Redirecting mobile profiles in Windows

UDS ENTERPRISE 3.6

Index

Introduction

The personalization of the operating system, applications and base files (documents, images, music, video, favorites...) made by each user is considered as a profile. Therefore, each user has their own profile that characterizes them: desktop wallpaper, position of icons, Word templates, position of toolbars, documents, images...

When the user first signs into a computer, their folder with custom subfolders and files is created. This folder is called profile.

The profile is divided into two sections:

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

Through an example, this document shows in a simple way how to configure Roaming Profile Redirection in Windows.

Why perform profile redirection?

Before we begin, we are asked some questions with their answers that help us understand how Profiling Redirection is treated.

What happens when a user changes computer?

When a user changes computers, a new profile is created again with different files and settings. Example: if the user had created documents on computer A, when he moves to computer B, these documents are not there. If he had put a wallpaper on computer A, on computer B he has another one, etc...

Switching from one computer to another can cause a big problem for the user. But what happens when the computer crashes? Most of the time, the user stops working because he no longer has his data, losing his work tool.

And for administrators?

Things get even more complicated if users keep changing computers. A new profile with data would be created on each new computer. This situation complicates management, from the point of view of information security (who has access, where is the information...); as well as backups. Another example would be when the user leaves the company, and their data has to be deleted.

So what do we do with the profiles?

Due to the system architecture, the configuration data is needed locally on each computer where the user logs in. On the other hand, user data does not need to be on all computers. Rather, they must be in a single place, accessible from any computer by the corresponding user.

The first thing to do is unlink the profile from each machine. That the profile is unique for each user on all computers on the network (domain) and that if a user has to change computers for whatever reason, their data travels with them. This is achieved by placing the data in a single place: the file server. The user's profile becomes a roaming profile, when traveling with the user. But to do it correctly, the following section must be configured:

Configuration data: It is the moving part. It is copied to each computer each time you log on and off.

Data storage and permissions

Preparation of the central warehouse

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

On the file server, we will create a folder to store user data (in this example we will call it Profiles):

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

It is important to note that each folder must have specific permissions. In this way, the system itself generates the folders without the need for the administrator to create them previously.

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

To do this, we open our Server Manager and select File and Storage Services, as can be seen in the following image:
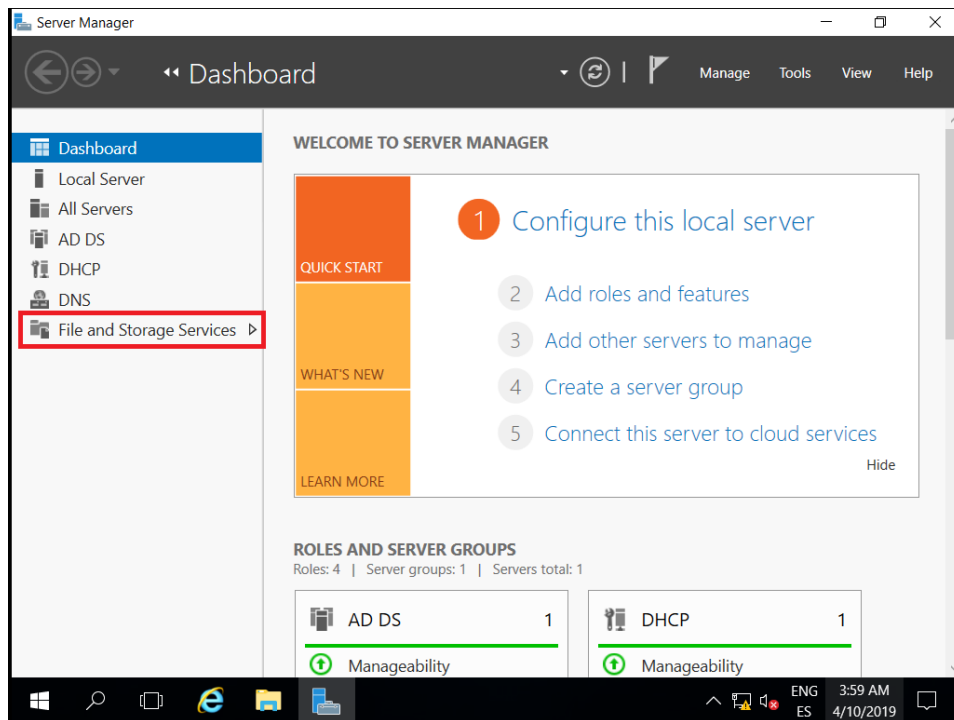
Once inside the panel, we will select the Shared Resources option. We recommend having a drive or partition to host user profiles there. In this example we have the drive E:\ in which we will save the information. If we do not want to have a specific partition, we can do it in the same way in the partition in which the installation was carried out (C:\), but we have to take into account that all the information from the server is on this unit and it would collapse if the Profile information increases until this drive is out of free space.
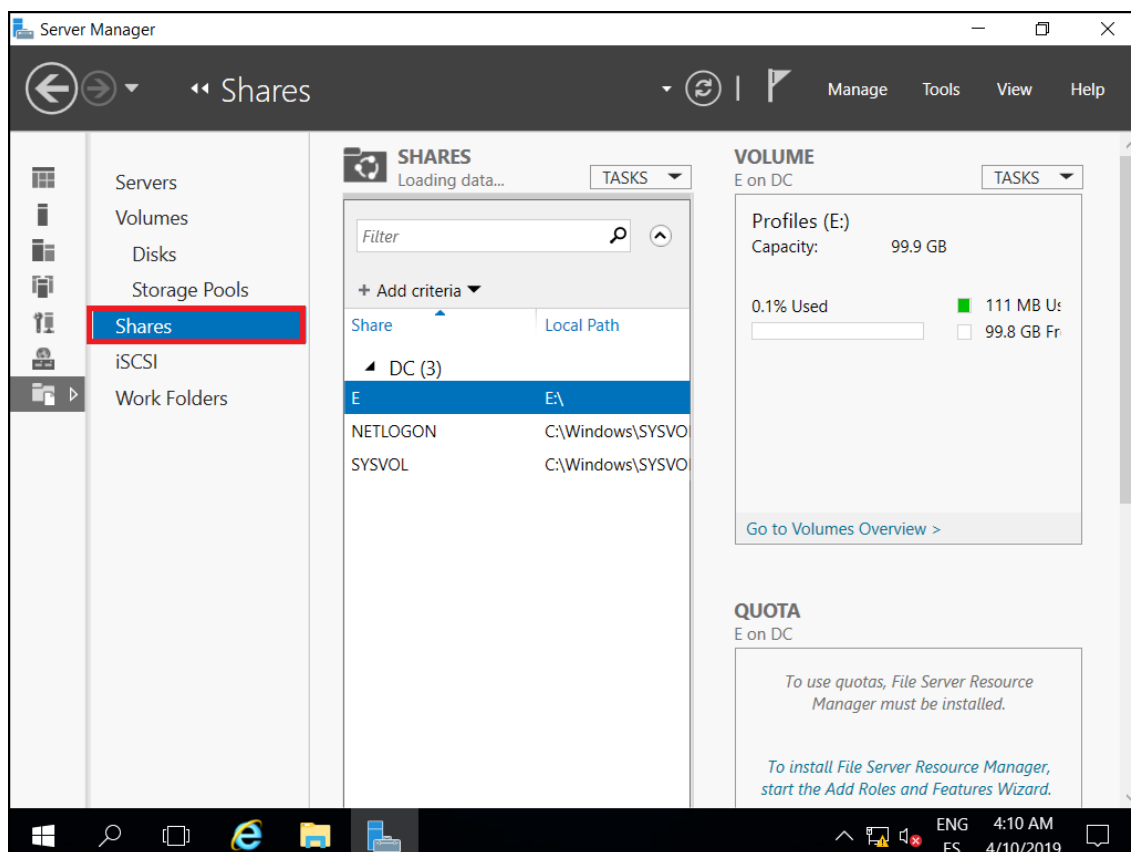
After having selected the unit where the user information will be stored, we click on TASKS and choose the option New Shared Resource...
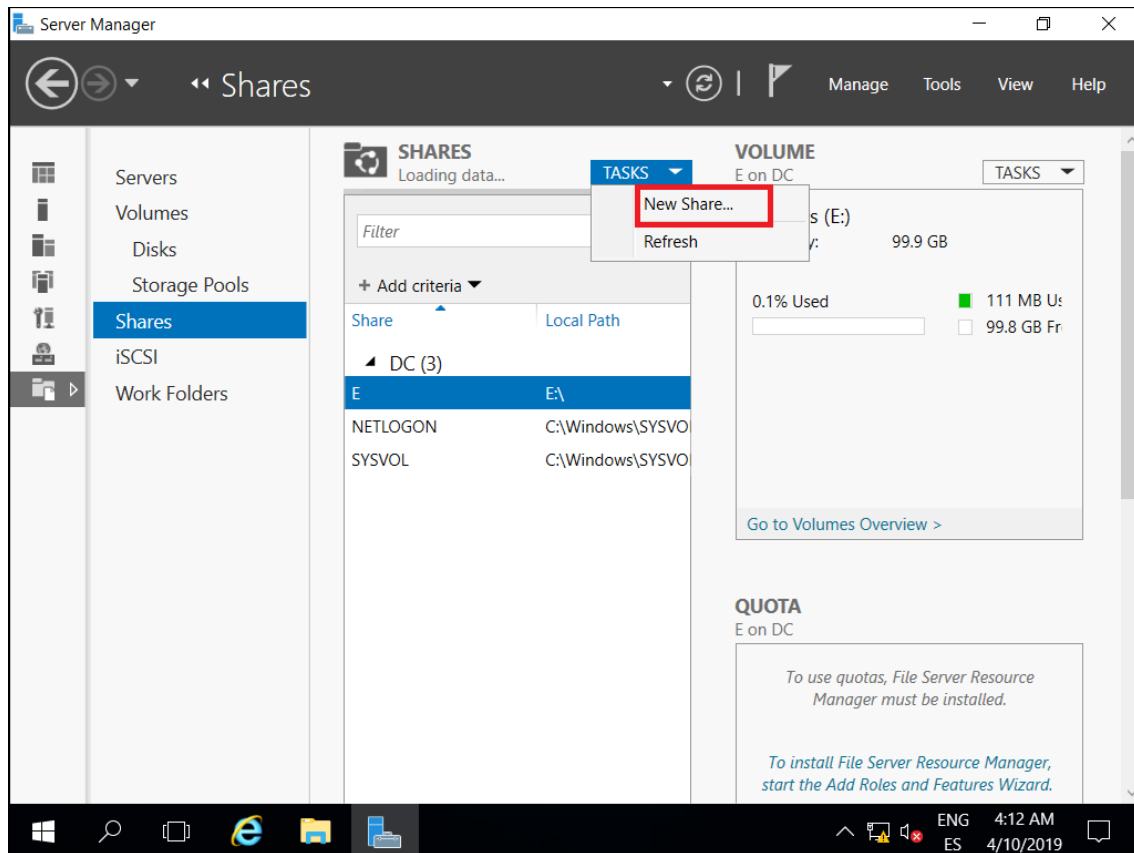
In the Wizard, for the creation of the new share we select the option SMB Share – Quick. As the description indicates, it is the fastest way to create a share.
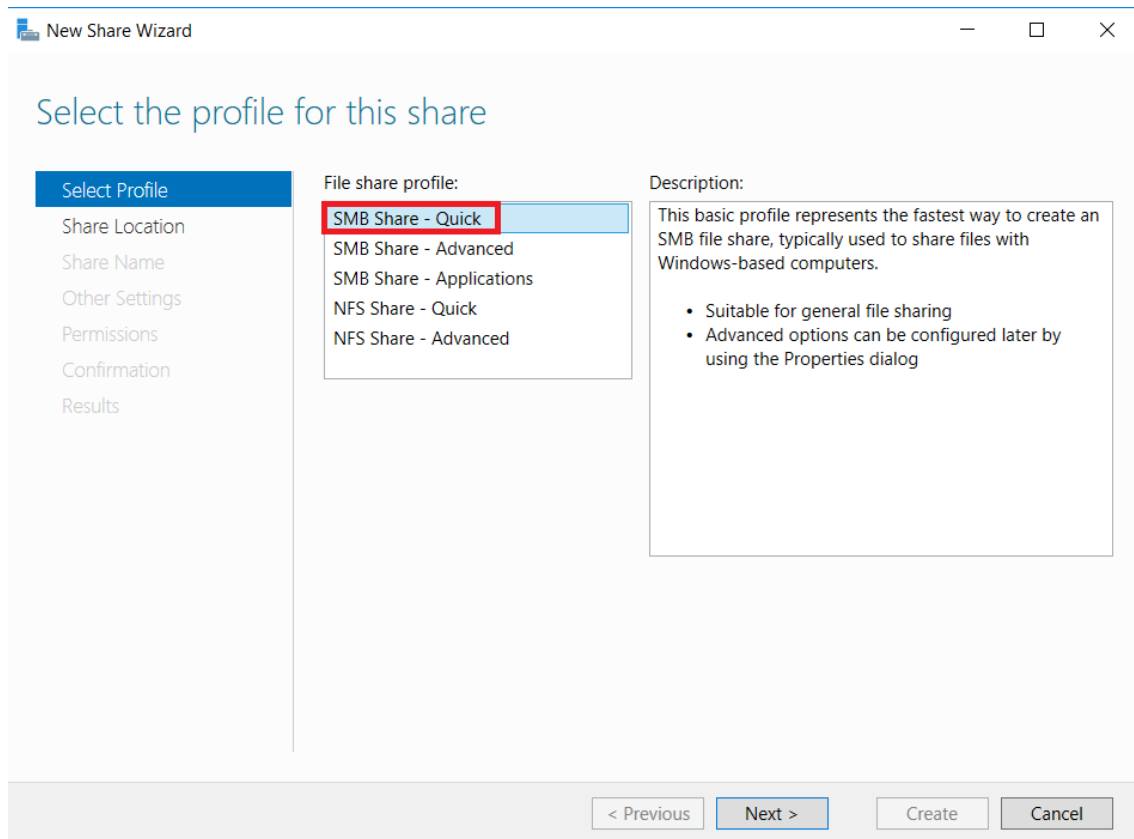
Select the path of the shared resource and we will choose the one that we have previously created. In this example we have the drive (E:), we select it and click on Next.
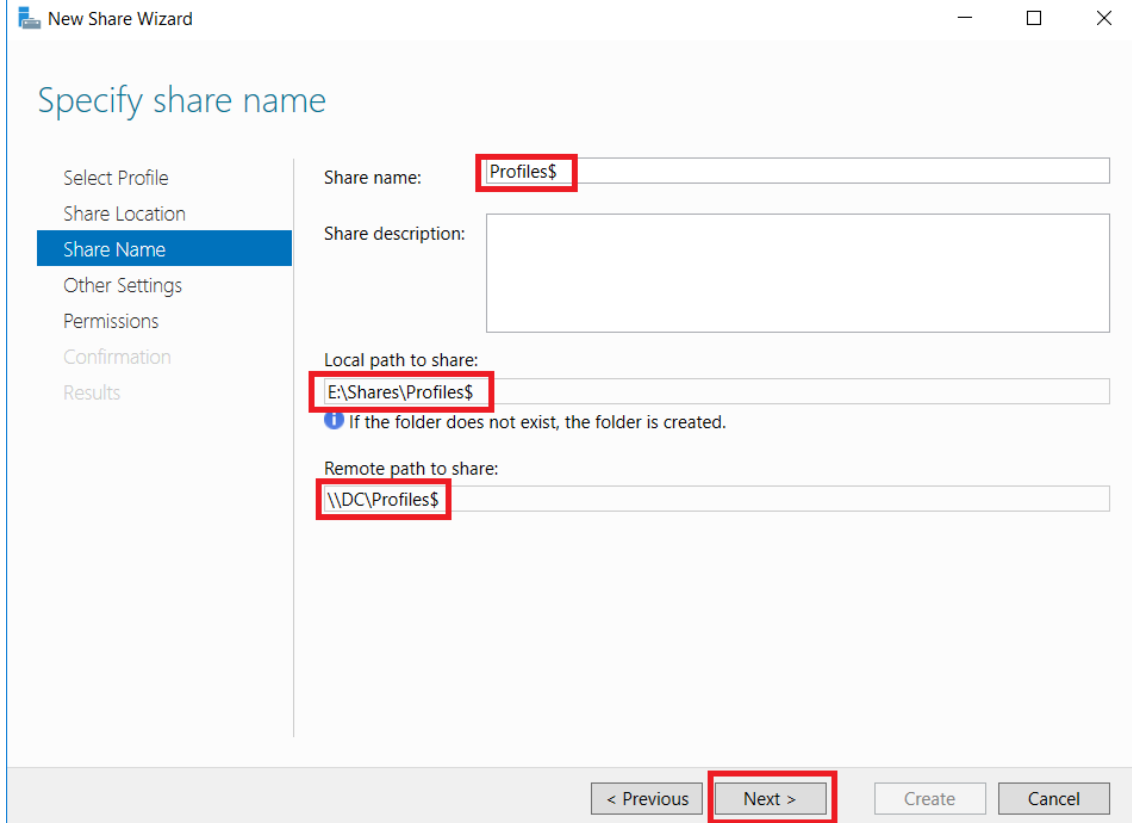
In the next section, we will indicate the name of the folder where the user profiles will be stored. In this example we will call it "**Profiles**". Next we can see that it automatically adds the Local Route and the Remote Route of the shared resource.
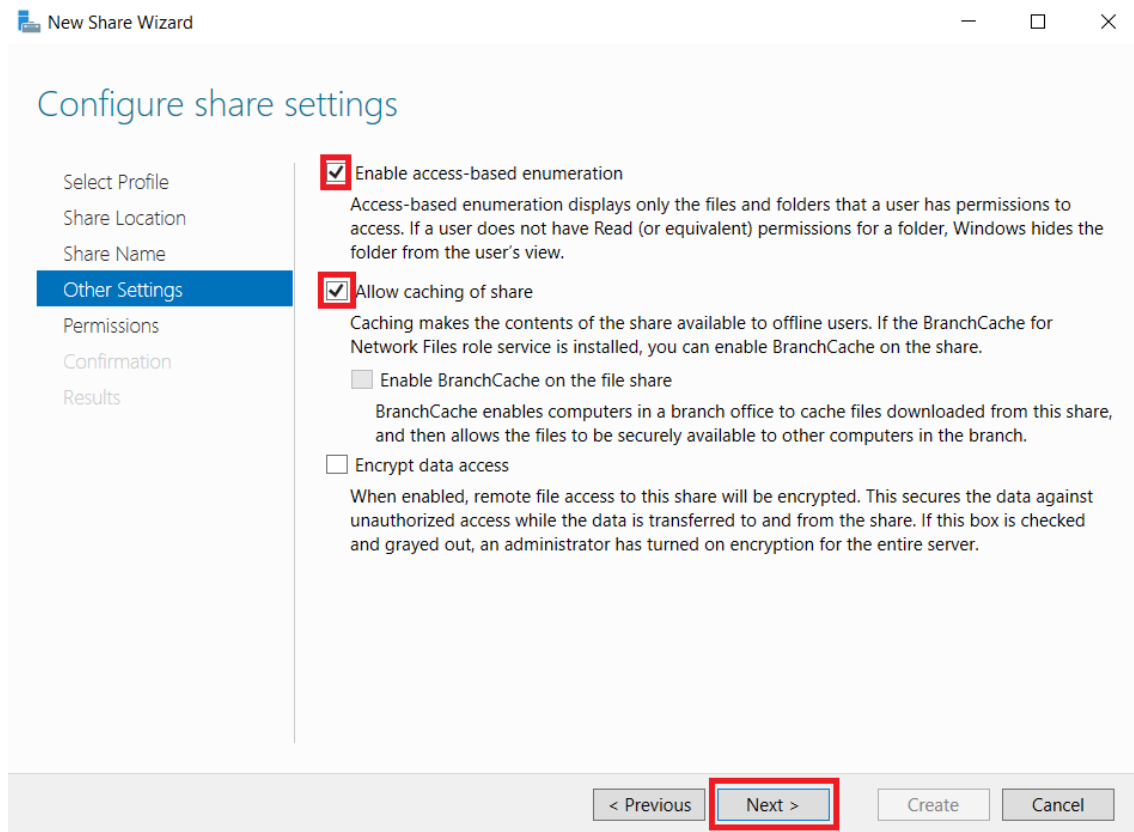
In the Configuration parameters section we will mark the following options:

