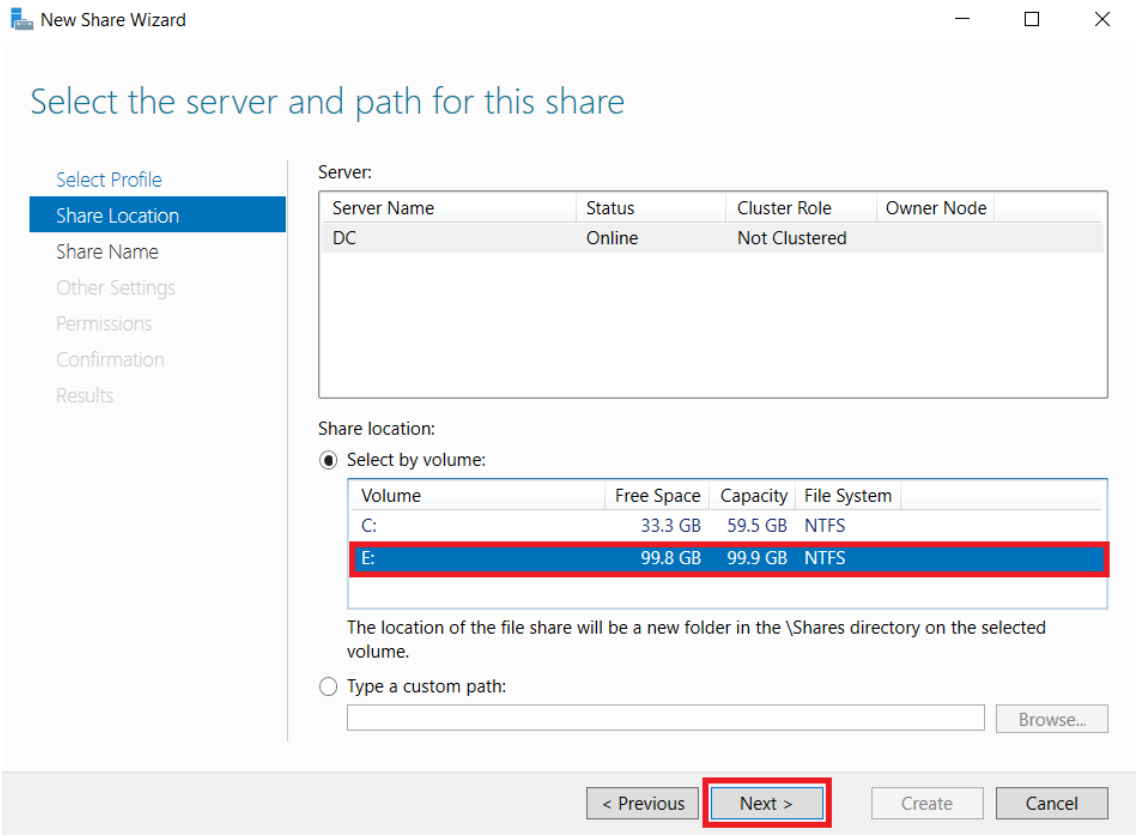
After having selected the unit where the information of the users will be stored, we click on **TASKS** and choose the option **New Share…**



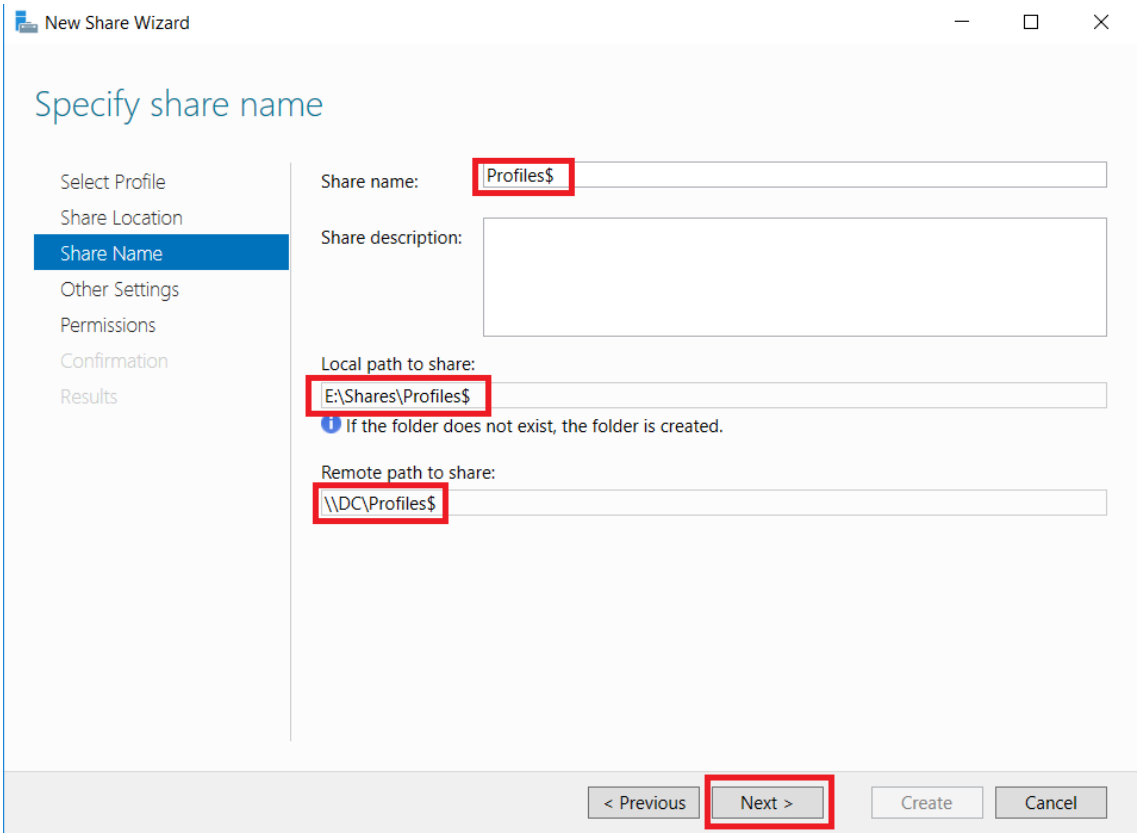
In the wizard, for the creation of the New Shared resource we select the option **SMB Share – Quick**. As the description indicates, it is the fastest way to create a shared resource.



We will select the route of the shared resource and we will choose the one that we have created previously. In this example we have the unit **(E:)**, we select it and click on next.

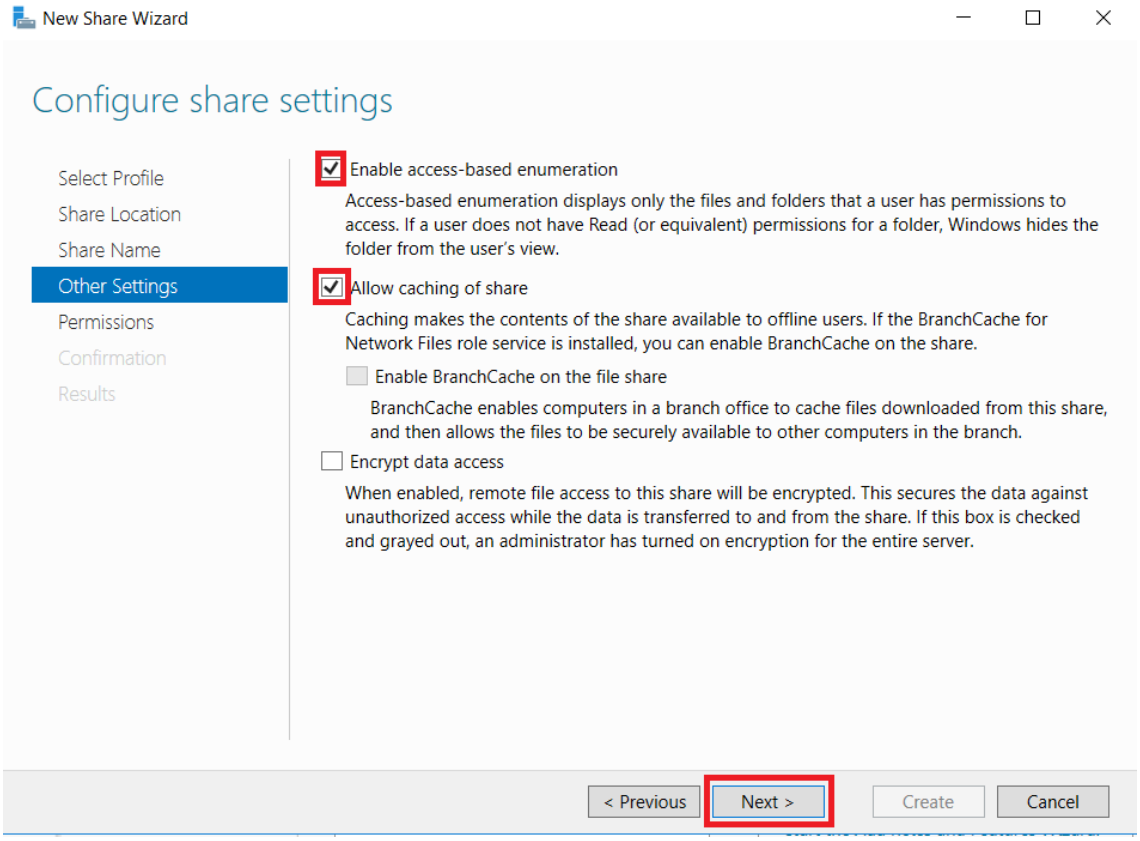


In the next section, we will indicate the name of the folder where the profiles of the users will be saved. In this example we will call it **"Profiles"**. Next we can see that it automatically adds the local route and the remote route of the shared resource.

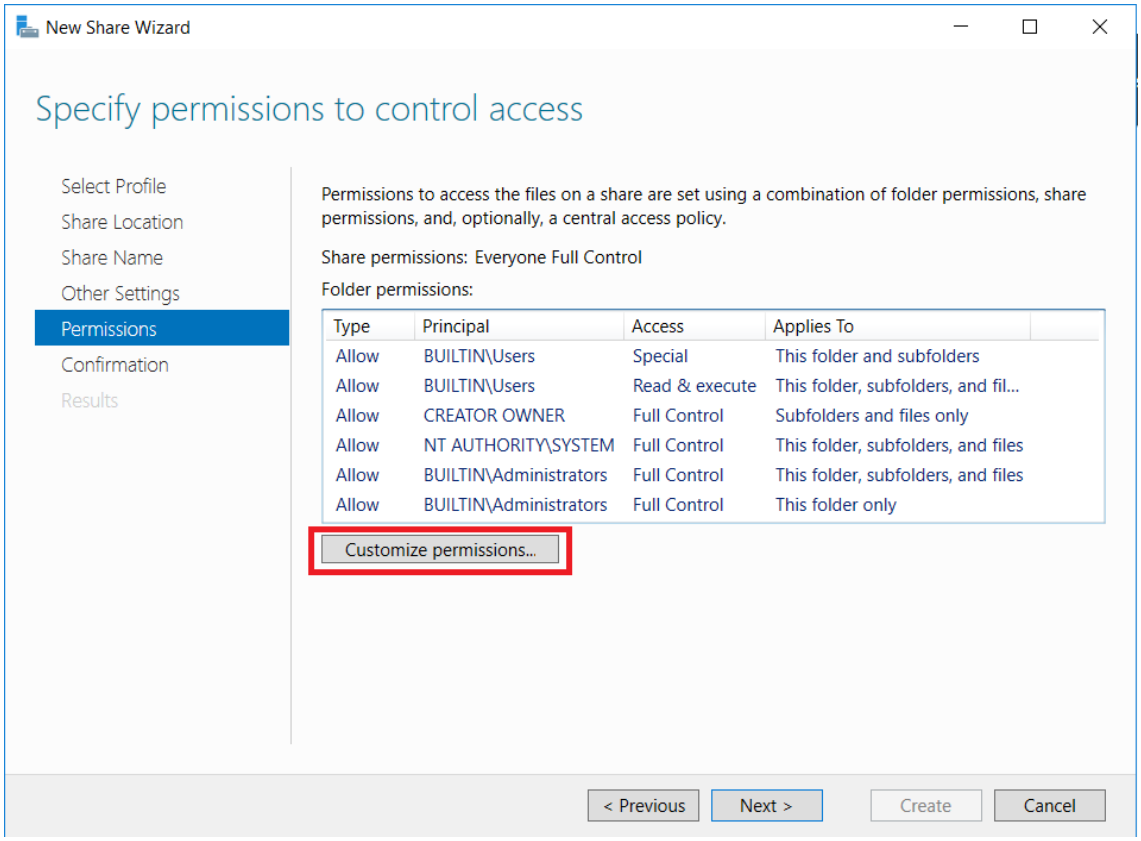


In the **Parameter Section** we select the following options:

- **Enable access-based enumeration:** it displays the files and folders to which a user has permissions to access.
- **Allow caching of share:** Allows the content of the shared resource to be available to users without connection.

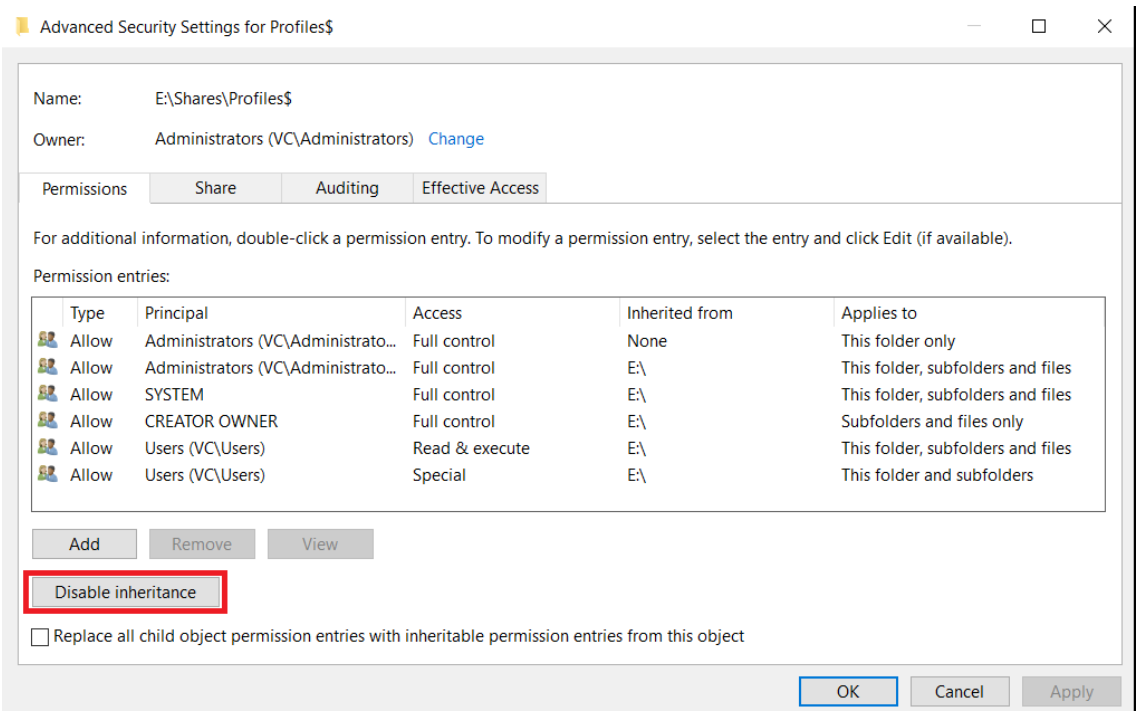


We will click on **Customize permissions…** to control access.

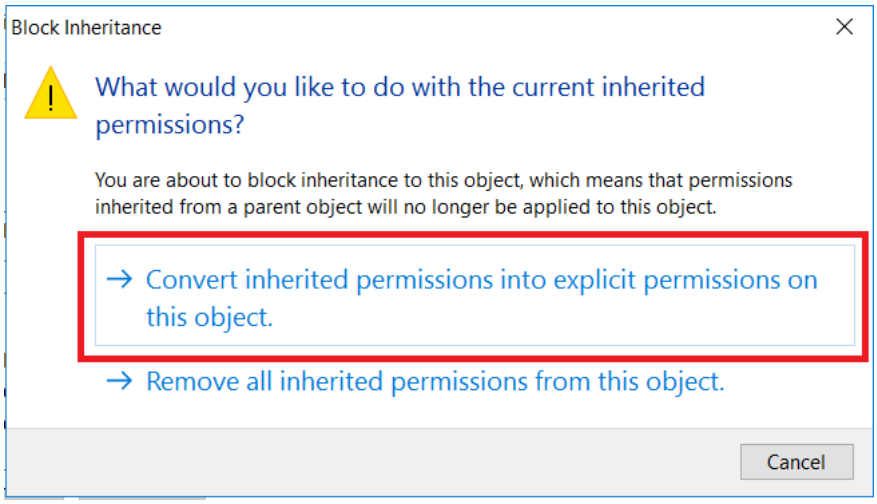


Next we will proceed to disable the inheritance for these folders. This operation will be performed so that in case there are several users, the permissions of the folders are completely independent.