- **Enable access-based enumeration:** displays files and folders for users who have access permissions.
- **Allow caching:** Allows the contents of the share to be available to offline users.

Click on Customize permissions... to control access.
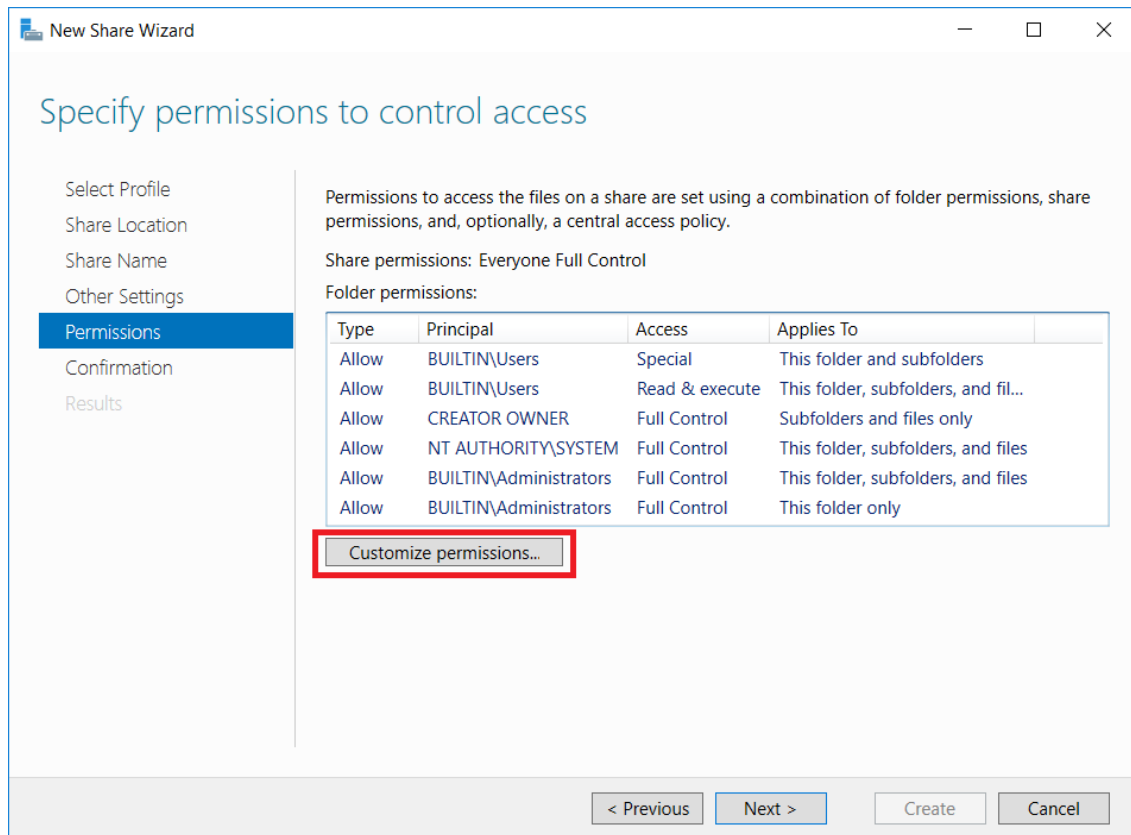
Next, proceed to disable inheritance for these folders. Carry out this operation so that in the event that there are several users, the permissions of the folders are completely independent.

Let's give an example: we have "user1" and "user2". Only "user1" will be able to access the "user1" folder, only "user2" will be able to access the "user2" folder. In this way, disabling inheritance grants individual permissions.
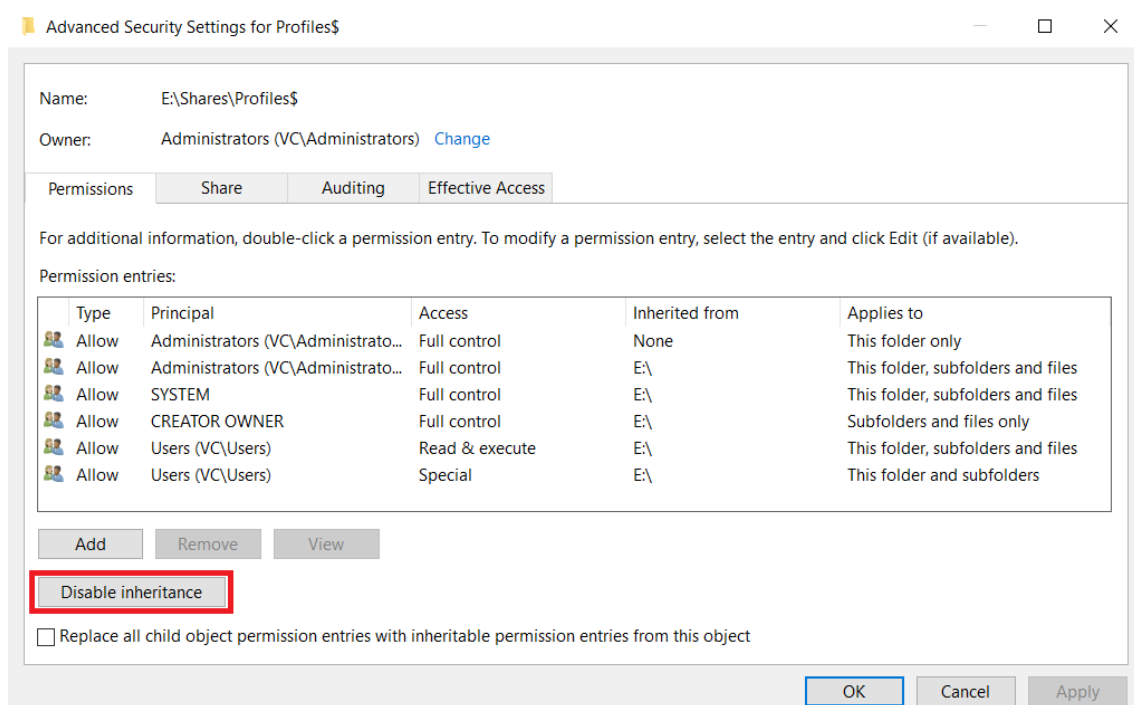
When disabling inheritance, it asks us what do you want to do with the current inherited permissions? In this example we select the first option: Convert inherited permissions to explicit permissions on this object.
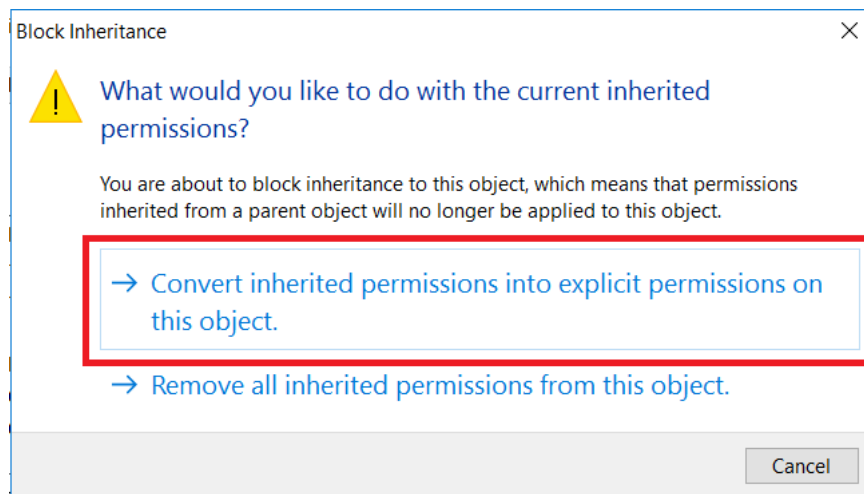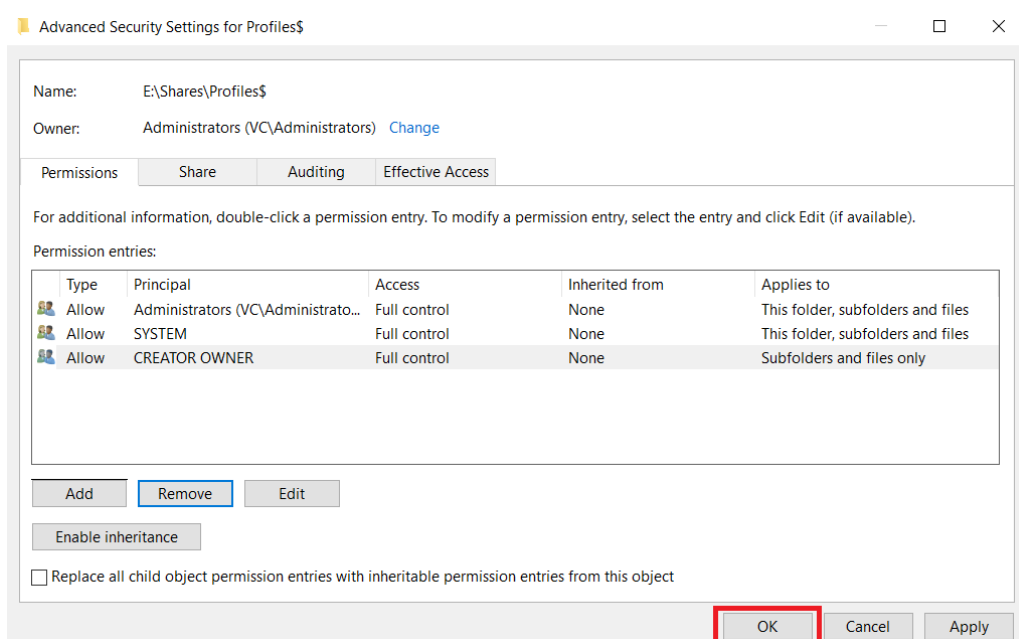
Next we will remove the permissions for the users of our domain, selecting the user and clicking on **Remove**, we will only leave the users CREATOR OWNER, SYSTEM and permissions for the Administrators (to have control in case there are problems with any of them).
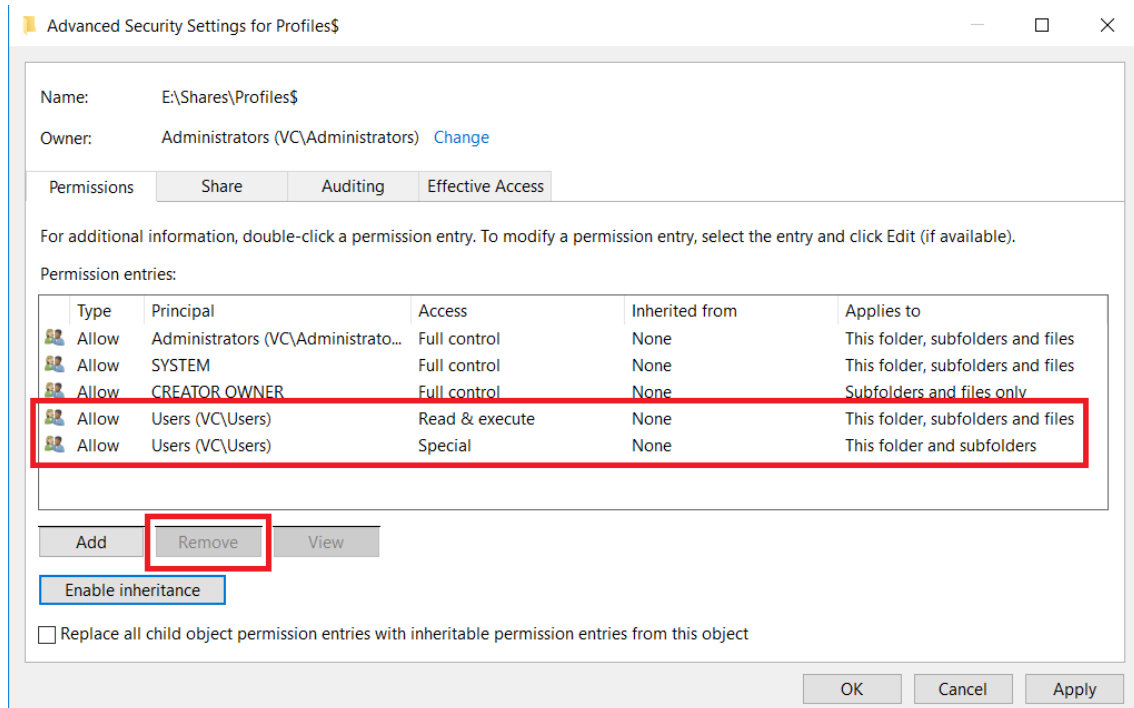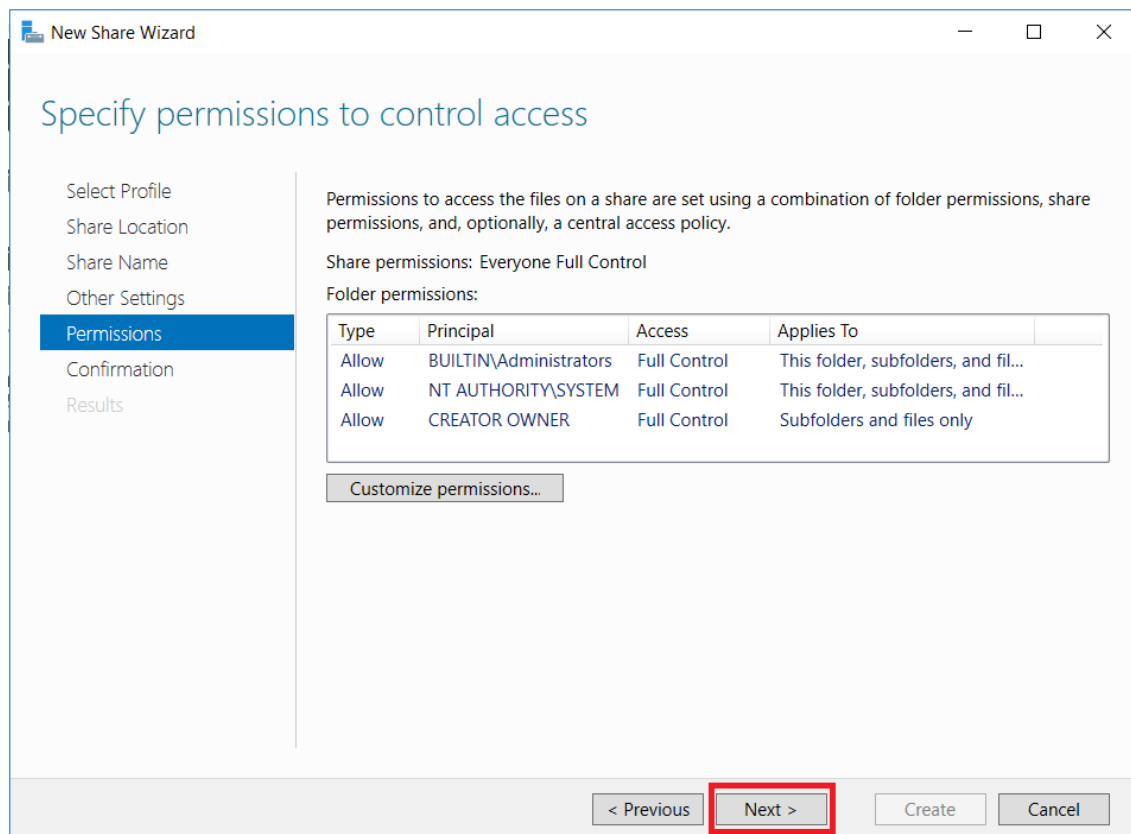