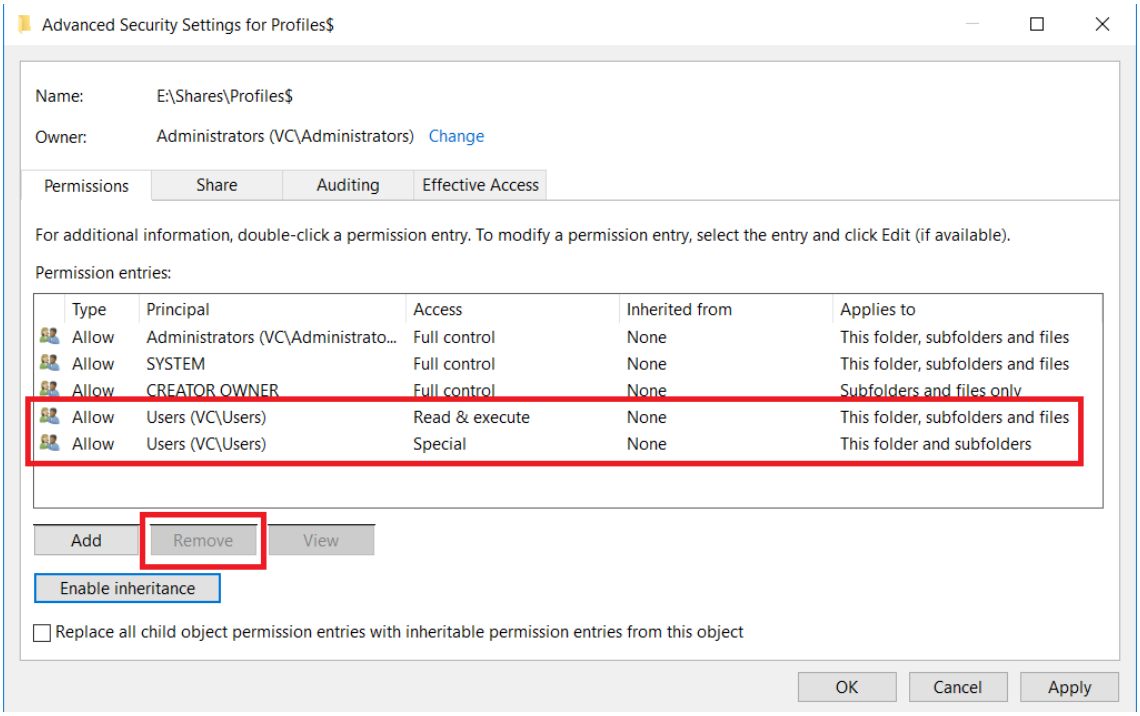
Let´s take an example: we have “user1” and “user2”. Only “user1” can access the “user1” folder and only “user2” can access the “user2” folder. Thus, by disabling the inheritance, individual permissions are granted.



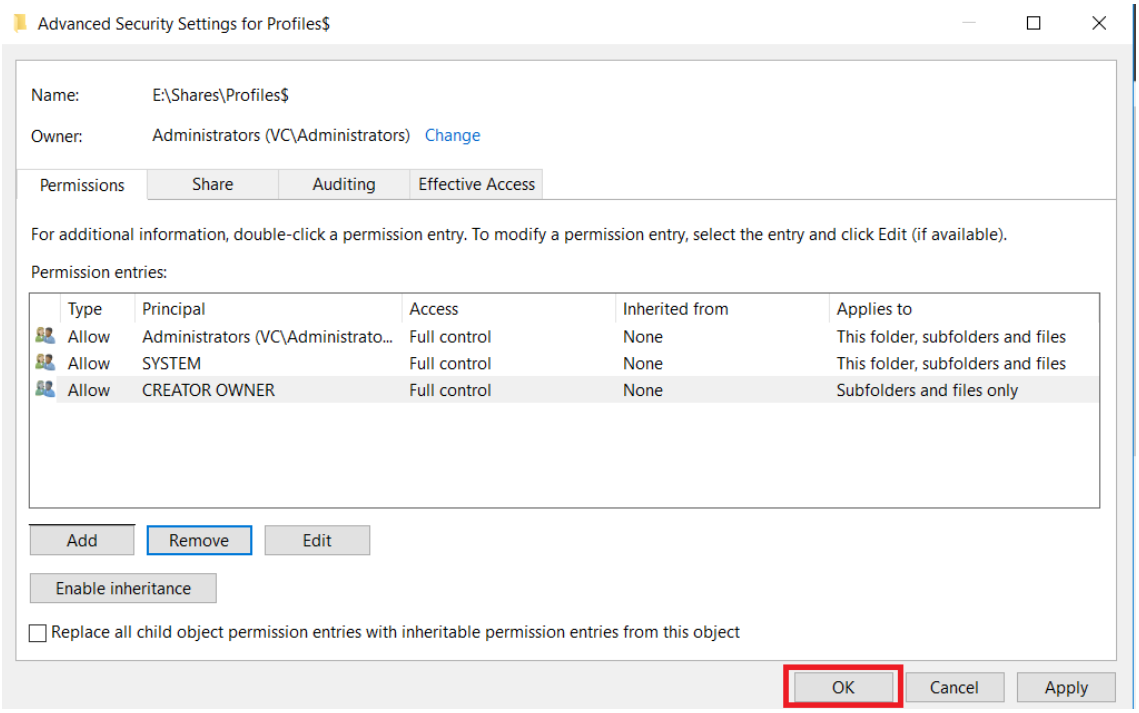
When we disable inheritance, the system ask us: what would you like to do with the current inherited permissions? In this example we select the first option: **Convert inherited permissions into explicit permissions on this object.**



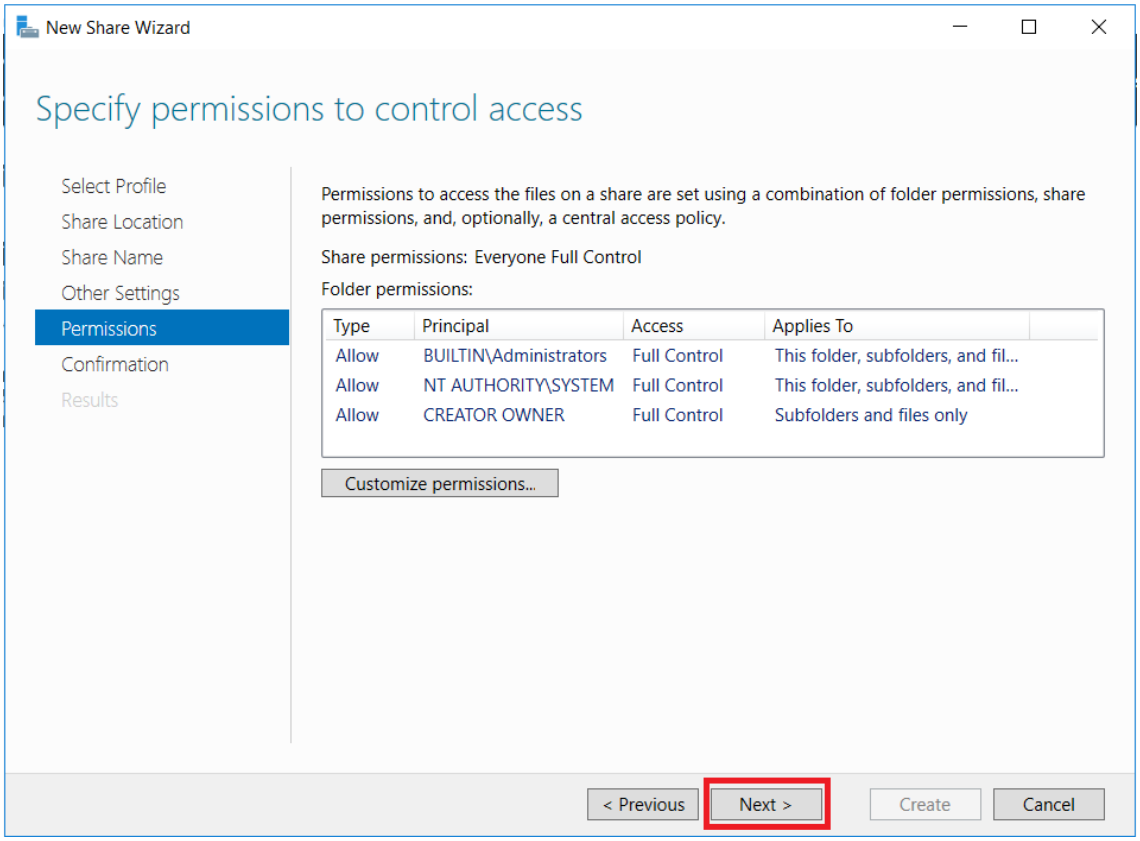
Next we will remove the permissions for the users of our domain. Selecting the user and clicking on **Remove**, we will only leave the users **CREATOR OWNER**, **SYSTEM** and permissions for the **Administrators** (to have control in case there are problems with any of them).



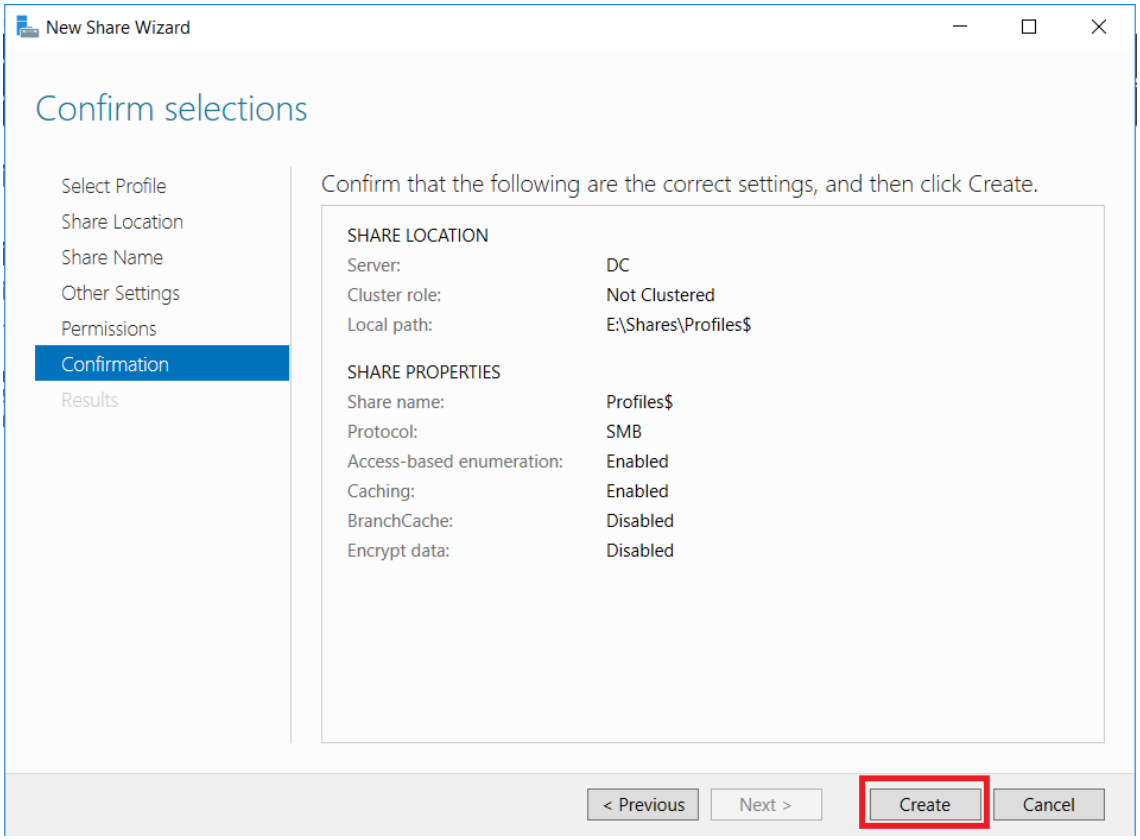
Finally we will click on OK. In this way, we will have customized the permissions of the user's folders.



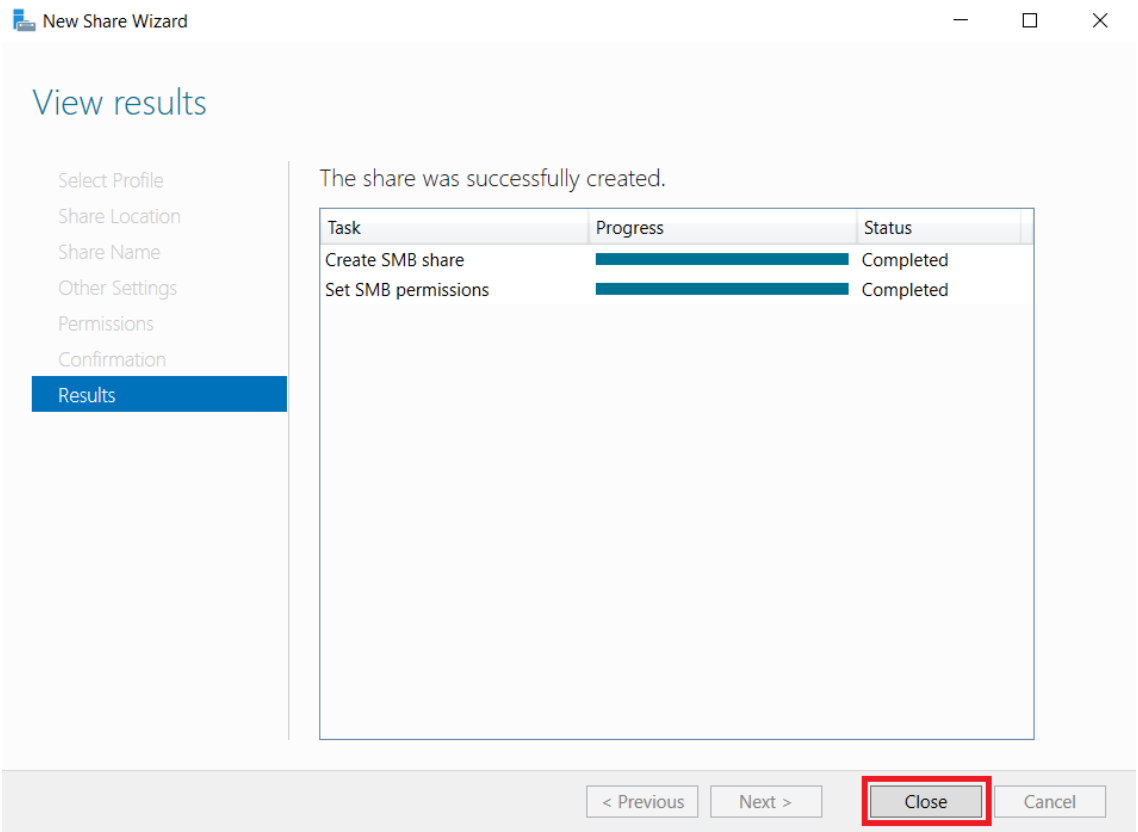
In this example we will create a new shared resource. In order to do this, we will click on following and we will call it **“Profiles”.**



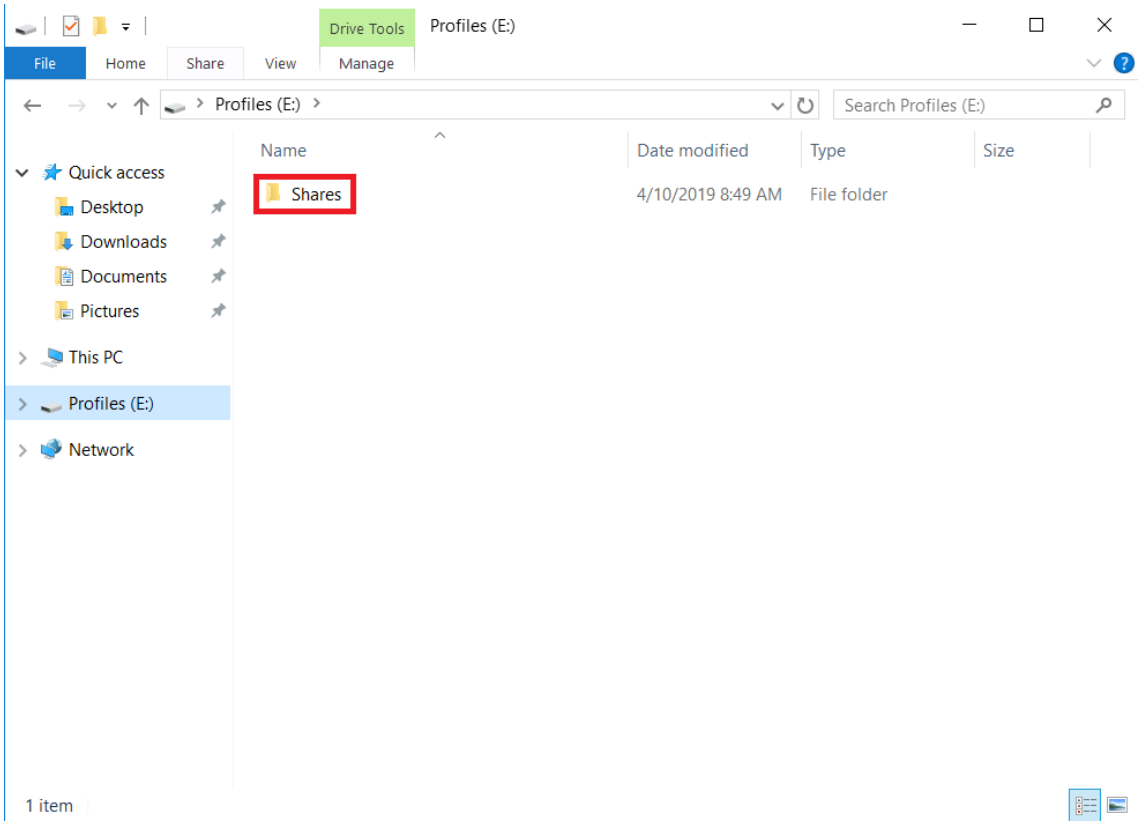
We will review the summary of the actions that will be executed and click on **Create**.



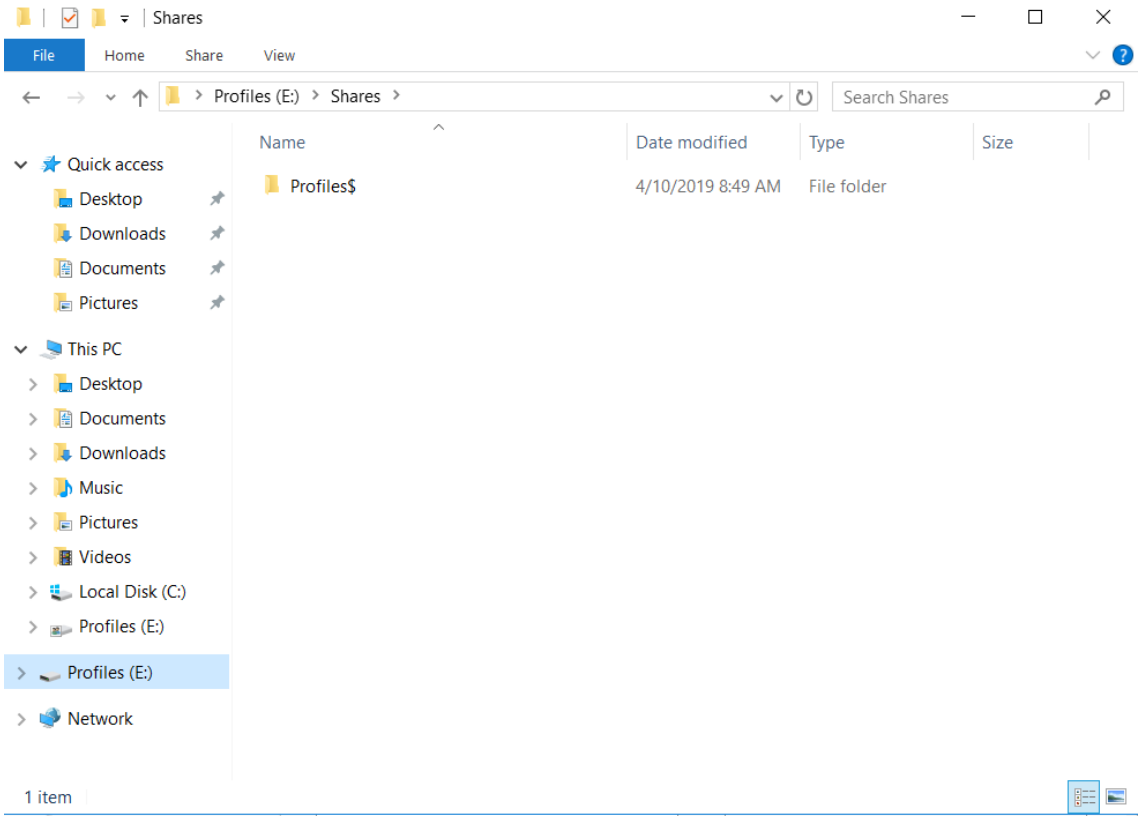
In the next window we can see the creation process.