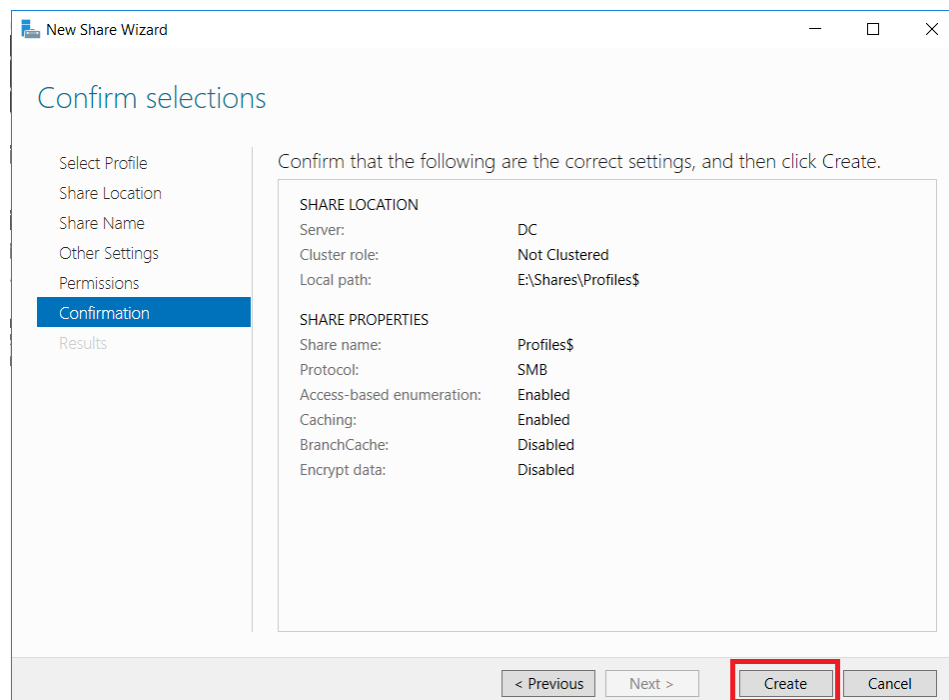Finally click OK. In this way, we will have customized the permissions of the users' folders.

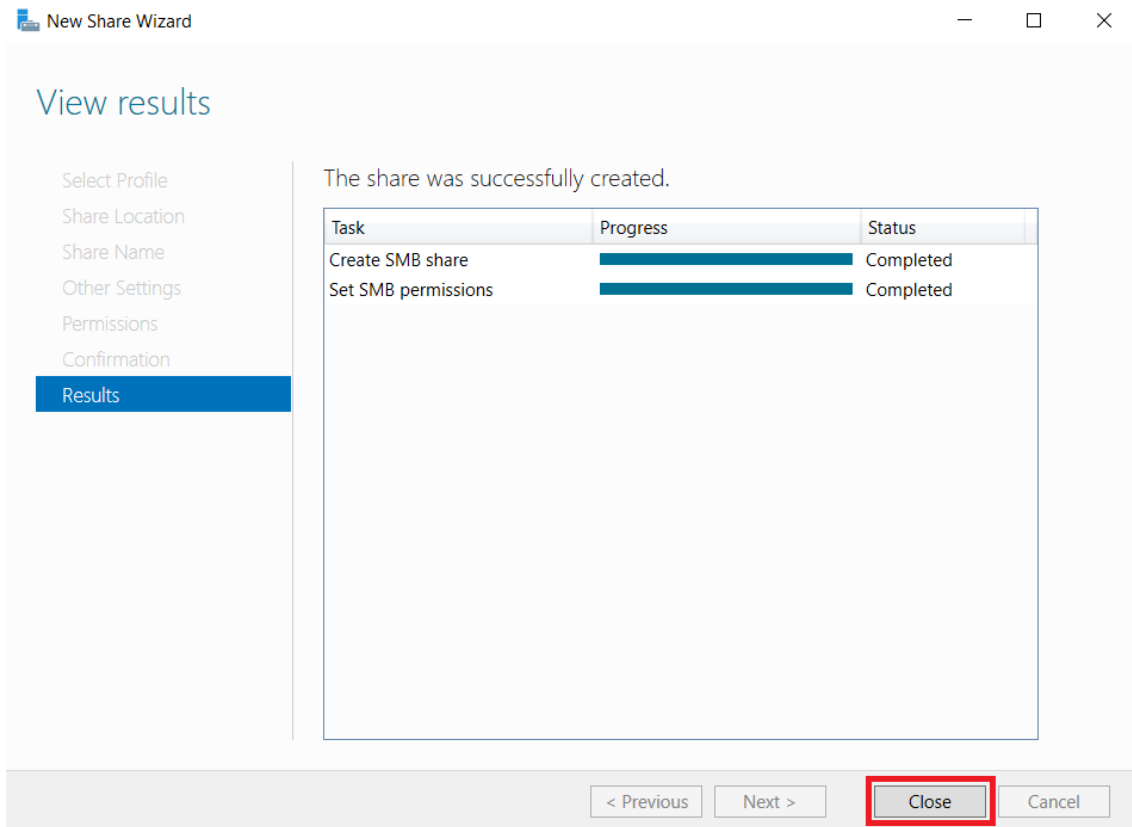In this example we will create a new share. To do this, click on Next and we will name it as "Profiles".
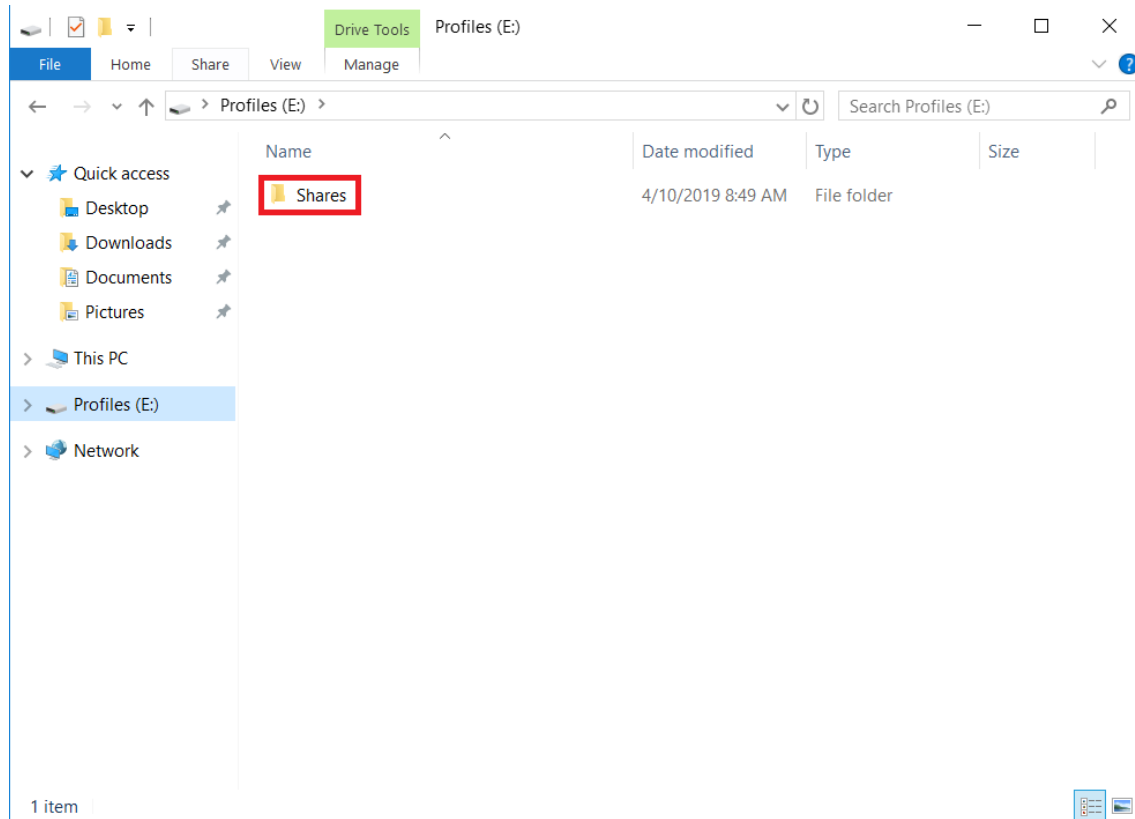
We will review the summary of the actions to be executed and click on CREATE.

In the next window we can observe the creation process.

Open the File Explorer, we will locate ourselves in the unit or partition in which we are going to save the profiles (in our case E:\). We can see that a folder called Shares has been created by default during the configuration process.

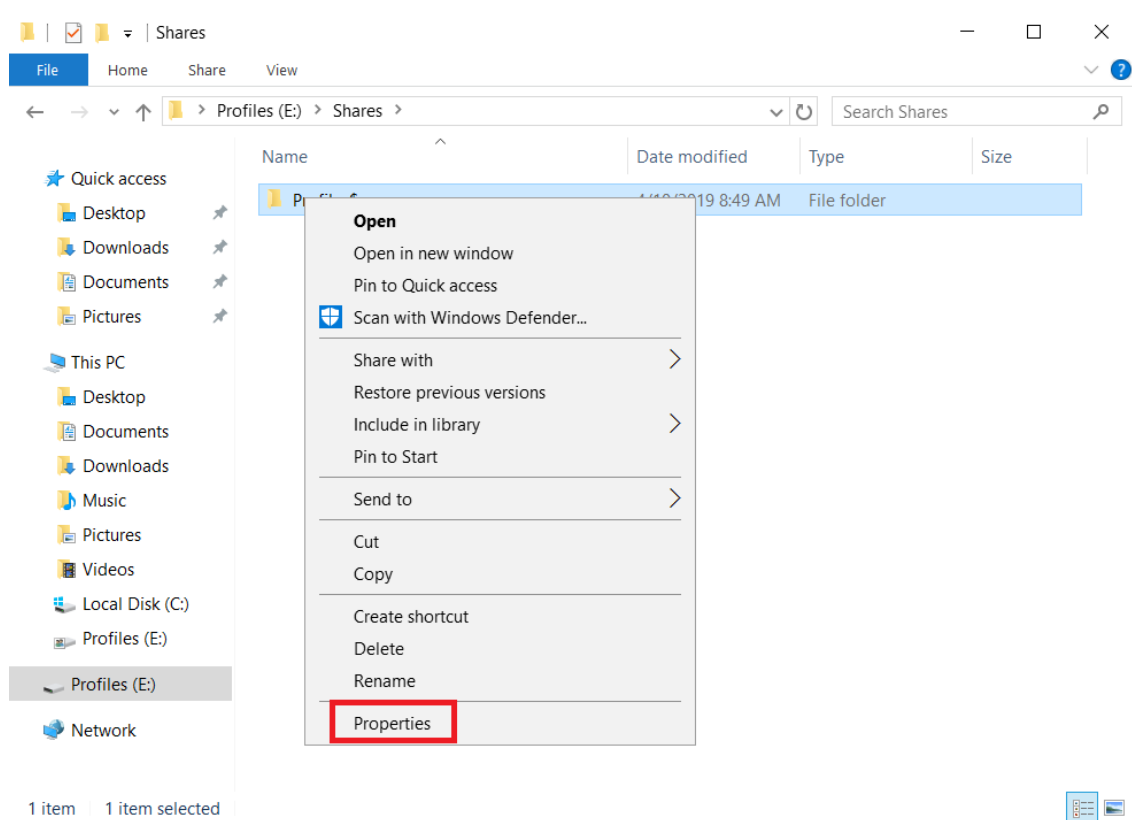Inside this folder, you will find the "Profiles" folder, where the user information will be stored.
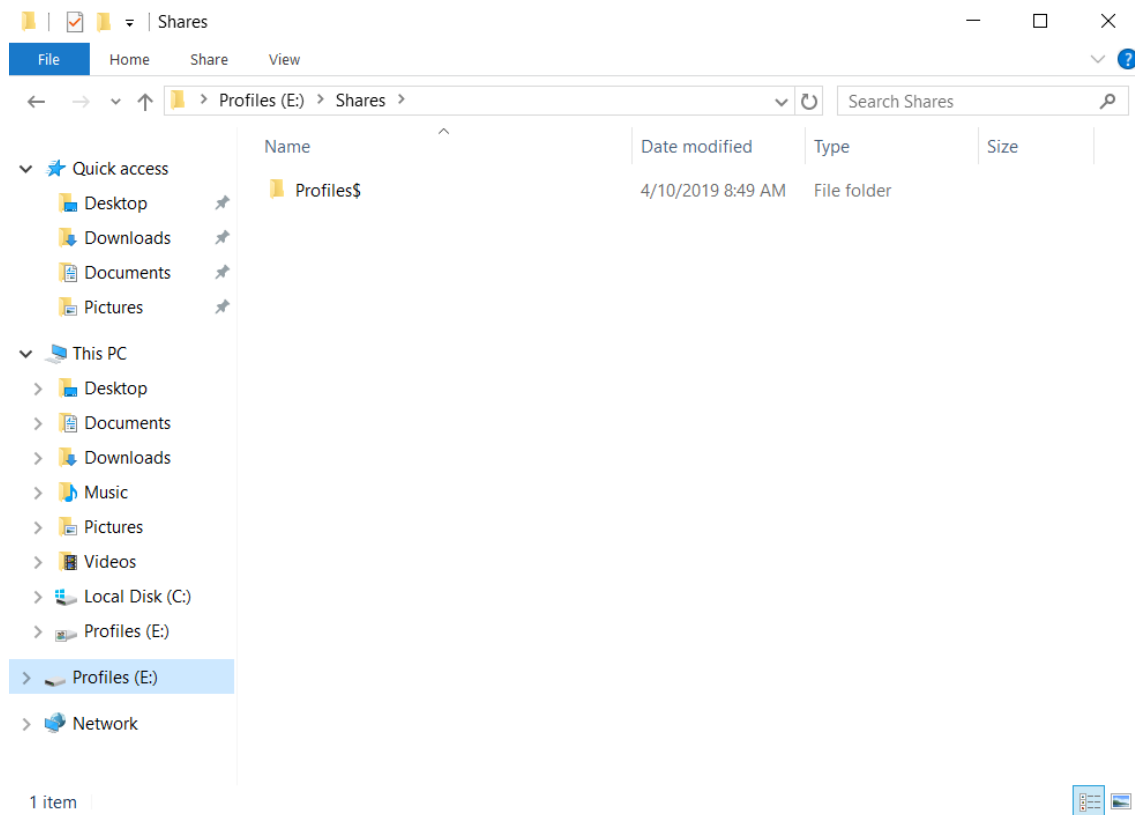
Permissions of the folder where the Roaming Profiles will be saved

Once we have created the folder, it is important to grant permissions to Domain users, so that they automatically save their information there. If the user does not have permissions, when they log in the documents will be created as temporary files and they will be lost when they log out.
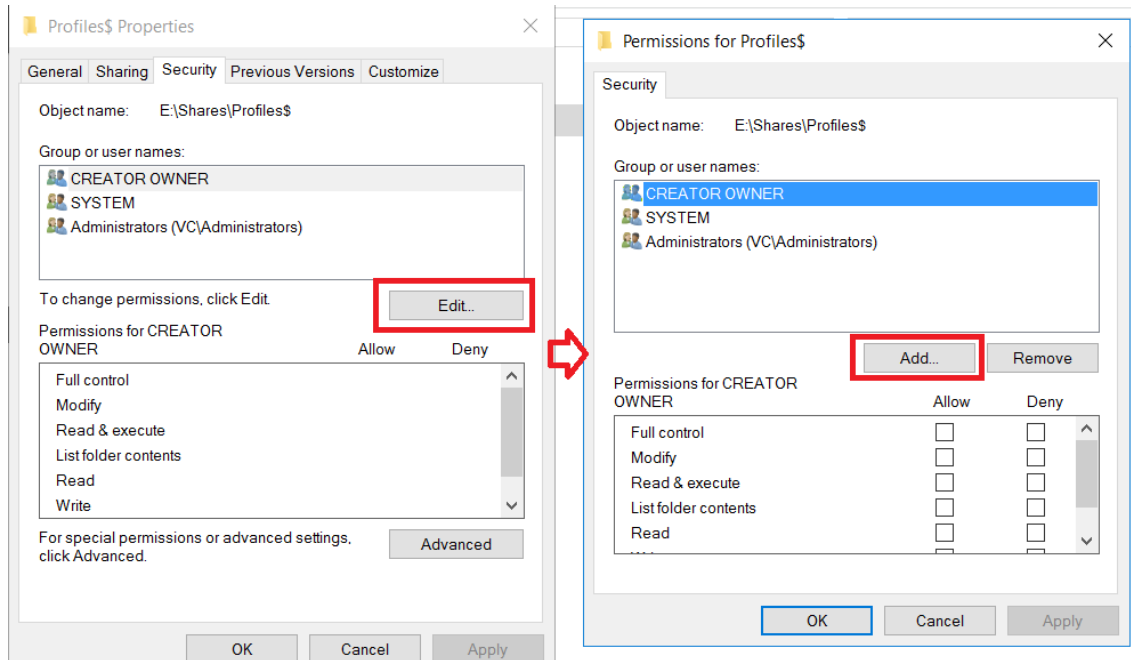
In this example we have created two users: "perfil01" and "perfil02" to whom we will give permissions.

To do this, right-click on the Profiles folder and select Properties.
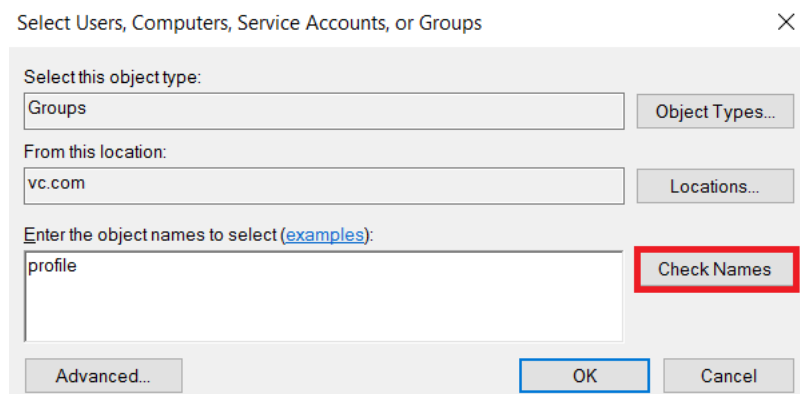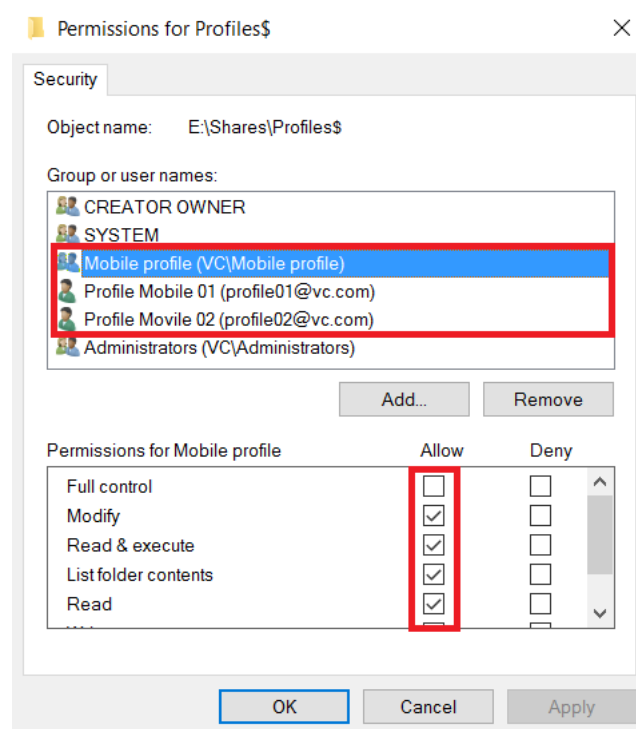
Click on Edit... and Add...

Introduce 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 users must belong.

In this example, we will grant permissions (Modify, Read and Execute, Show folder contents, Read) and finally click OK to apply the changes.