We'll open the File Explorer, we will go to the unit or partition in which we will save the profiles (in our case **E:**). We can see that a folder called **Shares** was created by default during the configuration process.



Inside this folder, we will find the folder **“Profiles”**, where the information of the users will be stored.

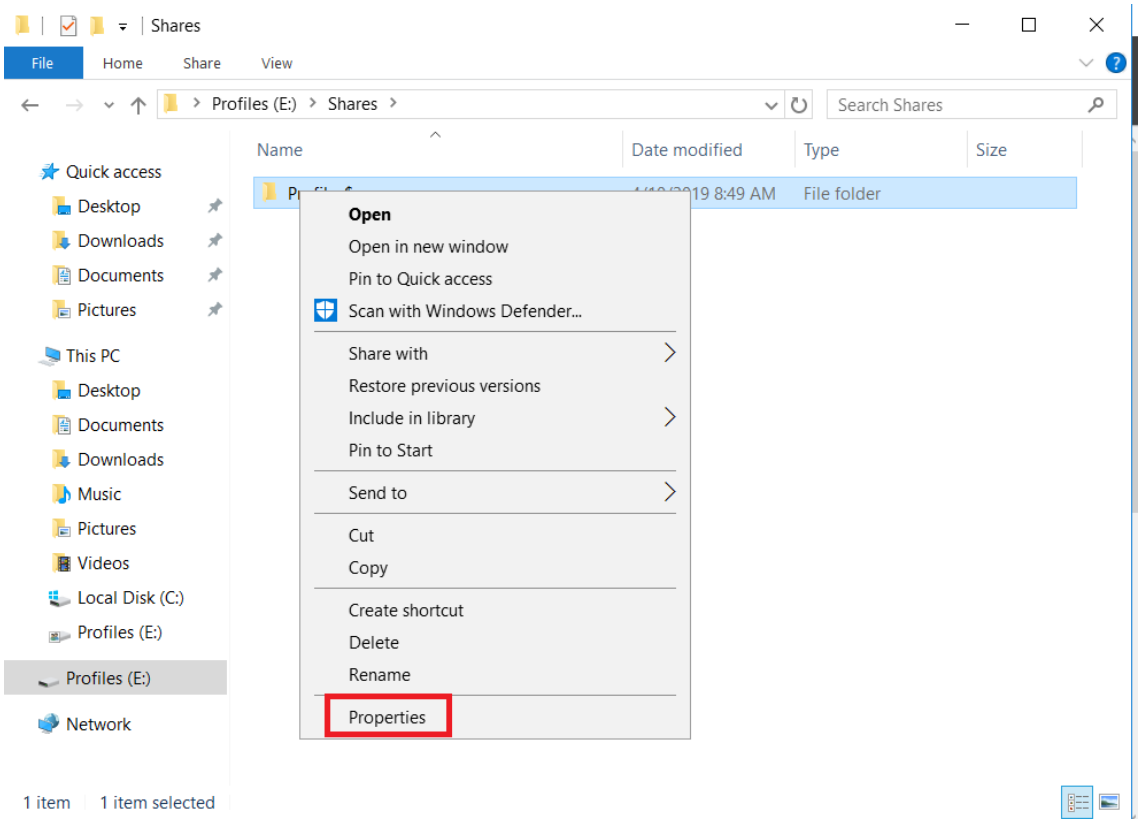


Permissions of the folder where Mobile Profiles will be stored

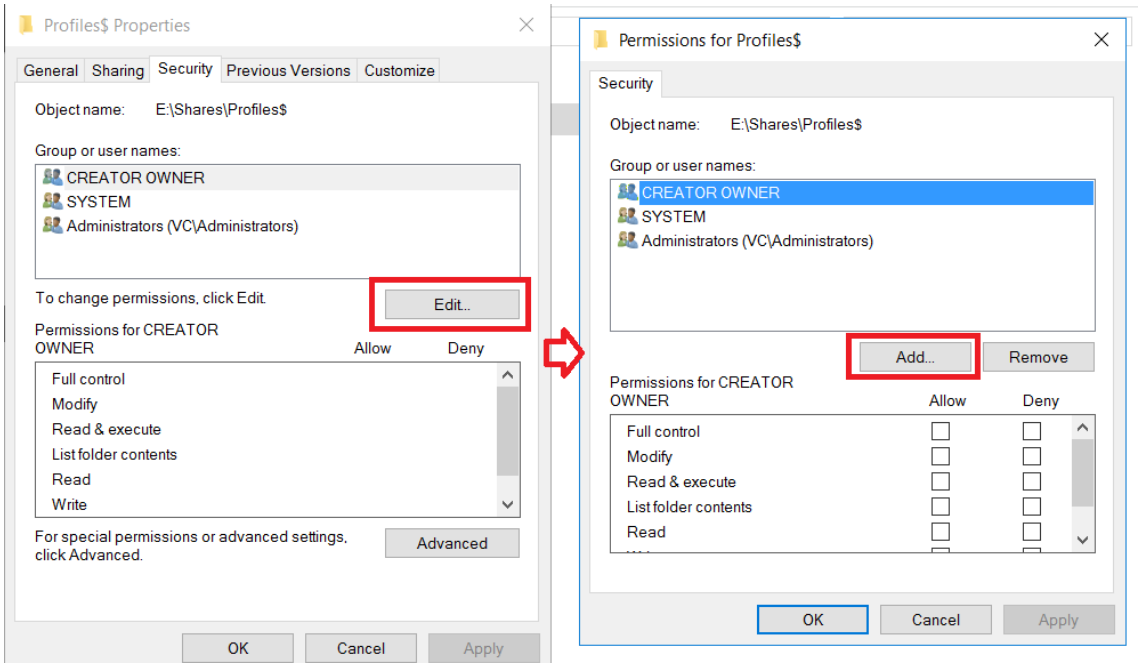
Once we have created the folder, it is important to grant permissions to the users of the Domain, so that their information is automatically saved there. If the user does not have permissions, when logging in the documents will be created as temporary files and will be lost when logging out.

In this example, we have created two users: profile01 and profile02 to which we will give permissions.

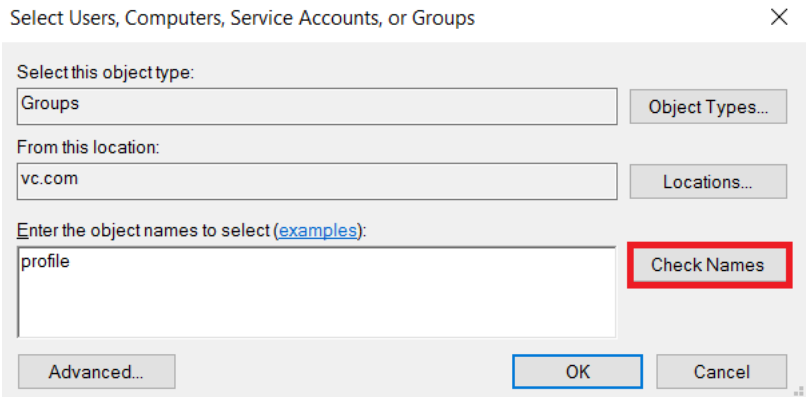
To do this we click with the right button on the **Profiles** folder and select **Properties**.



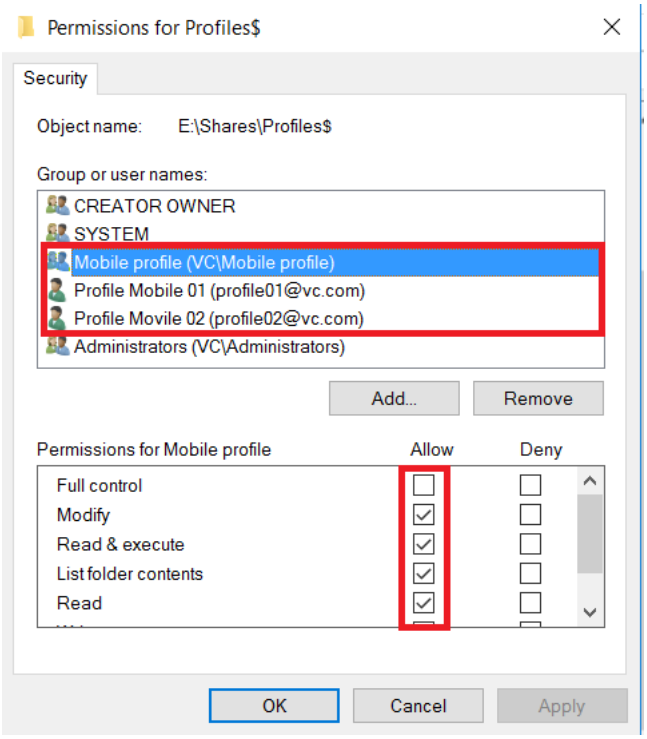
We will click on **Edit…** and **Add…**



Enter the name of the profile and click on **Check Names**. With the same process, we can grant permissions to the **Mobile Profile** group, to which the users must belong.

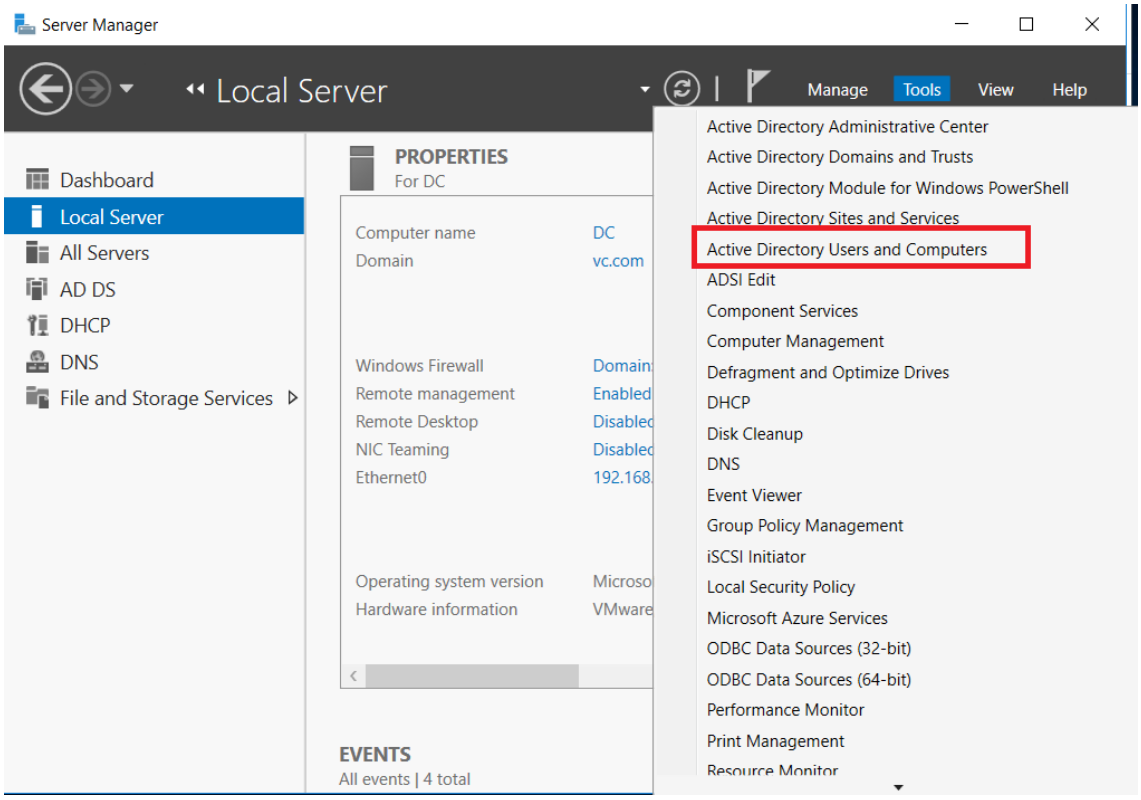


In this example, we will grant permissions (Modify, Read & Execute, List folder content and Read) and finally we will click on **OK**, to apply the changes.

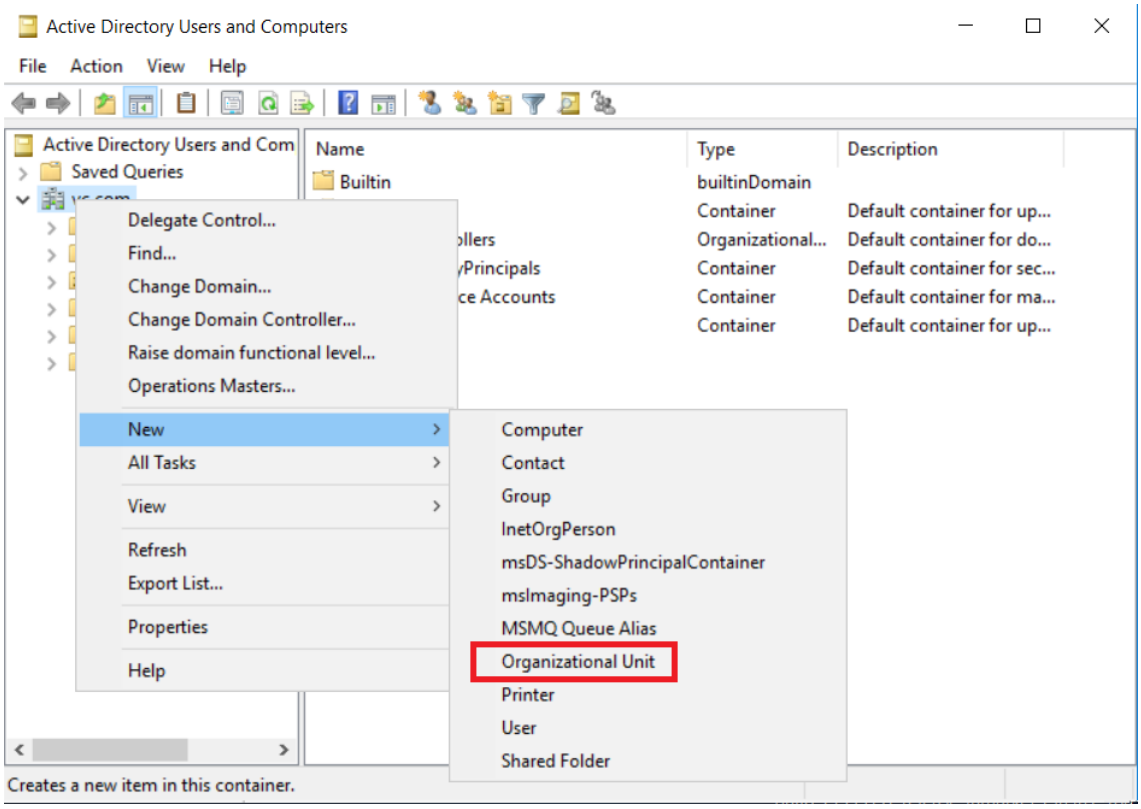


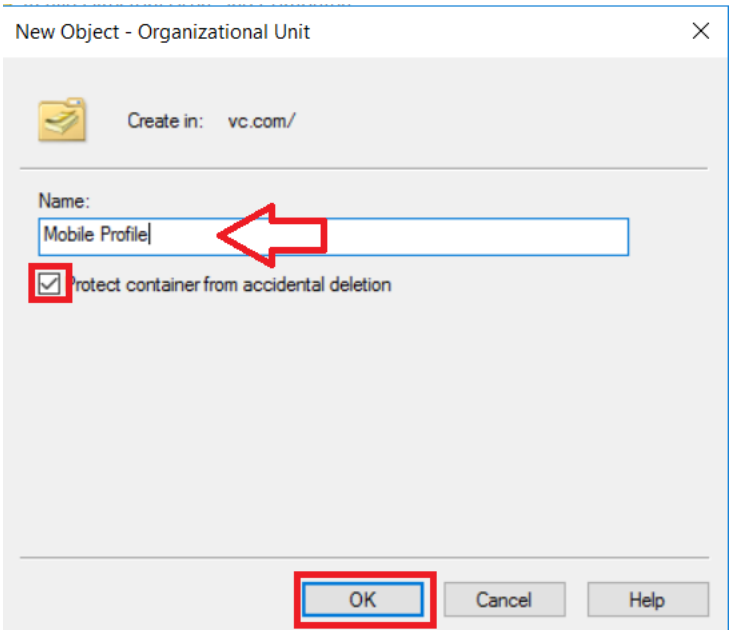
Configuration of Mobile Profiles

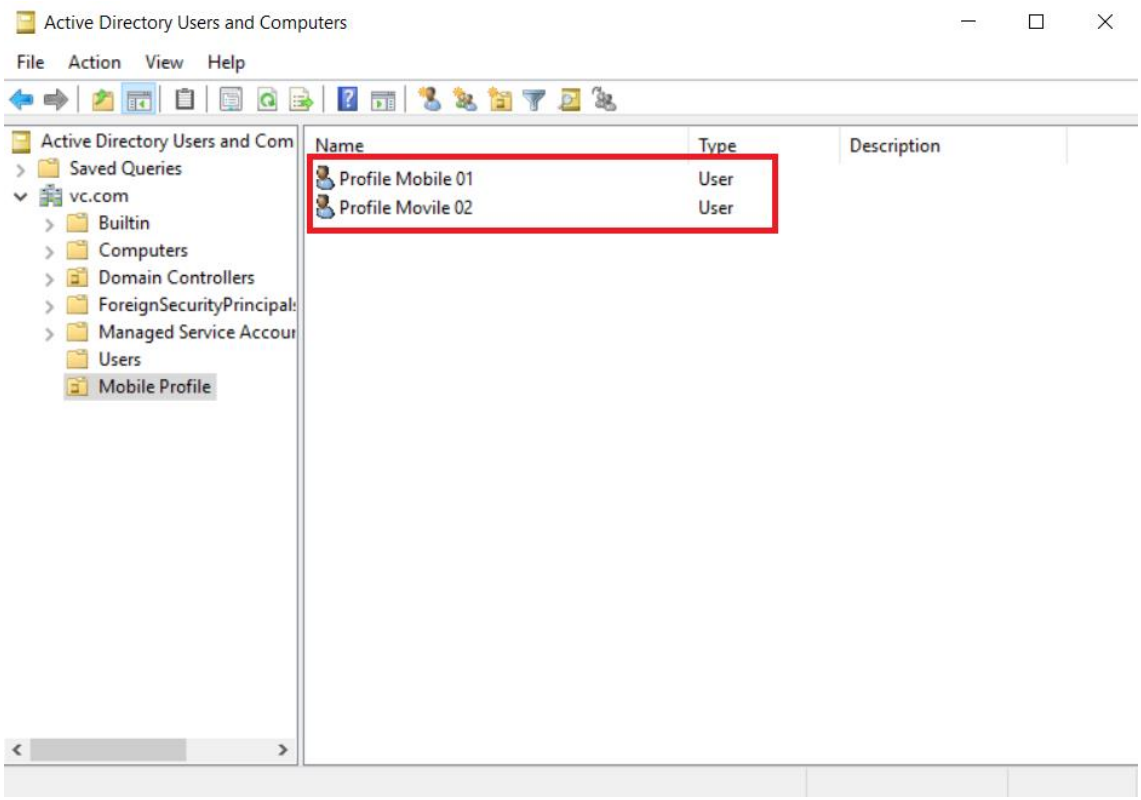
Once we have completed the process of creating the shared resources and have granted respective permissions, we will open the **Active Directory Users and Computers** management console (We will find in Server Manager > Tools).



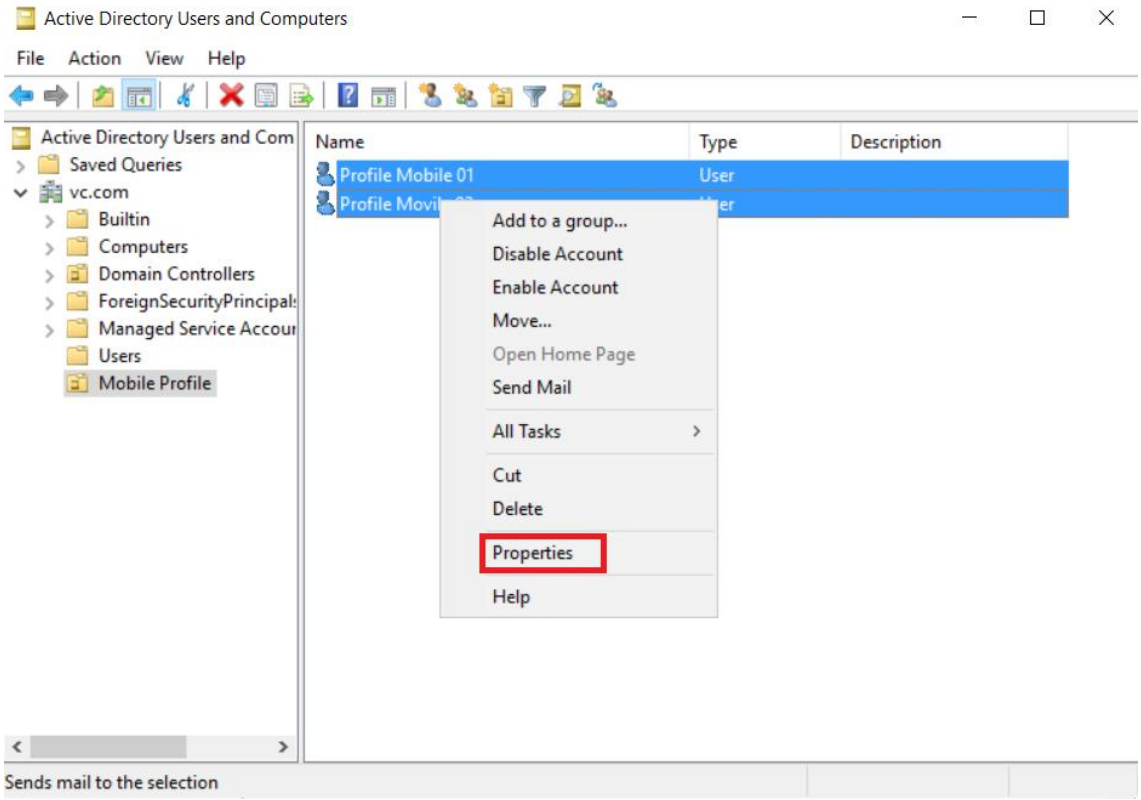
For the better management of the users and policies to be applied, it is advisable to create an organizational unit. In this example we have created one called **Mobile Profile**. Within this organizational unit, we have created the user **Mobile Profile 01** and **Mobile Profile 02**.







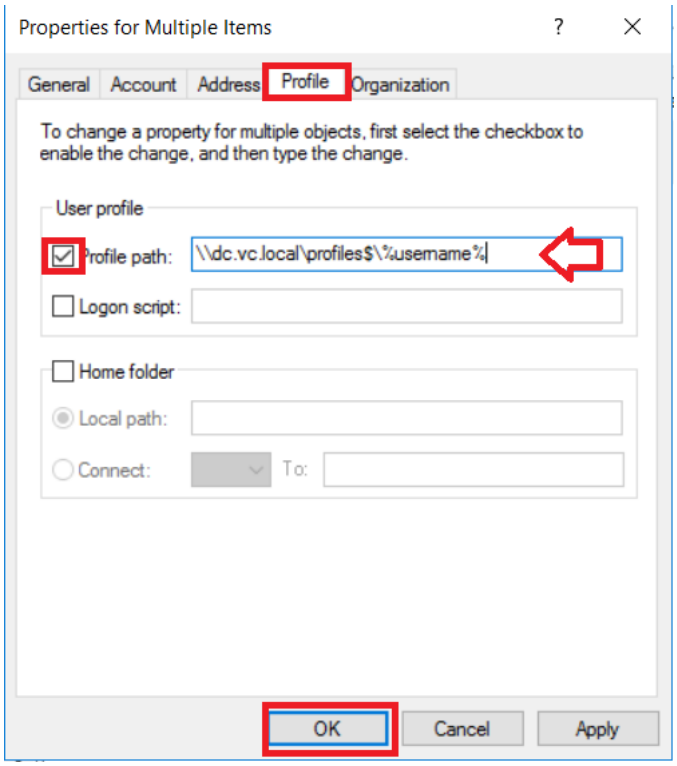
Select the two users, click with the right button and select **Properties**.



Click on the **Profile** tab. Select the option **Profile Path** and write the UNC path followed by \ and the variable **%username%** to generate a folder with the name of each user. For Example:

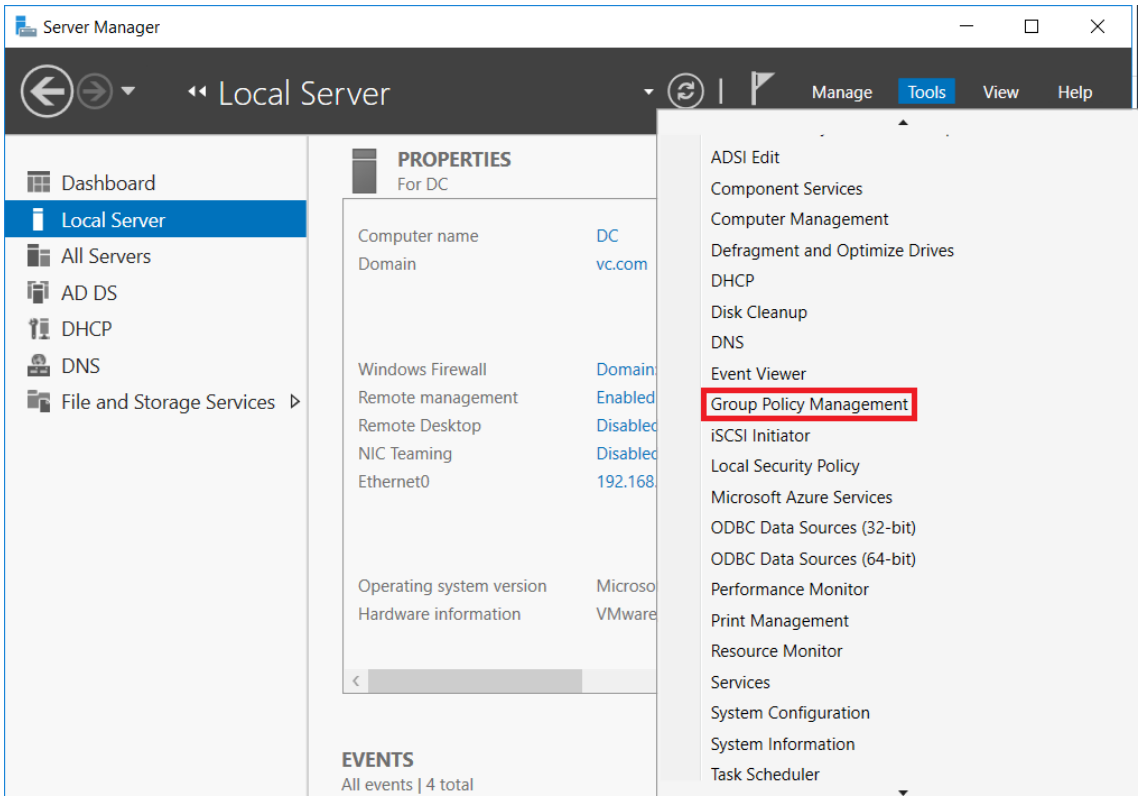
\\dc.vc.local\profiles$\%username%.

Click on **OK** button to apply the changes.

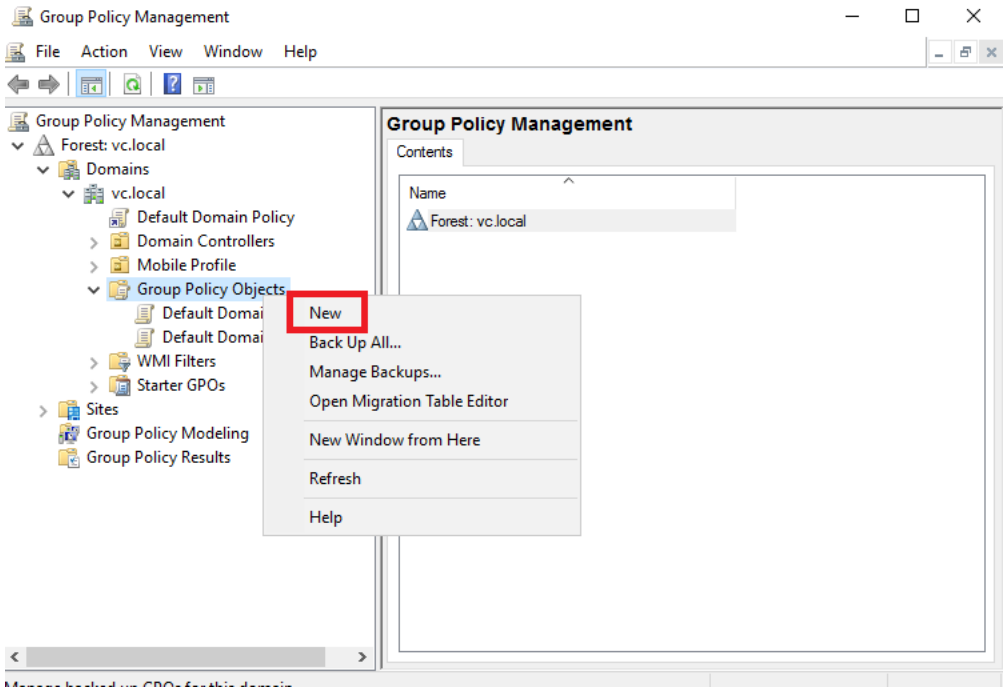


Configuring folder redirection

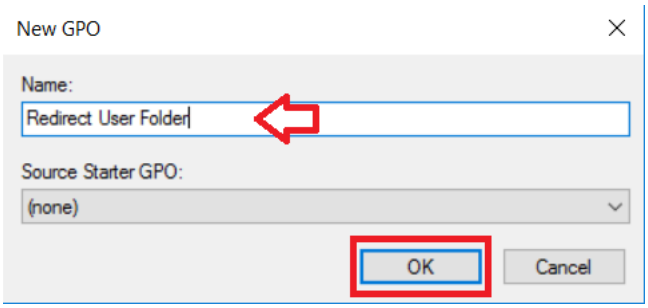
We will open the **Group Policy Management** console (We can find it in Server Manager > Tools).



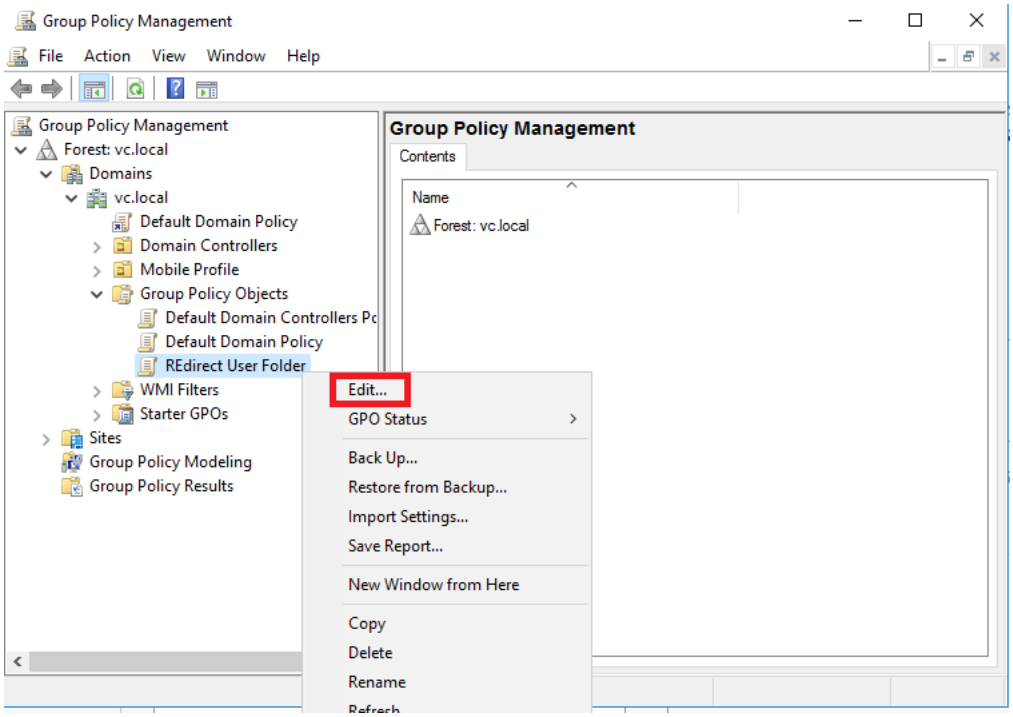
We will open the drop-down menu on the left and we'll look for **Group Policy Objects**. We'll click on **New** with the right button.



We will introduce an identifying name for the new policy. In this example we will call it: Redirect User Folder. Click on **OK**.