Configuration of the Roaming Profiles

Once we have completed the process of creating the shared resources and have granted their respective permissions, we will open the Active Directory user and computer management console (we will find it in the Server Manager > Tools menu).
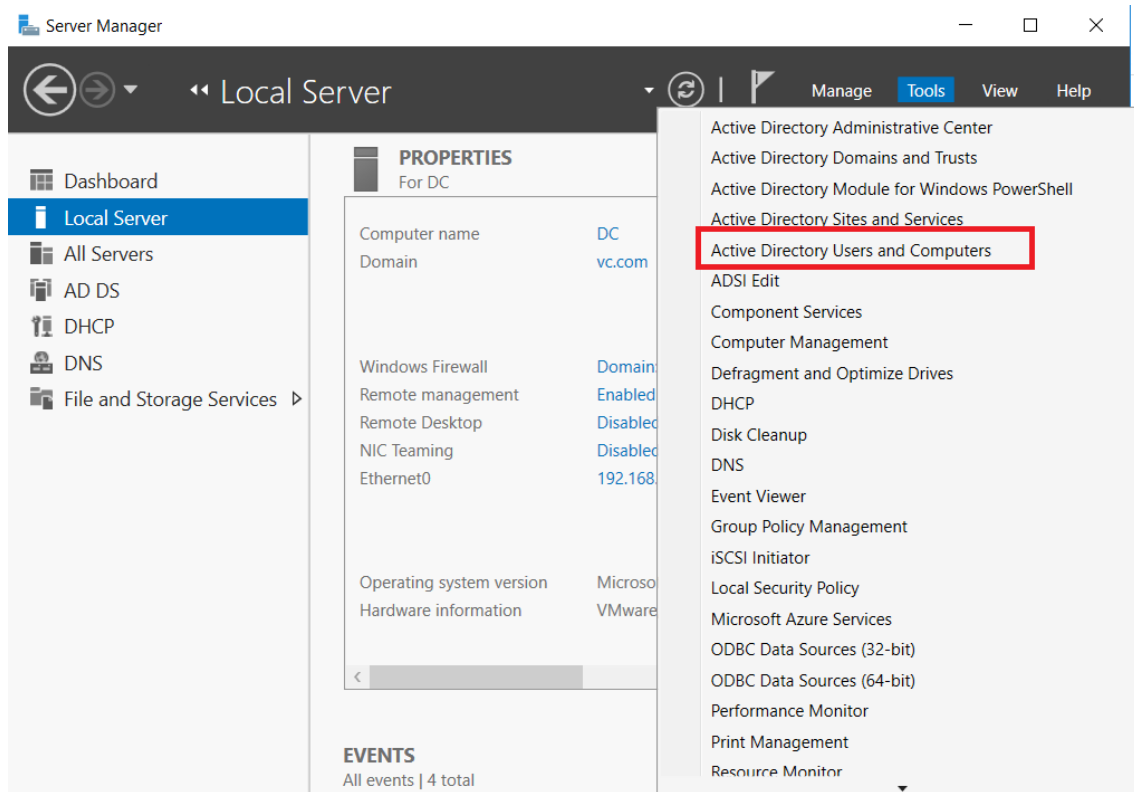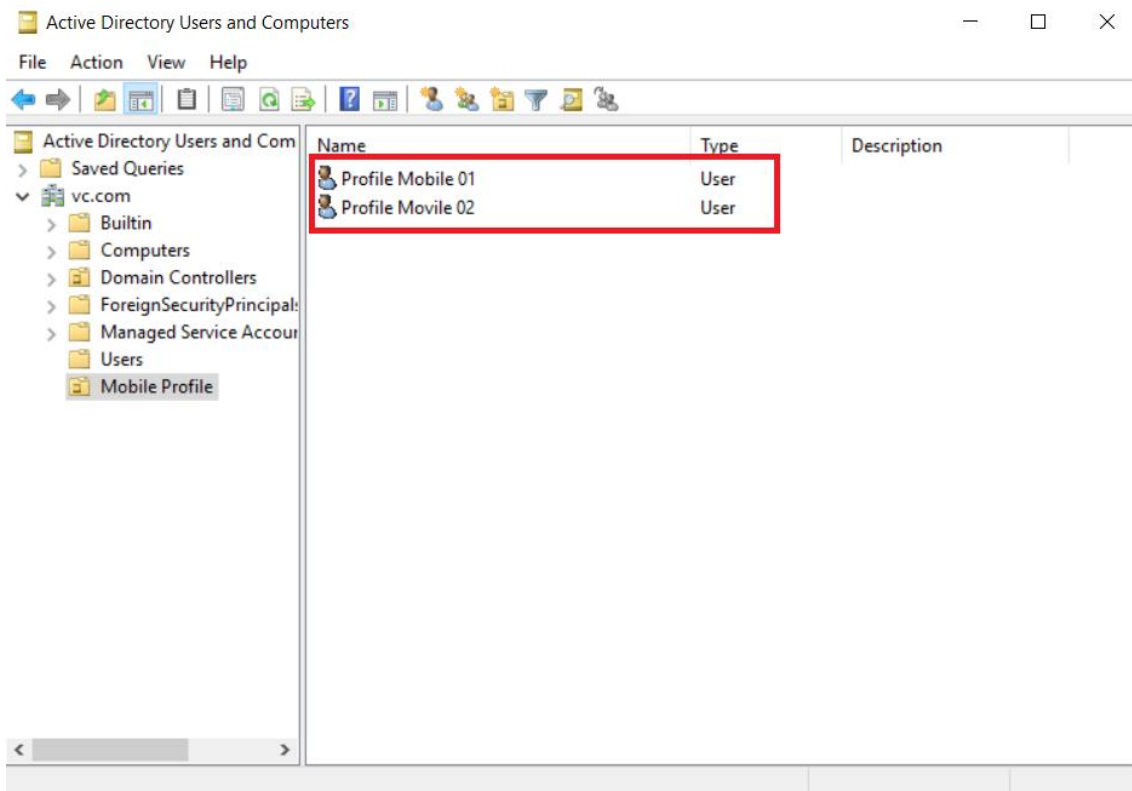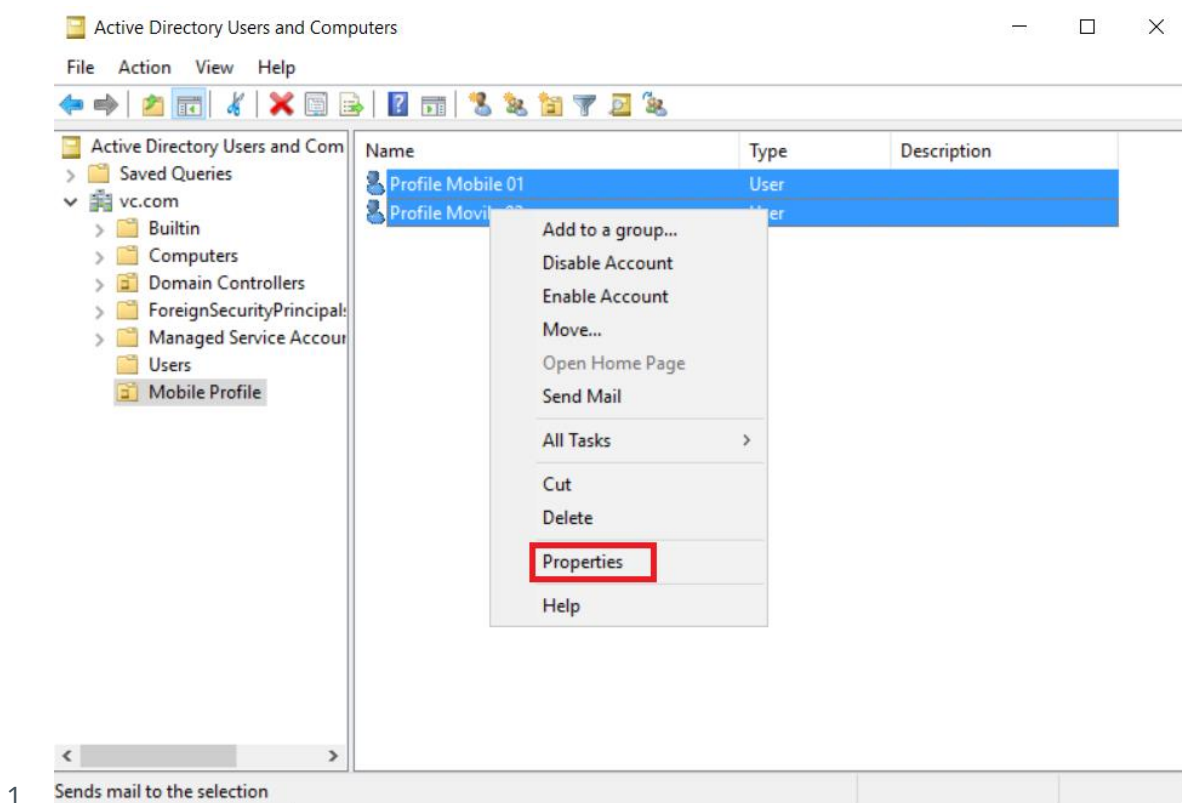
It is recommended, for a better management of users and policies to be applied, the creation of an organizational unit. In this example we have created one called Mobile Profiles. Within this organizational unit, we have created the users: Profile 01. Mobile and Profile 02. Mobile.
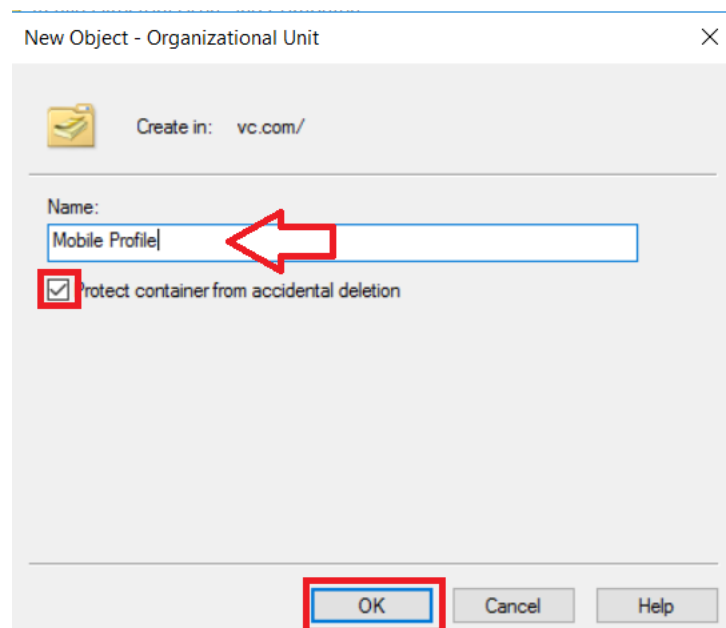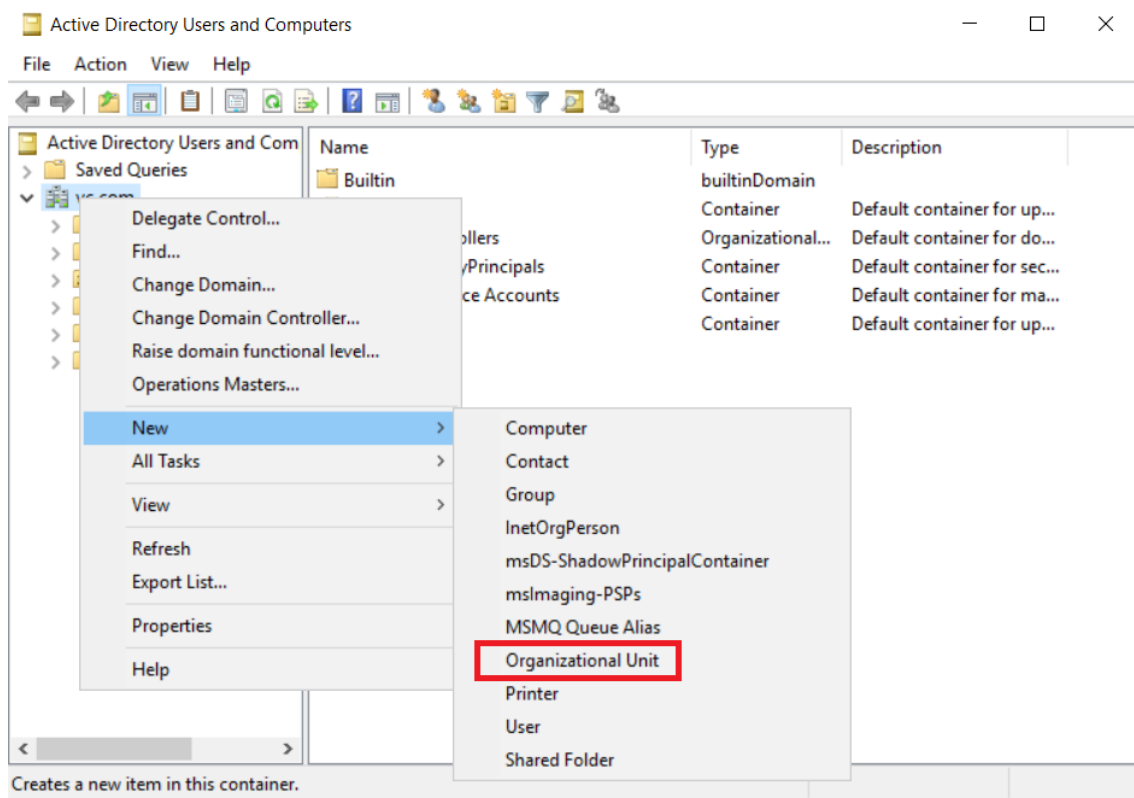
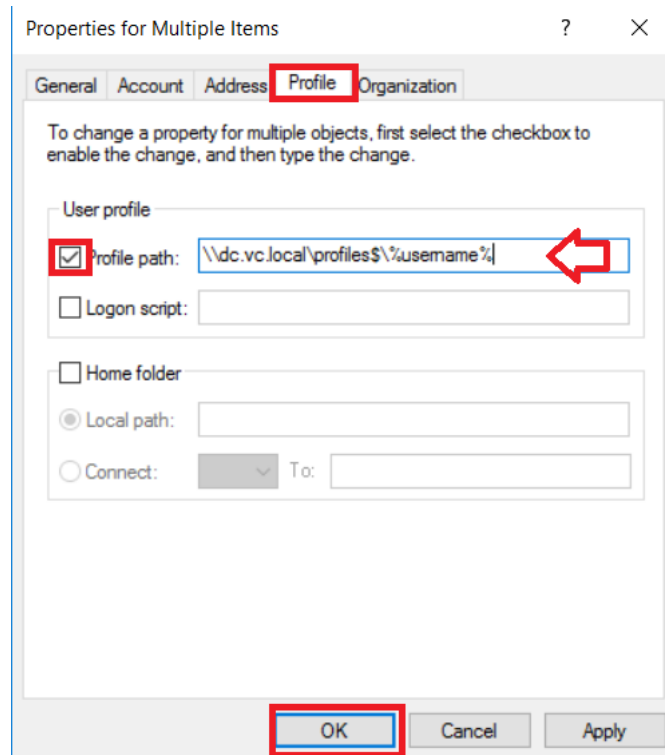Select the two users with the mouse, click with the right button and select Properties.

1.

Click on the Profile tab. We will select the Profile path option and we will write the UNC path followed by \ and the variable %username% so that it generates a folder with the name of each user. For example:
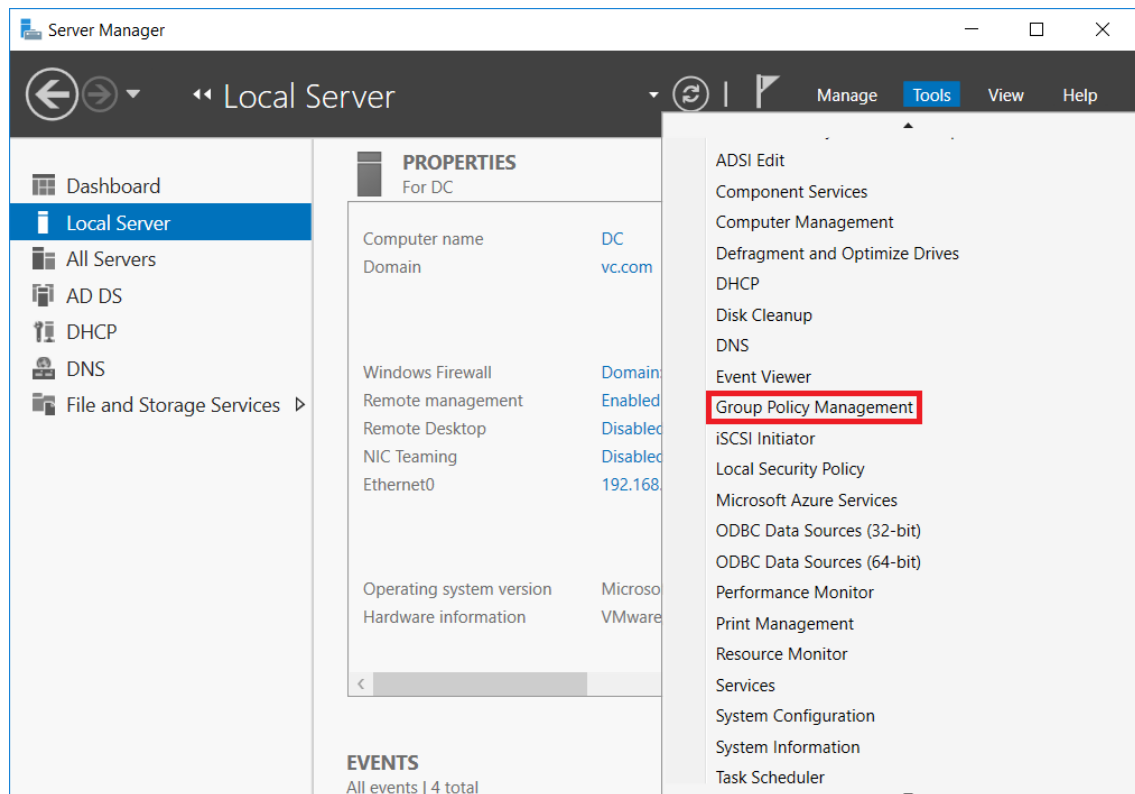
\\dc.vc.local\profiles$\%username%.

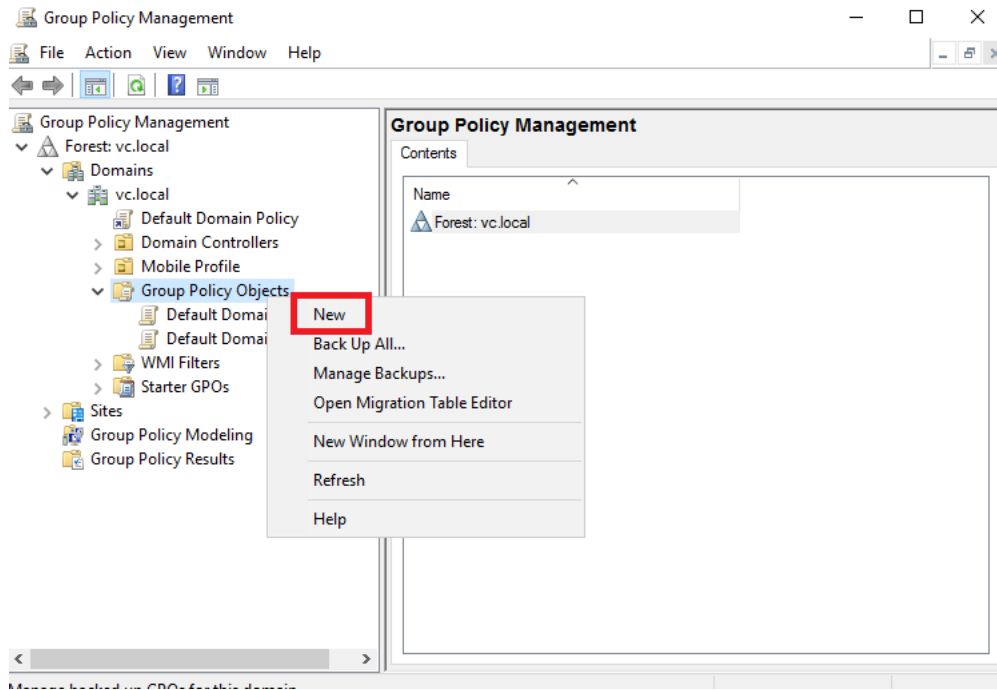Click on the OK button to apply the changes.

Folder Redirection Settings

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

Display the tree on the left until we find Group Policy Objects. With the right button, we will click on New.