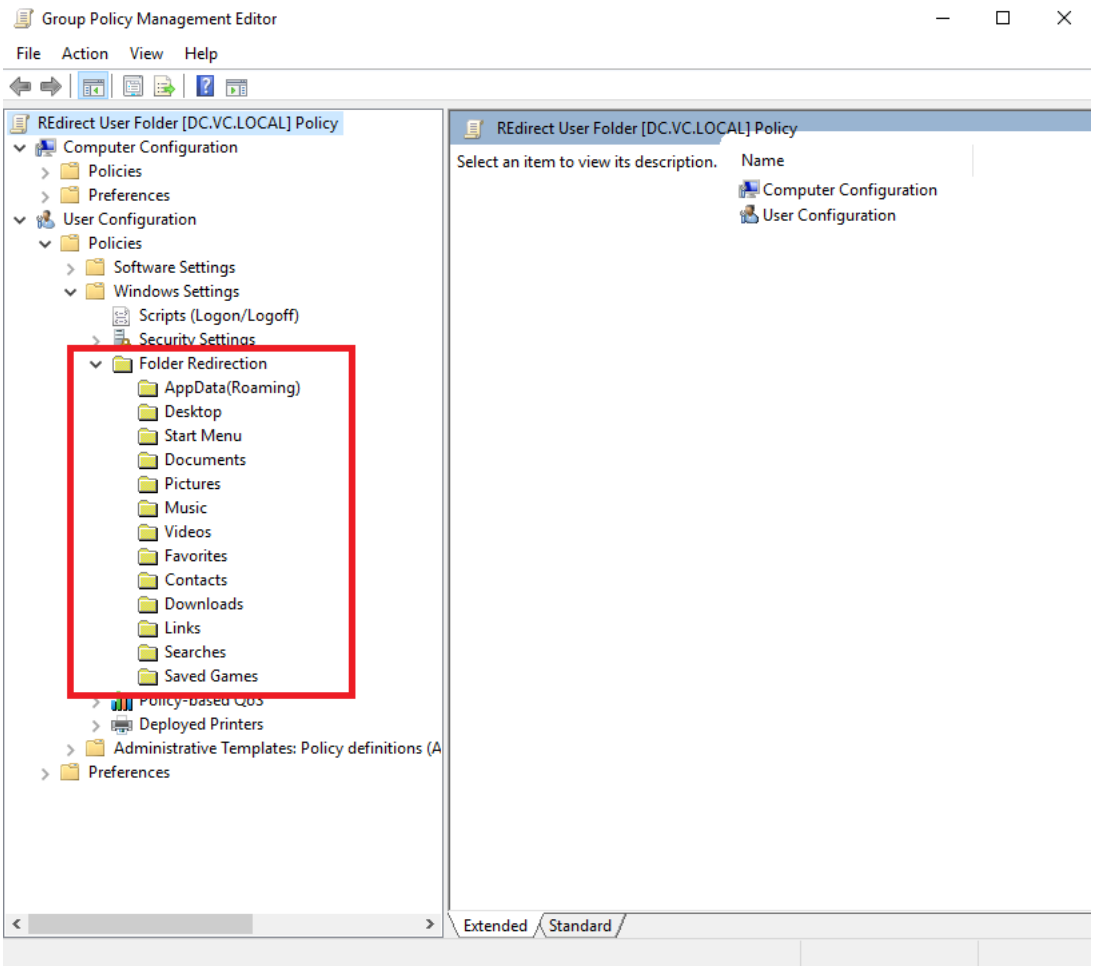


We will select the new policy, which we have previously created and we will click with the right mouse button on **Edit…**

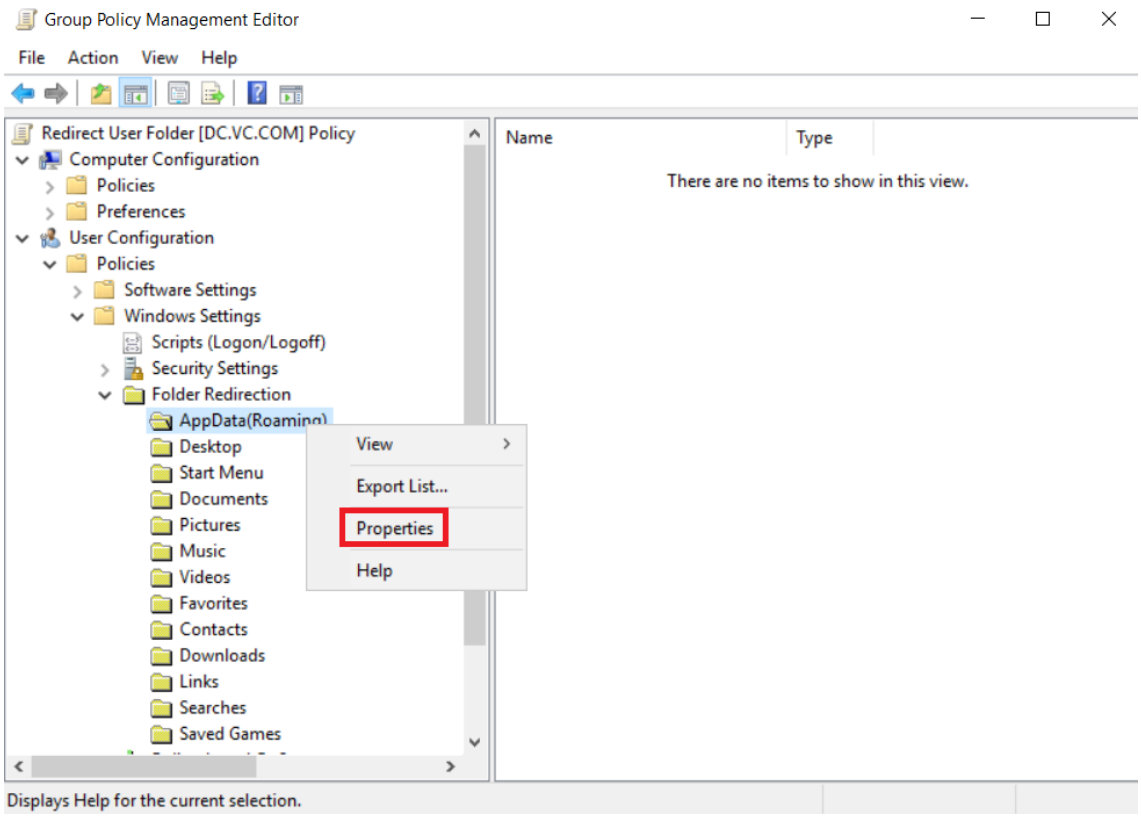


The policy will be displayed in a new window.

As this policy **affects the user** only, we will open the drop-down menu at **User Configuration > Policies > Windows Settings > Folder Redirection**, where we can find the different folders that we can redirect to the file server.



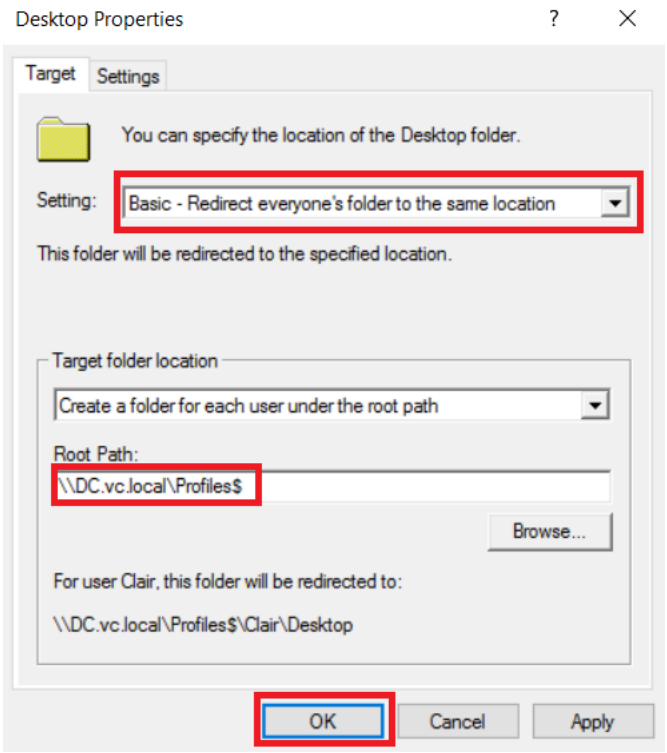
Select the **AppData (Roaming)** from the list, click with the right mouse button and click on **Properties**.



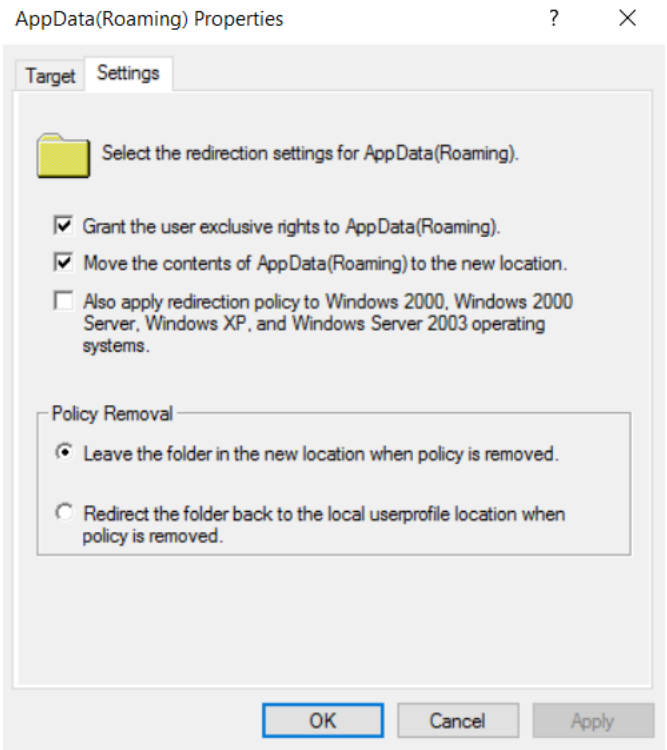
In the **Configuration** option, in this example we will use **Basic: redirect everyone´s folder to the same location.**

In this example, in the **Target folder location** we will select **Create a folder for each user under the root path**.

In the **Root Path** field we will indicate the UNC path of the data folder, which we have created previously, in this example we use \\DC.vc.local\Perfiles$. In the lower part we can see an example.

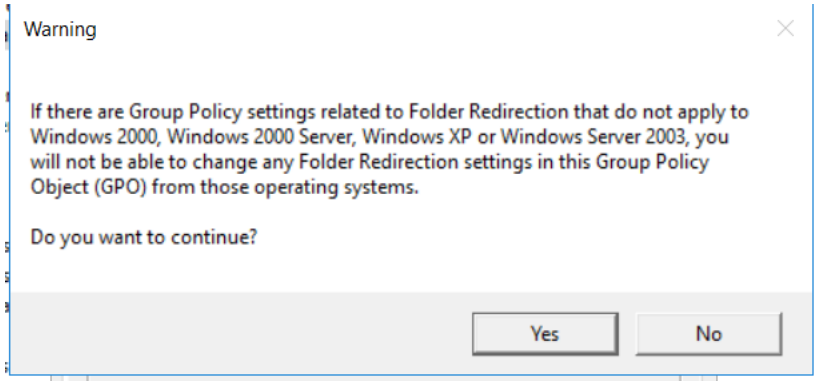


We will go to the **Settings** tab. In this tab we can find some options that are customizable. For example, if we mark the option **Grant the user exclusive rights in AppData (Roaming)**, access to user's folders will be blocked, even for the administrators. This would cause that, if needed, the owner of the folder should be changed and permissions should be configured again.



Click on the **OK** button to apply the changes we have made in the configuration.

Note: the system warns us that the compatibility with previous operating systems has not been marked. In this example we will indicate that we do want to continue.

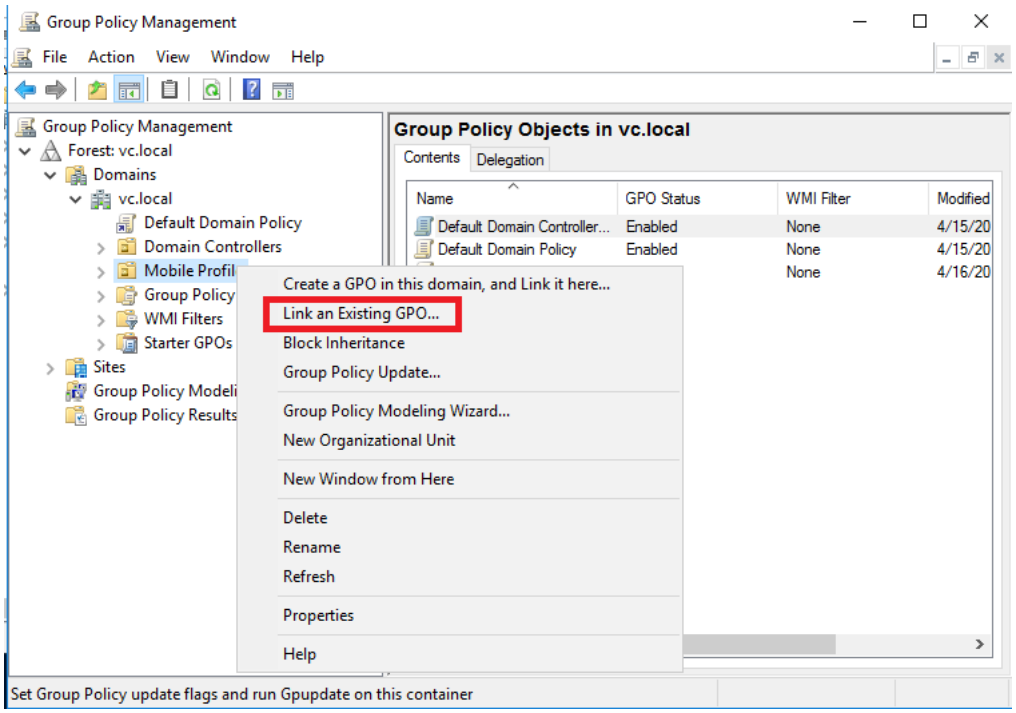


This operation will have to be repeated for all the user folders that we want to redirect:

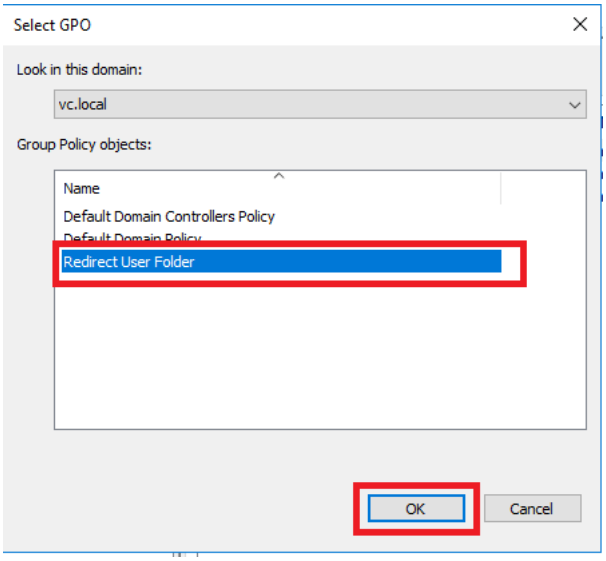
- Desktop
- Start Menu (We leave it as is, you can always depend on the applications installed on each computer).
- Documents
- Images
- Music (pay attention to this folder, since some user can finish with the shared space. It is recommended to link it with quotas)
- Video (pay attention to this folder, since some user can finish with the shared space. It is recommended to link it with quotas)
- Favourites
- Contacts
- Downloads
- Links
- Search
- Saved Games

If we do not mark to move all the folders, it is possible that it is replicated with the configuration data each time the user session is started and closed. To avoid this, a good practice is to redirect them all.

After selecting this configuration, we can close he policy editor. Now we will **assign** the policy that we have created, to the corresponding **organizational unit**. Following with the example of Mobile Profiles, we will select the Mobile Profiles organizational unit, click with the right mouse button and select **Link an existing GPO…**

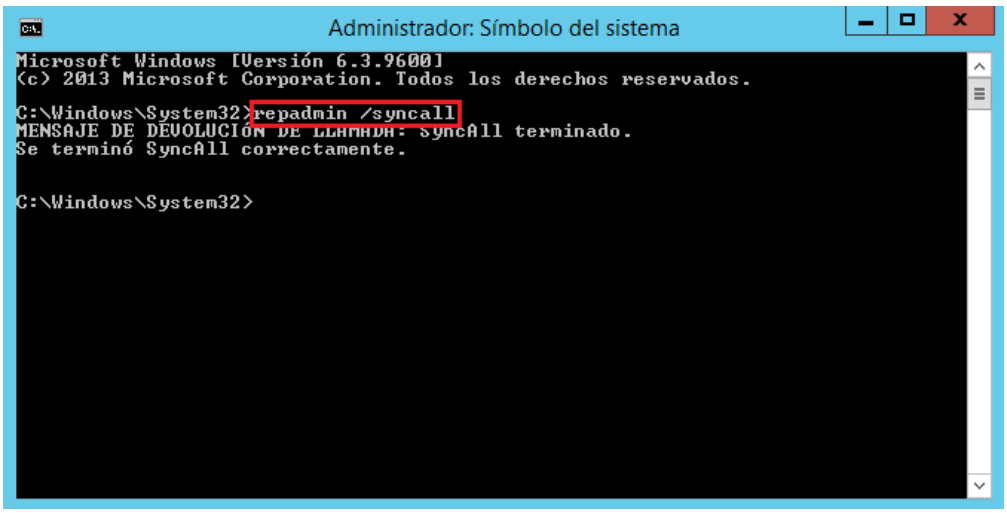


We will select the Redirection user folders policy that we have created previously and we will click on the **OK** button.



After doing this operation, we will have finished. We'll just have to check it. But we should be **alert**, because if we have more than one Active Directory driver, we have to make sure that the changes have been replicated to all the controllers. To be able to force it from a system console, we will execute the following command with administrator privileges:

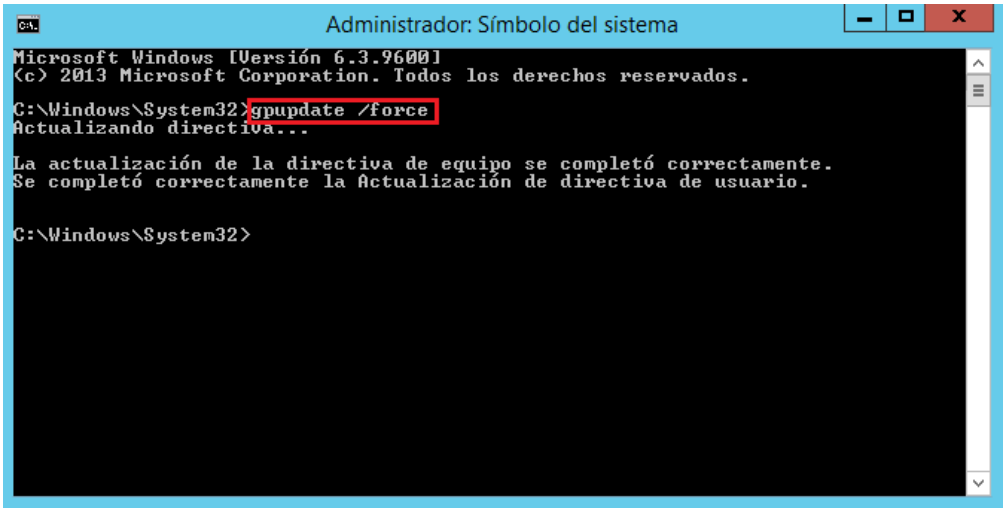
repadmin /syncall



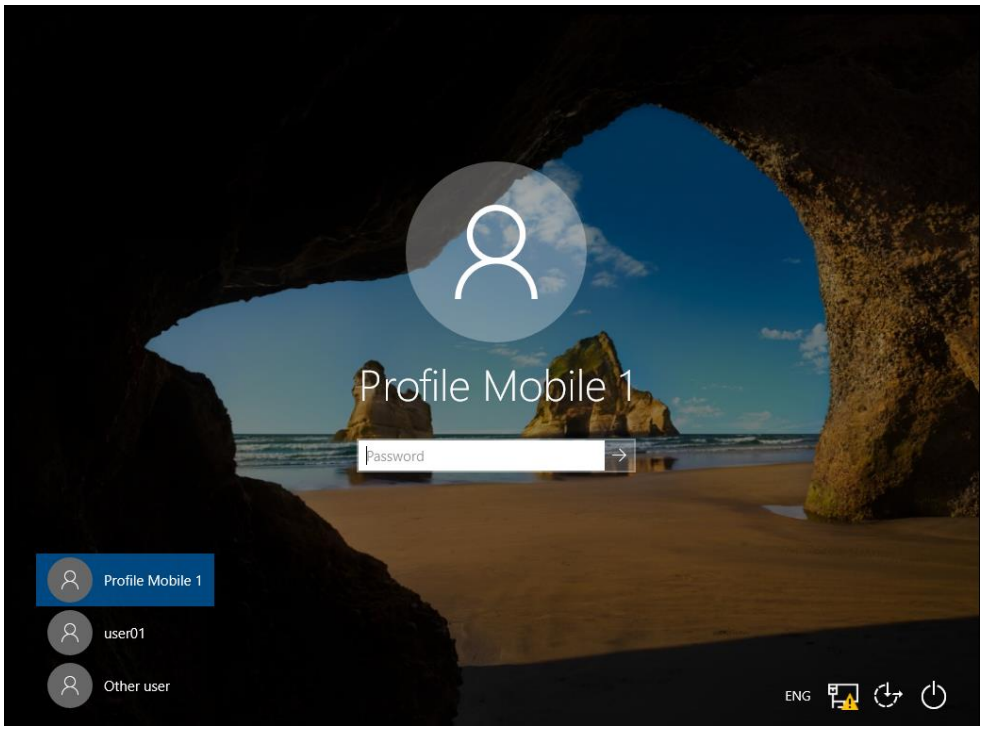
Checking the client device

Let´s take the example in which the device was already linked to the domain and the users had already started the session. In this case, we will have to refresh the security policies. In order to do this, we will execute this command from a system console with administrator privileges:

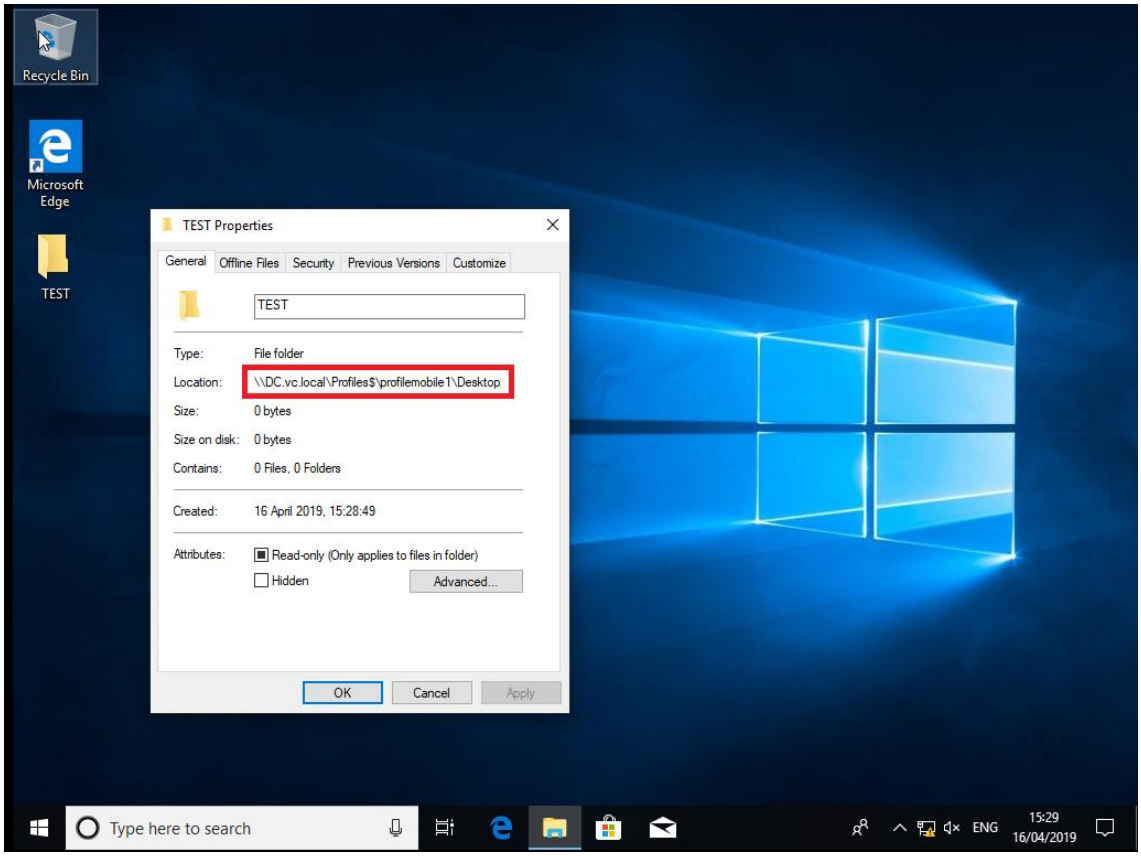
gpupdate /force



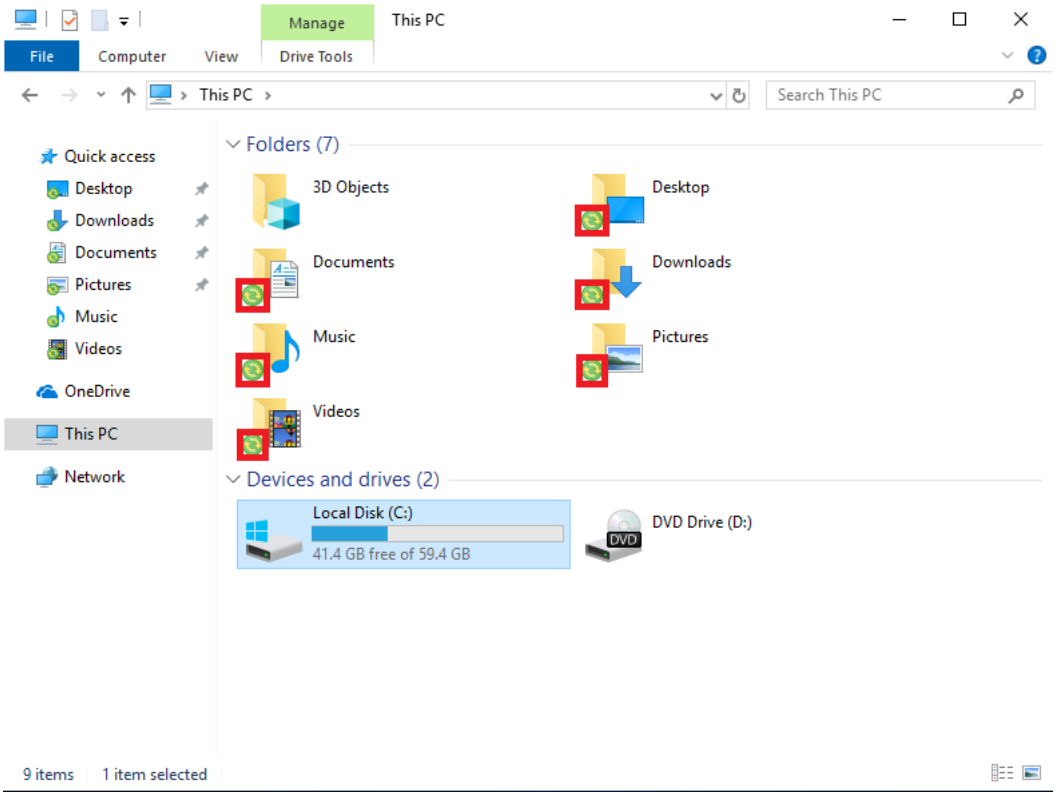
We will log in with one of the users which we have created previously. If the user had information stored in local, we will have to move this information to the corresponding folders of the file server



When logging in, apparently no changes have been made. But if **we create a new folder on the desktop**, we click with the right button on the folder and select **Properties**, we can see that the folder is not located on the local hard drive, but points to the UNC path of the file server, which we have previously created.



If we place ourselves in the user´s folder (from the desktop), we can see that all the folders have a green symbol. This symbol indicates that it is a file folder without connection.



If we place ourselves in the hard drive user´s folder (**C:\Users**), we can see that the folder is empty, because the files are not saved on this hard drive. Except for the local configuration folders, which are inside the hidden **AppData** folder (in the folder options allow viewing of hidden files should be enabled).

Mobile Profile with OST in mapped unit

The Microsoft Outlook data file by default has a local route as the default route, which is not synchronized even if the profile is mobile. To solve this problem, we can save the OST automatically in the user´s profile.

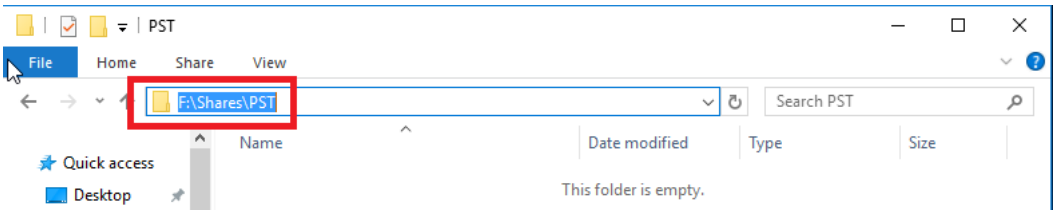
Storage of the profiles

We recommend having a unit or partition to host the .**ost** of the users. We can use the same as the profile of the users. In this example we will use another unit, which we will identify as **F:**. In this unit all the **.ost** (Microsoft Outlook) will be saved.

Shared resources and permissions.

We will create a folder where the Mobile Profiles will be stored inside the unit. In this example we will use **F:**.

We'll shared the directory with the name of the network resource that we want and we'll give the permissions to any user. We can do the same steps that we did when configuring the **Storage of the data and permissions** (page 2)



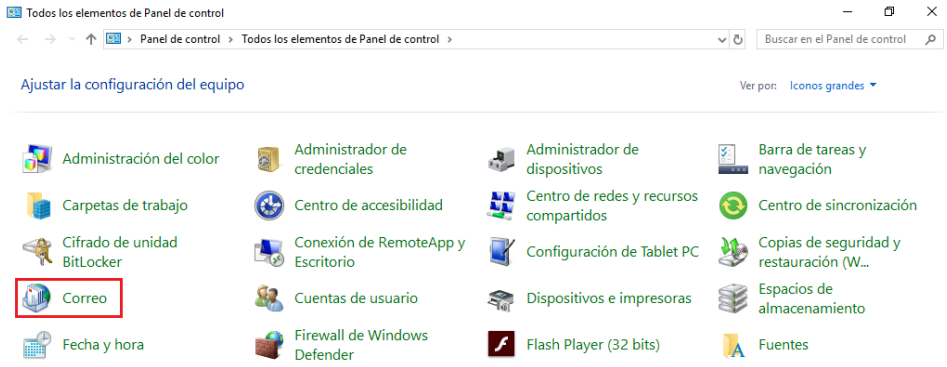
Redirecting OST data files

- First Method:

In this section we will show through an example how we can redirect the OST data files created by Microsoft Outlook at the moment of setting up a user account.

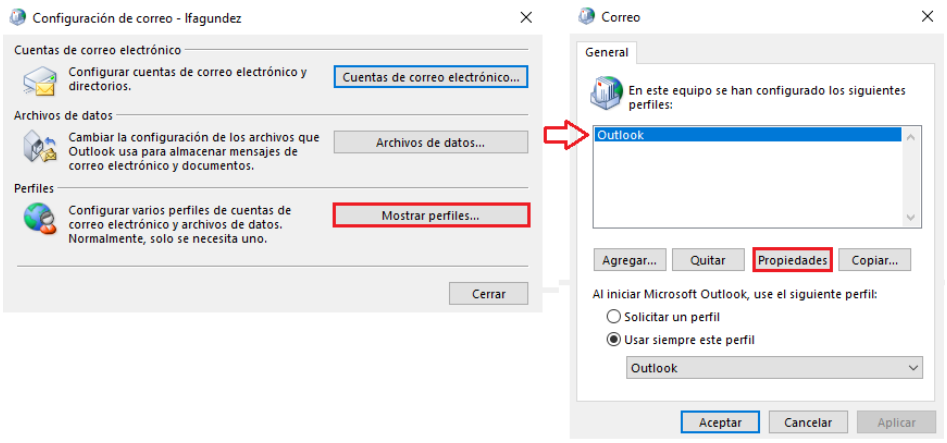
If we already have an OST file belonging to an account that is configured in a profile, we can copy that file to the location we want. In this case, we will copy it to the location of the resource that we have shared.

To be able to do this operation it is necessary that we have installed **Microsoft Outlook**. After fulfilling this requirement, we will open the Control Panel and we will click on **Mail**.

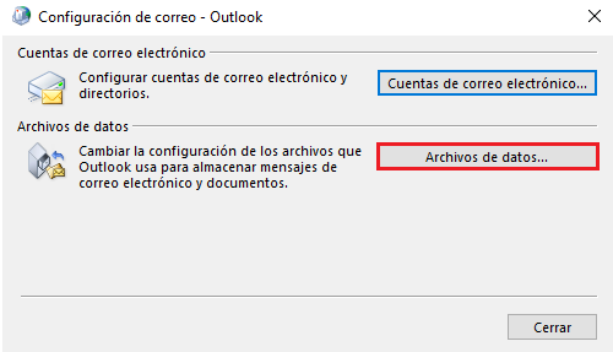


Click on **Show profiles** and here we will find the email profiles that we have configured. In this example, we will configure **Outlook** (the one that appears by default) where we already have a configured account. If you have not yet created a profile, follow the steps to create an Outlook profile that you will find in the following link.

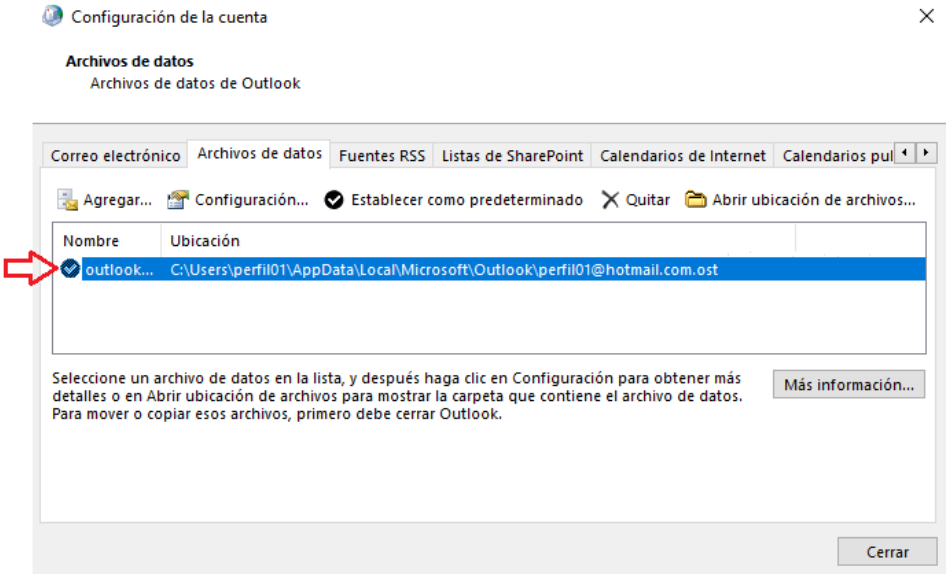
We will select the profile and click on **properties**.



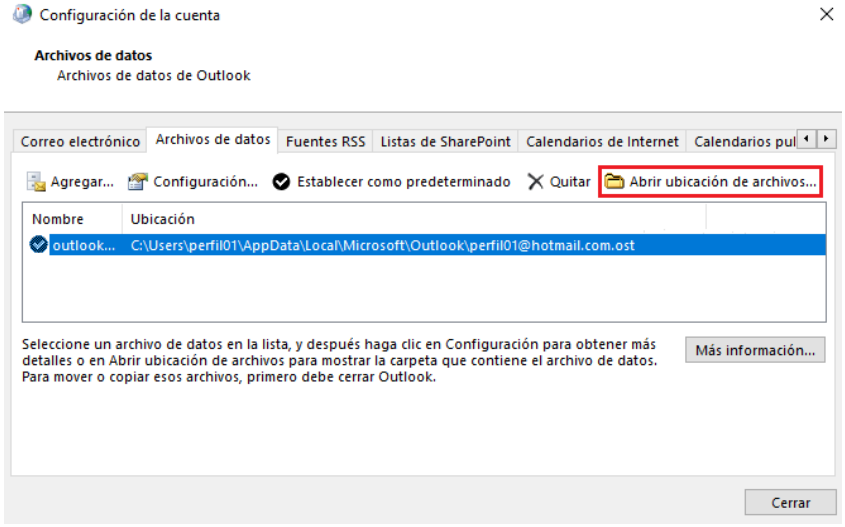
Click on **Data files…**



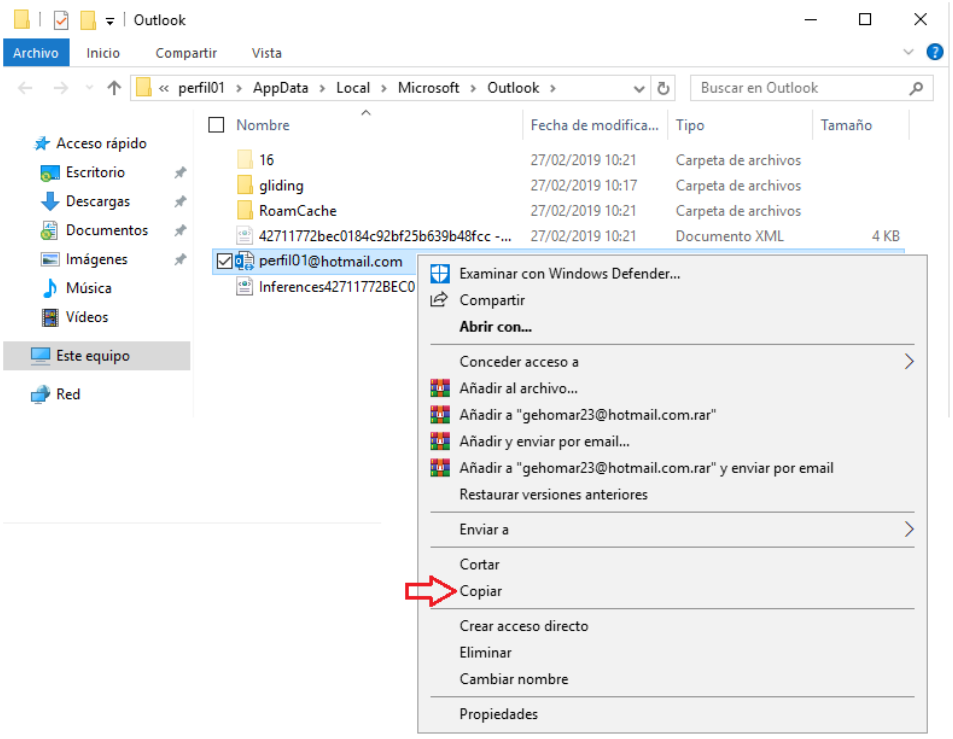
In the following screenshot, the **.ost** file is son the route: C:\User\perfil01\AppData\Local\Microsoft\Outlook\



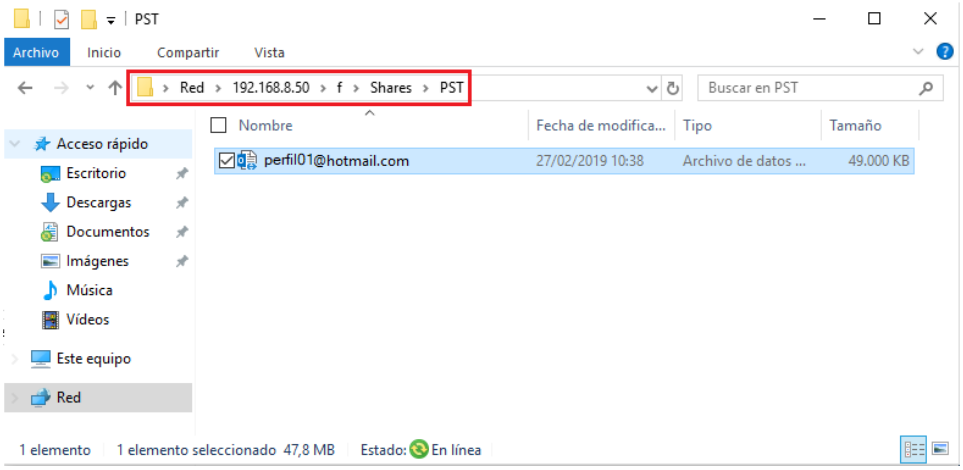
Click on **Open file location** to easily find the file **.ost:**



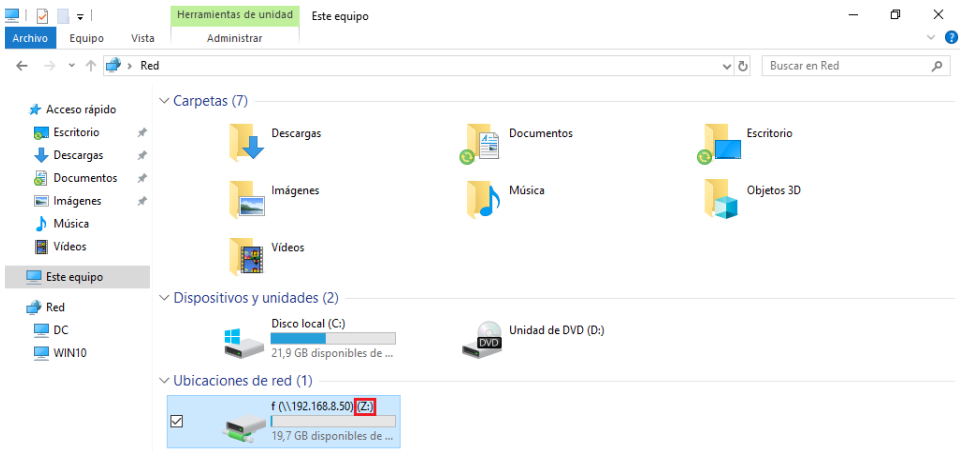
We will select the file and copy it:



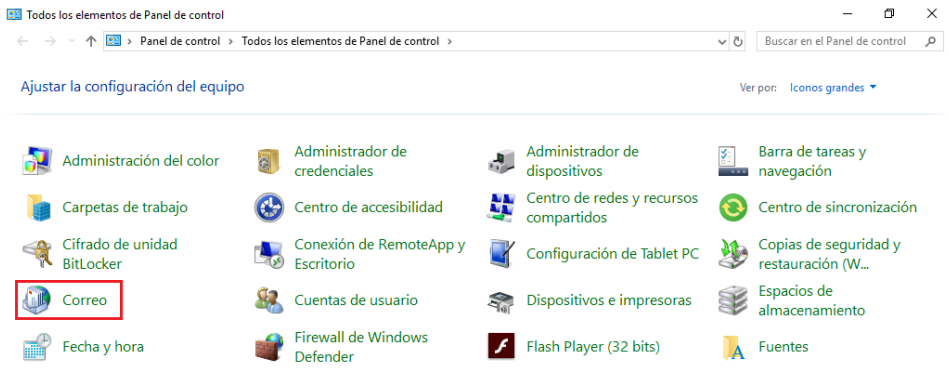
We will paste it into the F:\Shares\PST unit that we have previously shared.



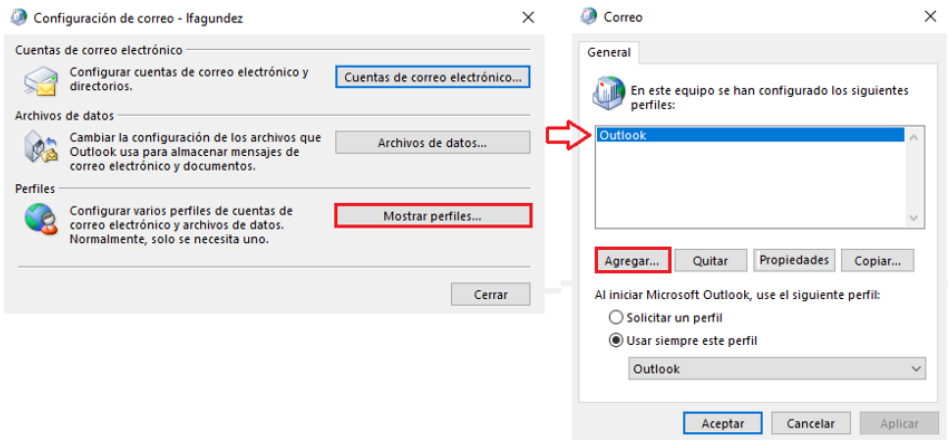
We will create a network unit in the computer. In this example, we will create the unit **Z:**, in order to make the configuration of Outlook.



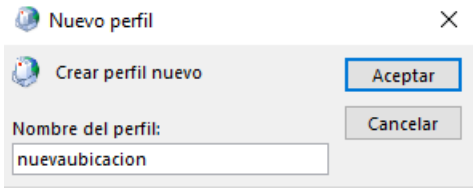
After creating the network unit, we will open the Control Panel and once again we will click on **Mail**



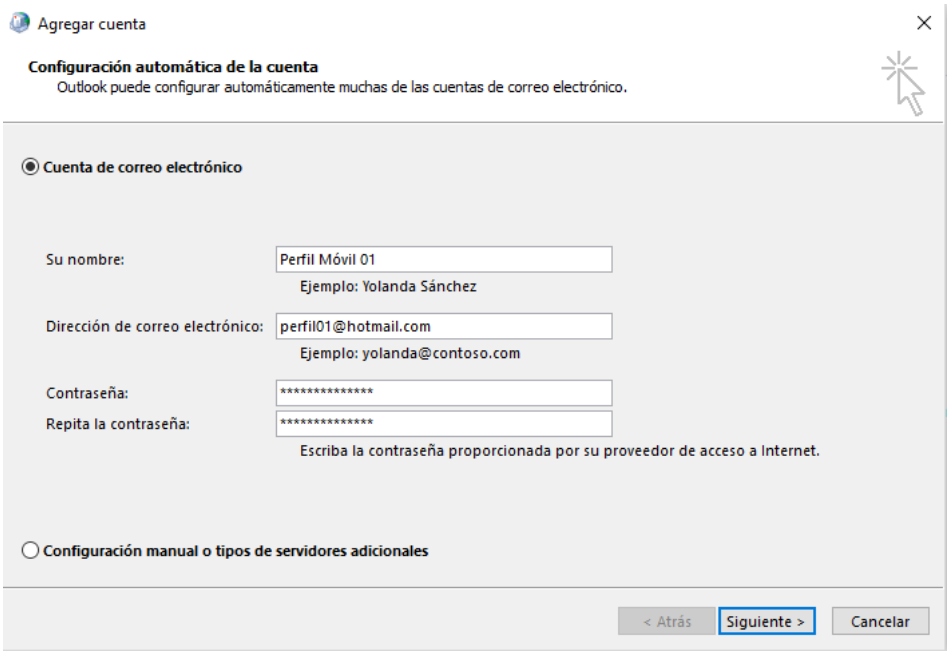
We will click on **Show profiles…** And this time we will click on **Add…** to create a new profile.



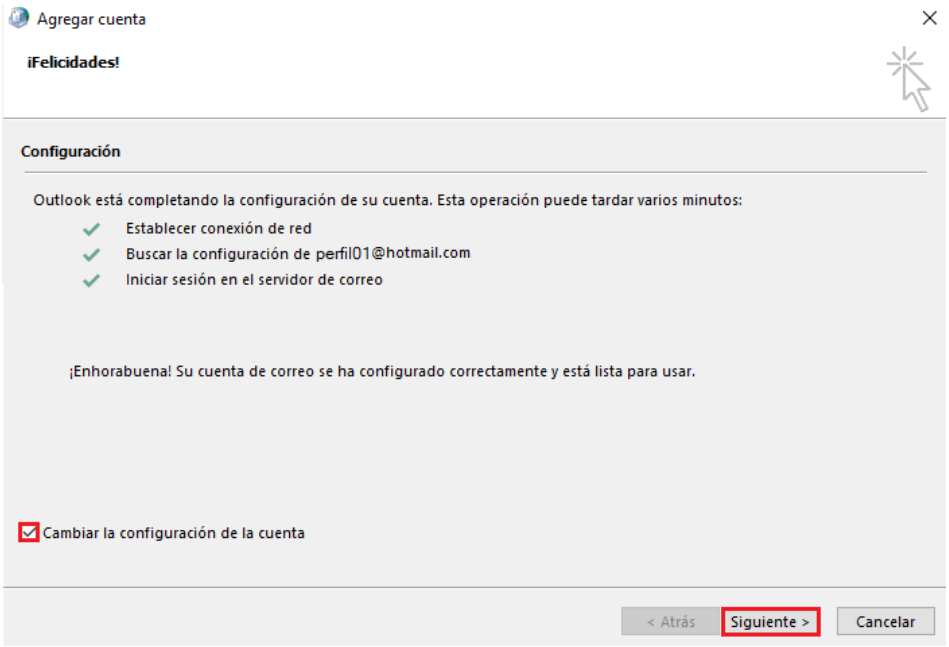
We will add a name. In this example we will use **“nuevaubicacion”** and clik on **OK**.



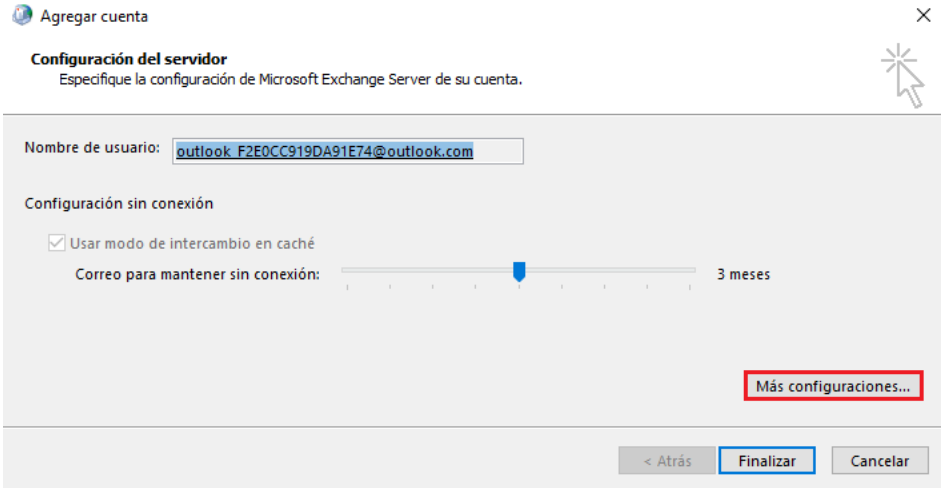
After making this configuration, a wizard will ask us to configure the email account. Enter the name, email address, password and repeat the password and click Next.



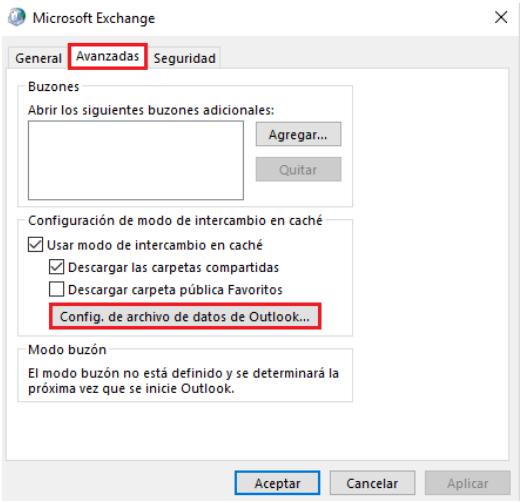
We will wait for the configuration of the account to be made. After completing the configuration correctly, we will mark the option **Change configuration account** and click on next.



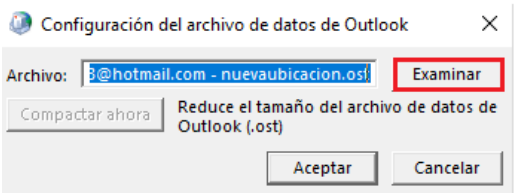
In the next wizard window, click on **More configurations…**



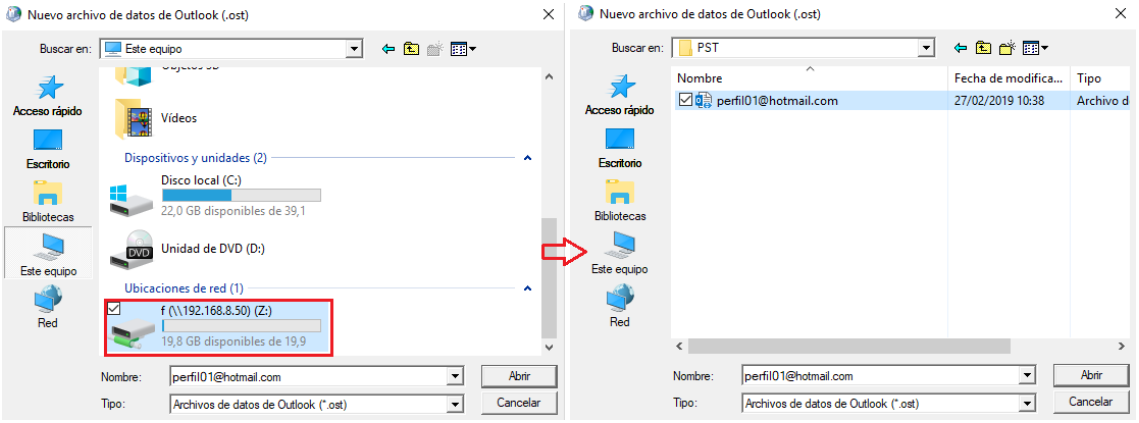
In the window will be displayed, we will enter the **Advanced** tab and click on the **Outlook Data File Configuration…** button



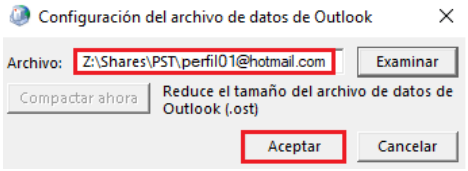
Click on the Browse button



A window will be displayed, where we can select where the **.ost** files are stored. In this example, we will select the network unit that we have created previously and look for the .ost file, which we have previously created. Then click on **Open**.

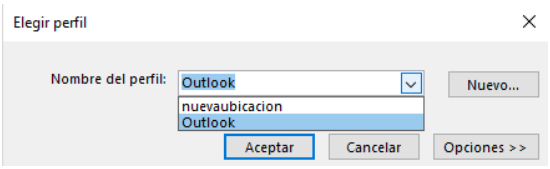


The wizard will be closed and we'll be able to see that the path where the **.ost** file is located has been modified. We will click on **OK**.



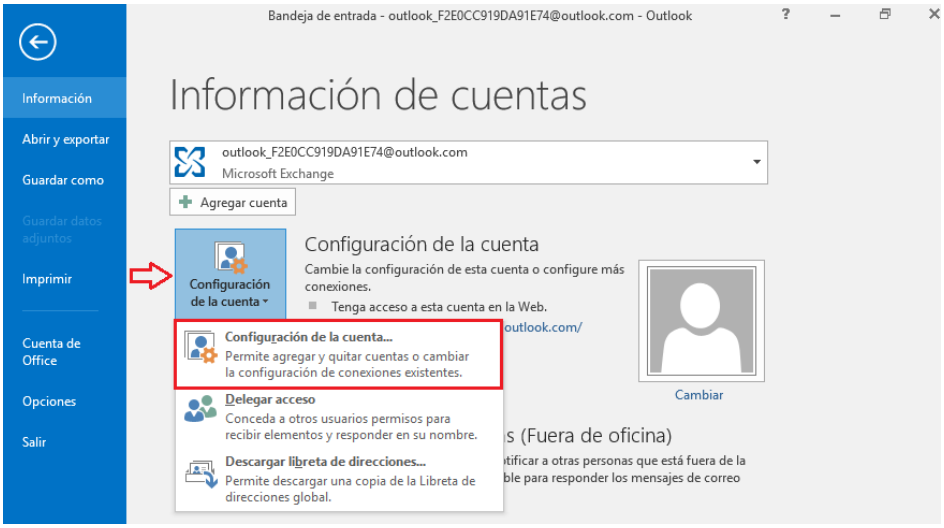
After making the modification of the path, we will open the Microsoft Outlook and confirm that the route has been changed.

In order to do this, we will select the new profile:

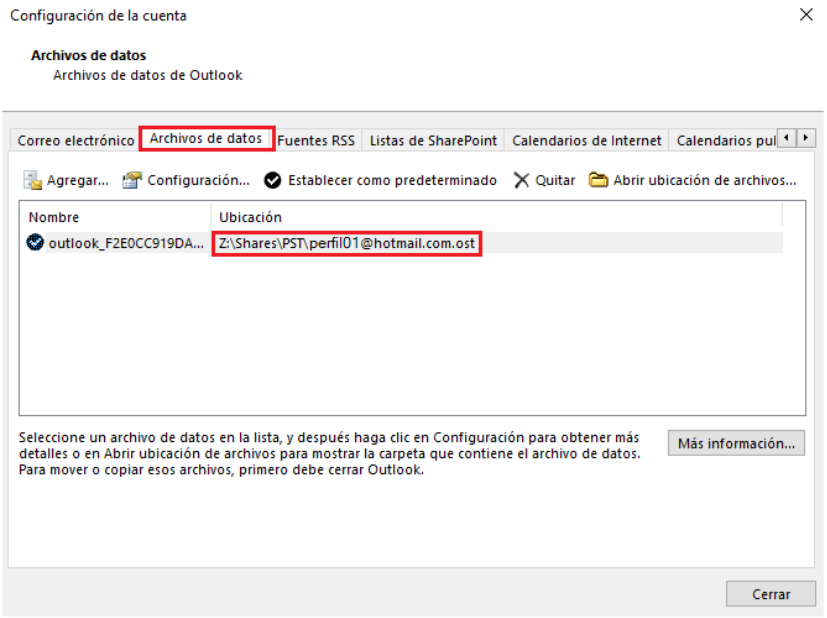


We will wait for Outllook to upload the profile:

We will go to Account Settings and click on **Account Settings…**



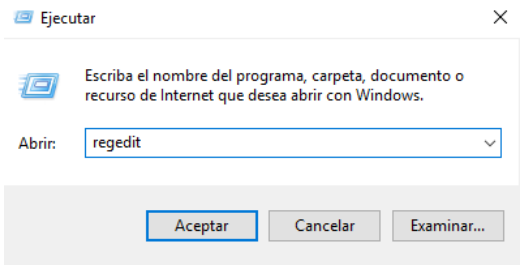
We will select the tab **Data files**. If the process has been performed correctly, the location of the .**ost** file will have changed, which means that from that moment, Outlook can be opened in any computer of the organization that is in that domain and we will not have to wait for all the emails to load again.



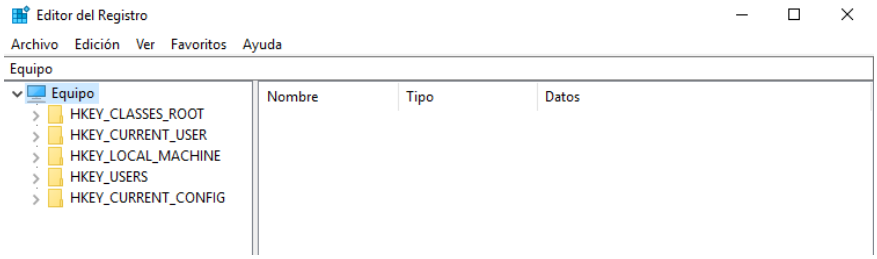
- Second Method:

Finally, we're going to show another method, since this process can also be performed modifying Windows registry (**regedit**), to force Outlook to open from a specific location, where we have stored the .**ost** of the accounts that are created from Outlook.

Press **Windows + R** and Run window will be opened. Type **regedit** and click on **Ok**

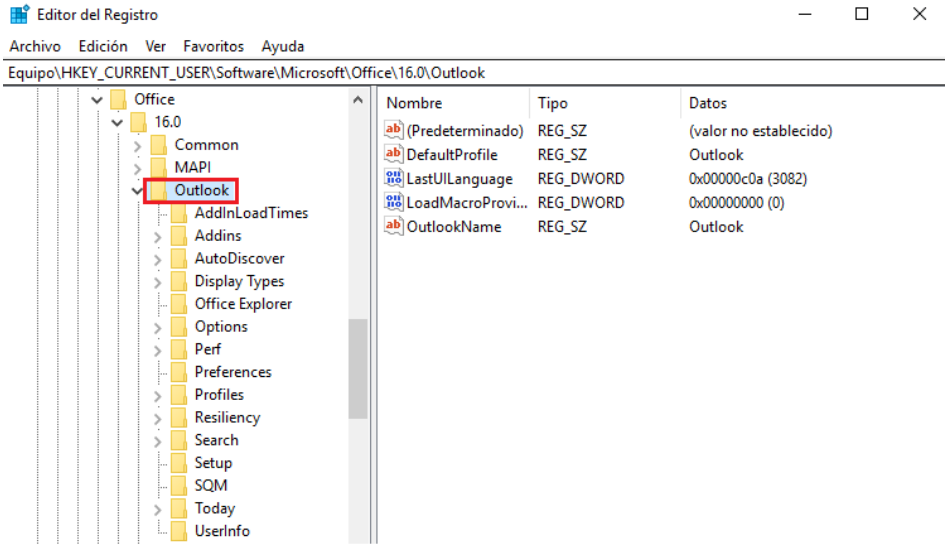


A popup window will open with the Registry Editor.

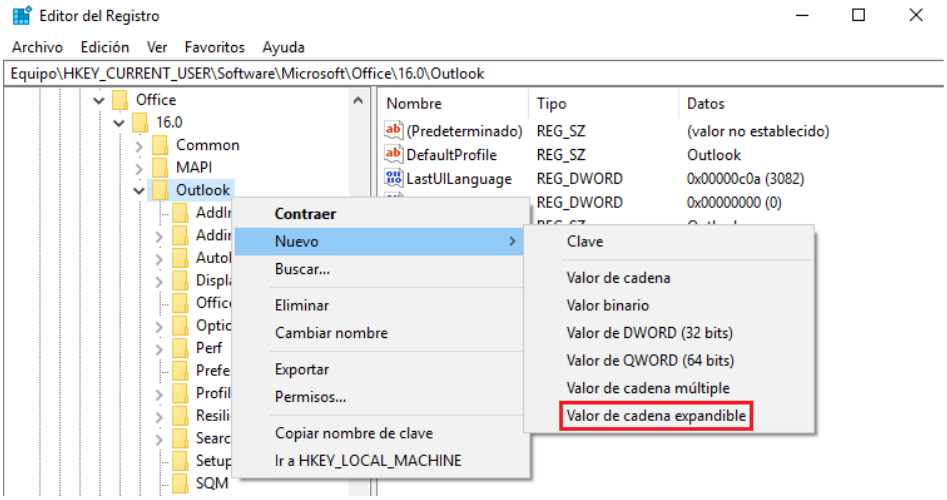


We will go to the following path:

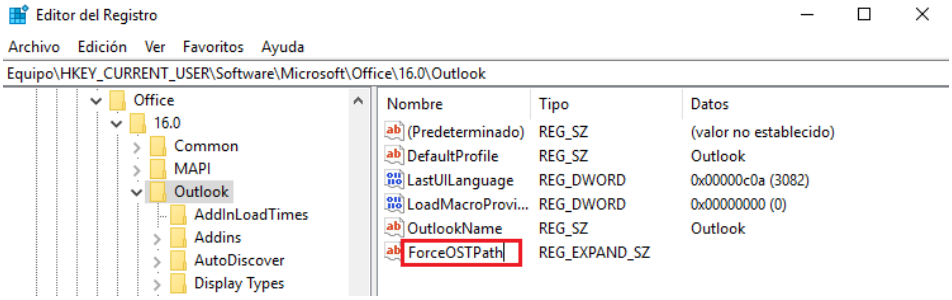
HKEY_CURRENT_USER → Software → Microsoft → Office → ("we choose the version of the Office", in our case we have installed the 2016 version) **16.0 → Outlook**



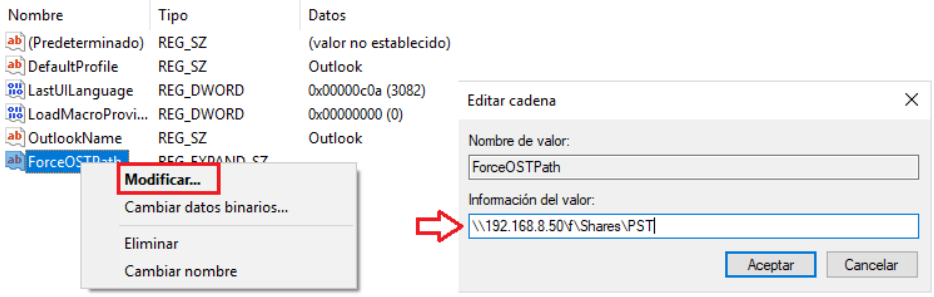
We will click with right mouse button on Outlook and select **New → Expandable chain value**



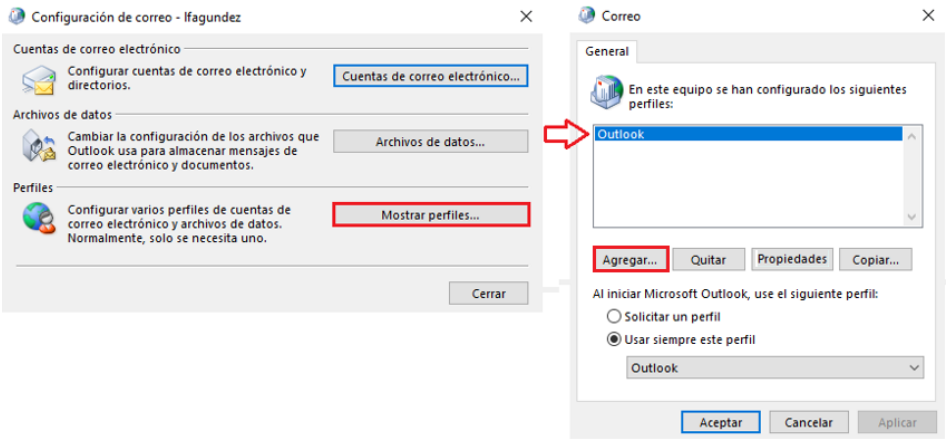
We will introduce the name **ForceOSTPath**



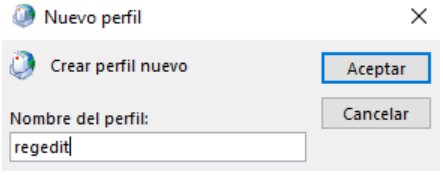
We will edit the record, click with right mouse button on **Modify…** A popup will open in which we will enter the path where the files of type **.ost** are found. In this example we will use: \\192.168.8.50\f\Shares\PST



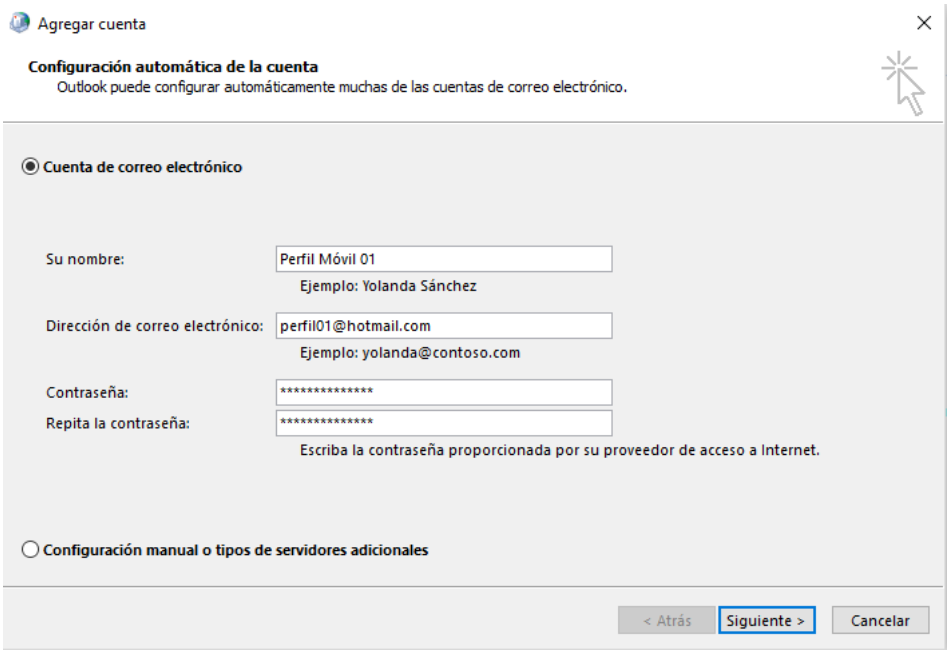
After making this change, we will perform the test of creating a new profile



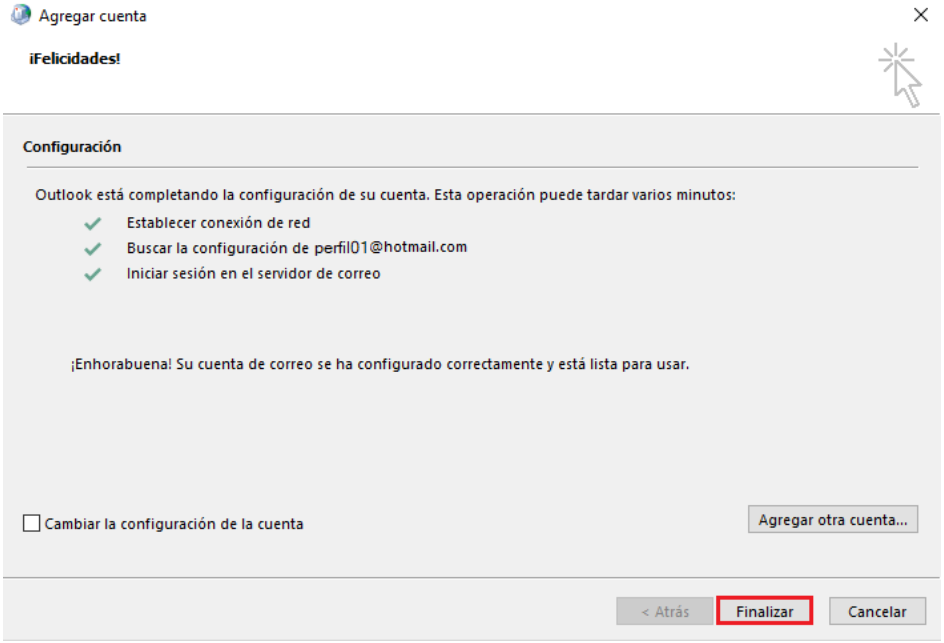
In this example, we will call it **regedit**



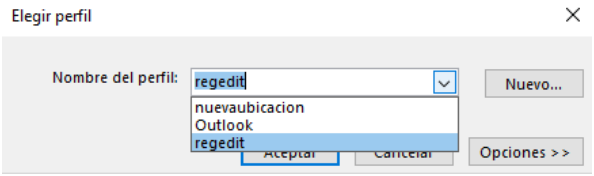
At this point, the wizard asks us to perform the account configuration again.



Once the account configuration is finished correctly, click on **Finish** and open Outlook:

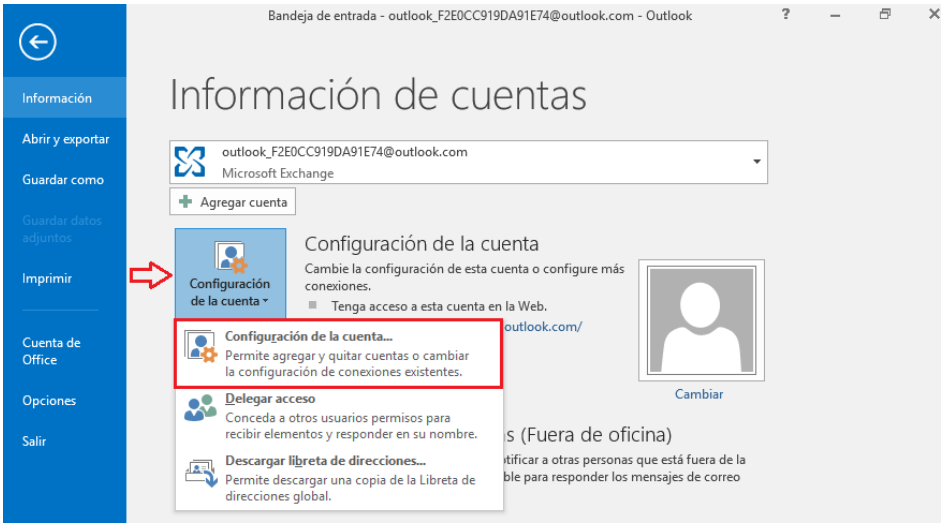


Once we have opened Outlook, we will select the file that we have created previously:

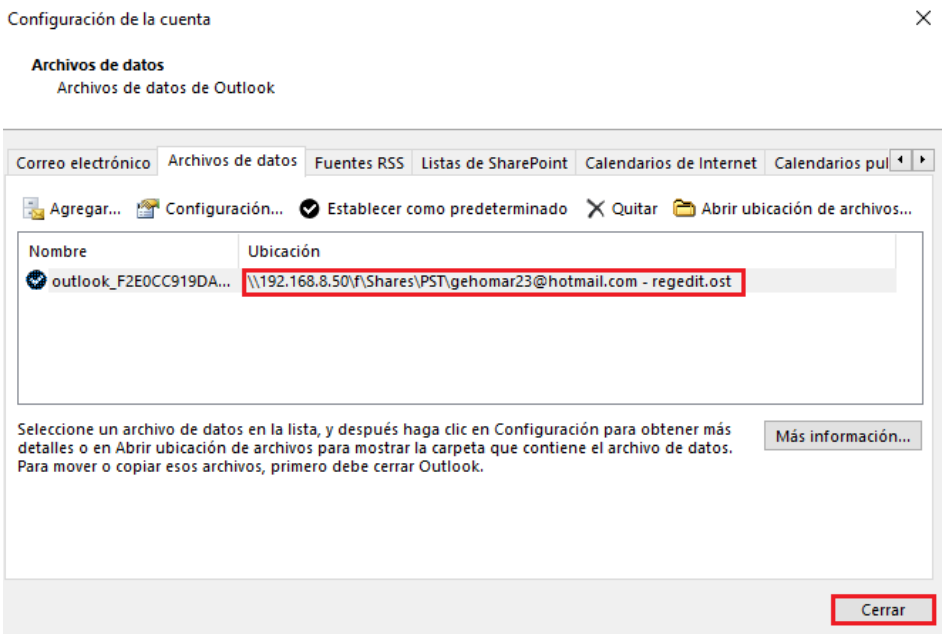


We will wait for the profile to be loaded:

After completing the profile upload, we will open the Account Settings and select **Account Settings…** again:



Open the tab **Data files** and verify that the path where the **.ost** files are stored from this moment is located in the network unit that we have previously configured. In this way, we can open Outlook on any computer in our organization, which is within the domain, and we will not have to wait for all our emails to be loaded again.



About VirtualCable

VirtualCable develops, supports and commercializes UDS Enterprise through a subscription model, including product support and updates in segments based on number of users.

Additionally, VirtualCable offers professional services to install and configure UDS Enterprise.

For further information visit www.udsenterprise.com or email us at sales@udsenterprise.com