We will introduce an identifying name for the new policy. In this example we will call it: User Folder Redirection. We will click on the OK button.
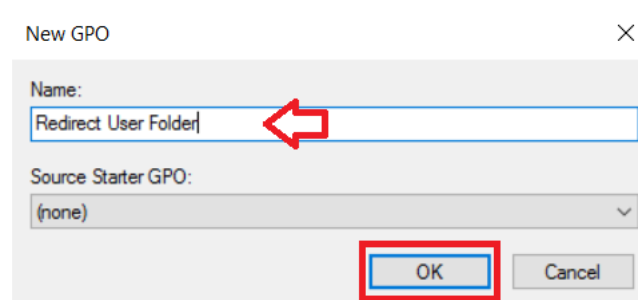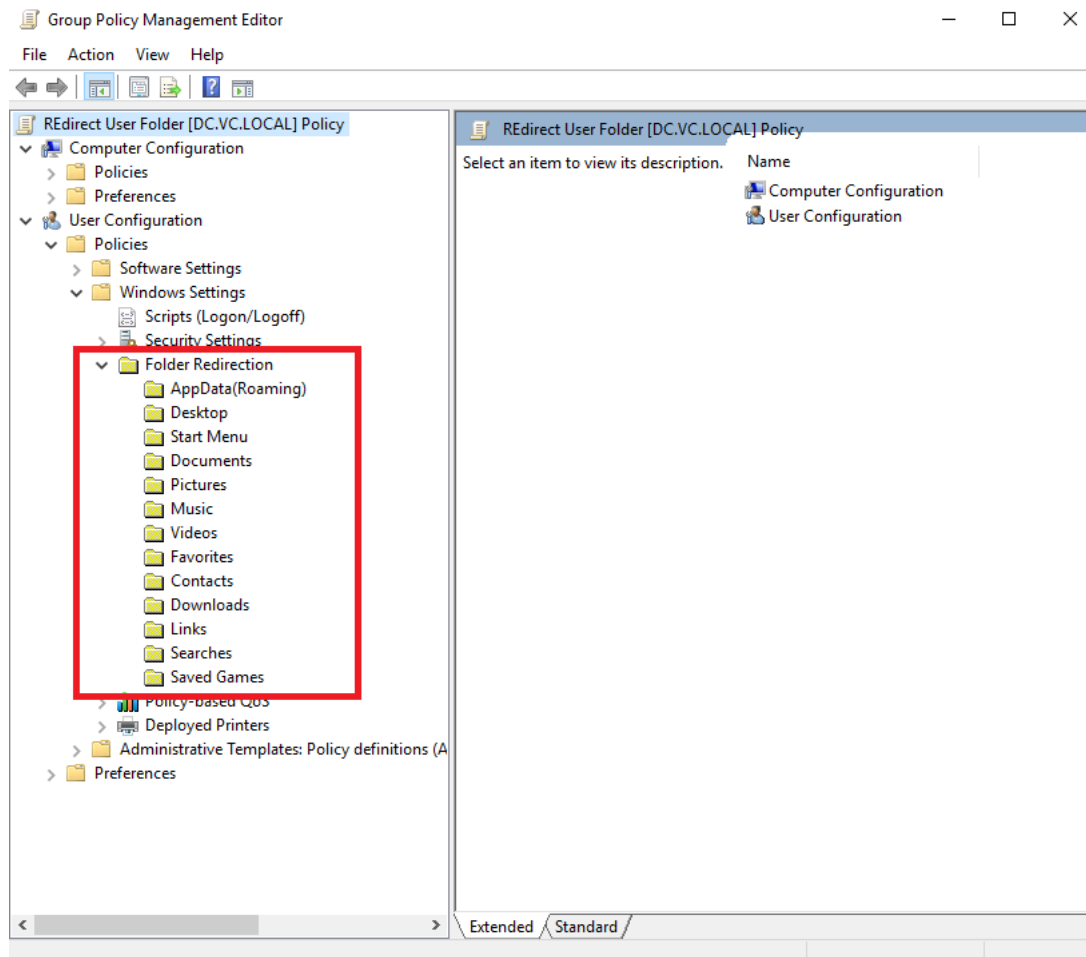
Select the new policy that we have previously created, we will click with the right mouse button and click on Edit.
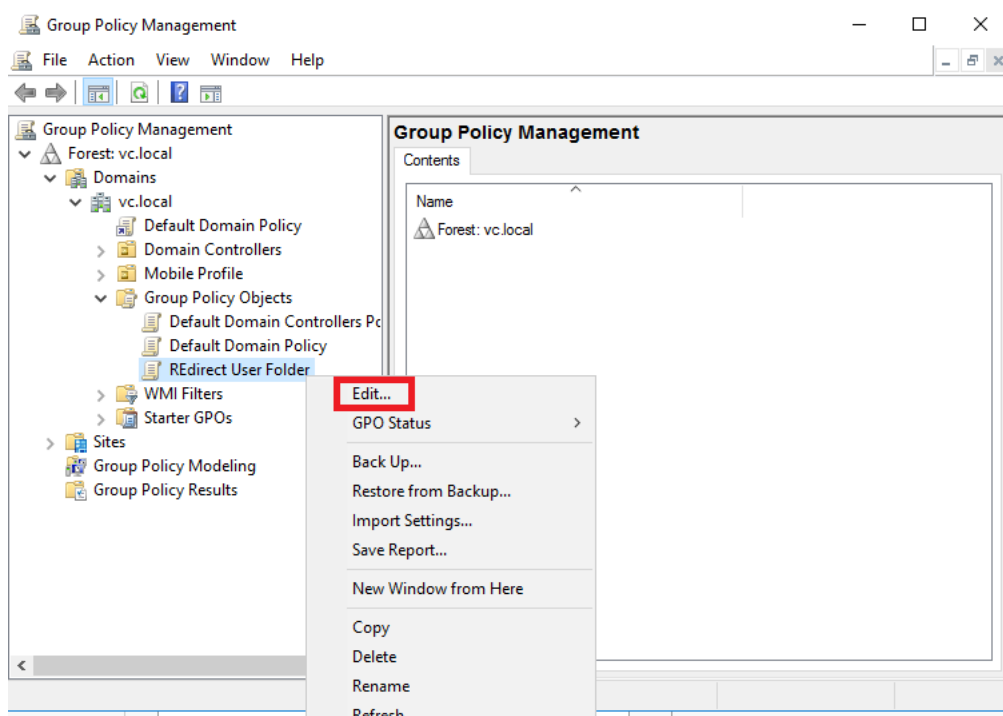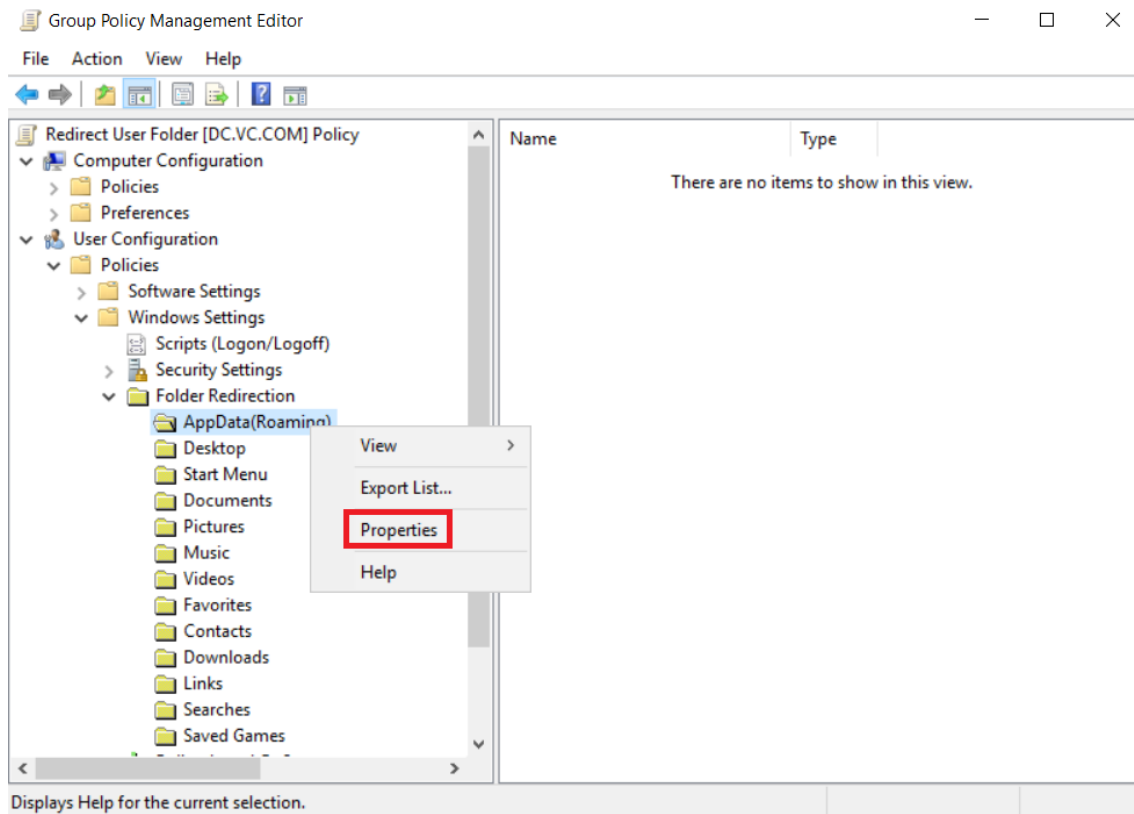

The policy will appear in a new window.

As this policy affects the user only, we will display User Configuration > Policies > Windows Settings > Folder Redirection. There we can find the different folders that we can redirect to the file server.

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

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

In the Destination folder location field in this example we will select Create a folder for each user in the root path.

In the root path field we will indicate the UNC path of the data folder that we have created previously. In this example we use: \\DC.vc.local\Profiles$. We will be able to observe that in the lower part, it indicates an example.
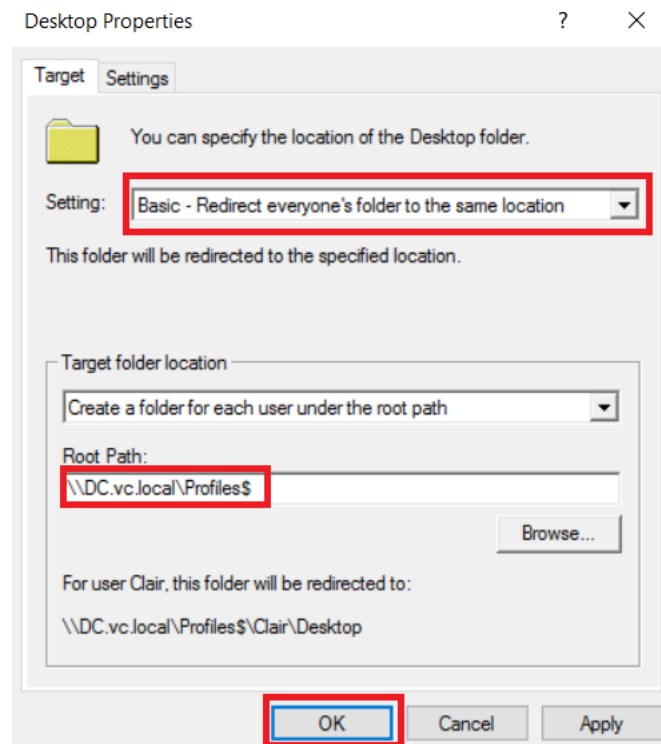
Go to the Configuration tab. In this tab we can find options that are customizable. For example, if we check the option Grant the user exclusive rights in AppData (Roaming), access to user folders will be blocked, even for administrator users. This would mean that, if necessary, the owner of the folder would have to be changed and the permissions re-established.
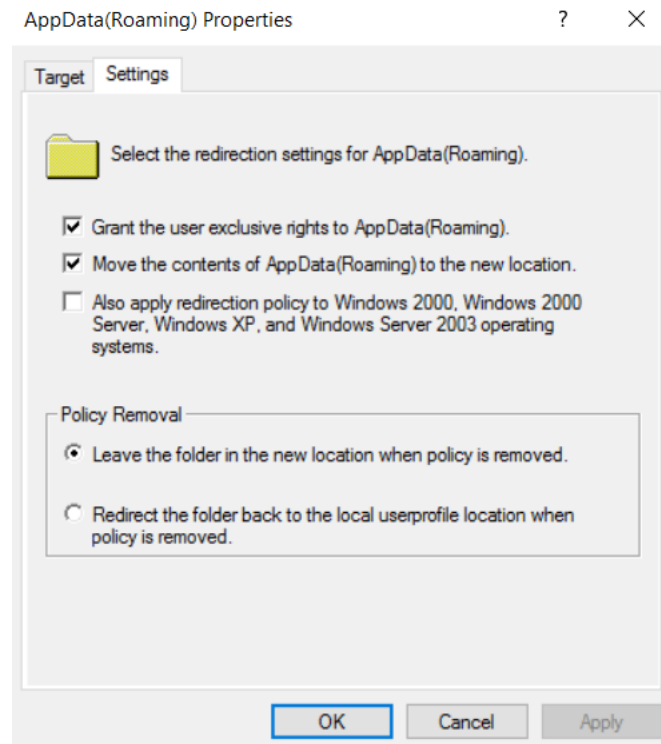
Click on the OK button to apply the changes we have made to the configuration.

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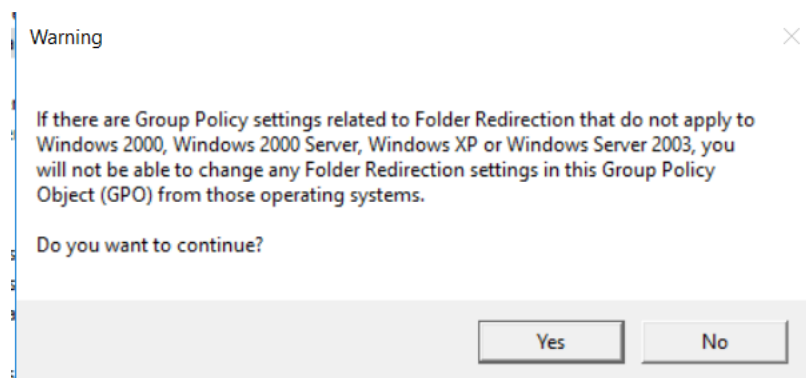

We will have to repeat this operation for all the user folders that we want to redirect:

- Desk
- Start menu (we leave it as it is, it can always depend on the applications that are installed on each computer).
- documents
- Images
- Music (be careful with this folder. Some user can occupy a large part of the shared space. It is recommended to link it with quotas)
- Video (be careful with this folder. Some user can occupy a large part of the shared space. It is recommended to link it with quotas)
- Favorites
- Contacts
- downloads
- Links
- searches
- saved games

If we do not check that all folders are moved, it is possible that the configuration data is replicated each time the user session is started and closed. To avoid this, a good practice is to redirect them all. So we will avoid this situation.

After making this configuration, we can now close the policy editor. Now we will assign the policy that we have created to the corresponding organizational unit. Continuing with the Roaming Profiles example, we'll select the Roaming Profiles organizational unit, right-click, and select Link an existing GPO.
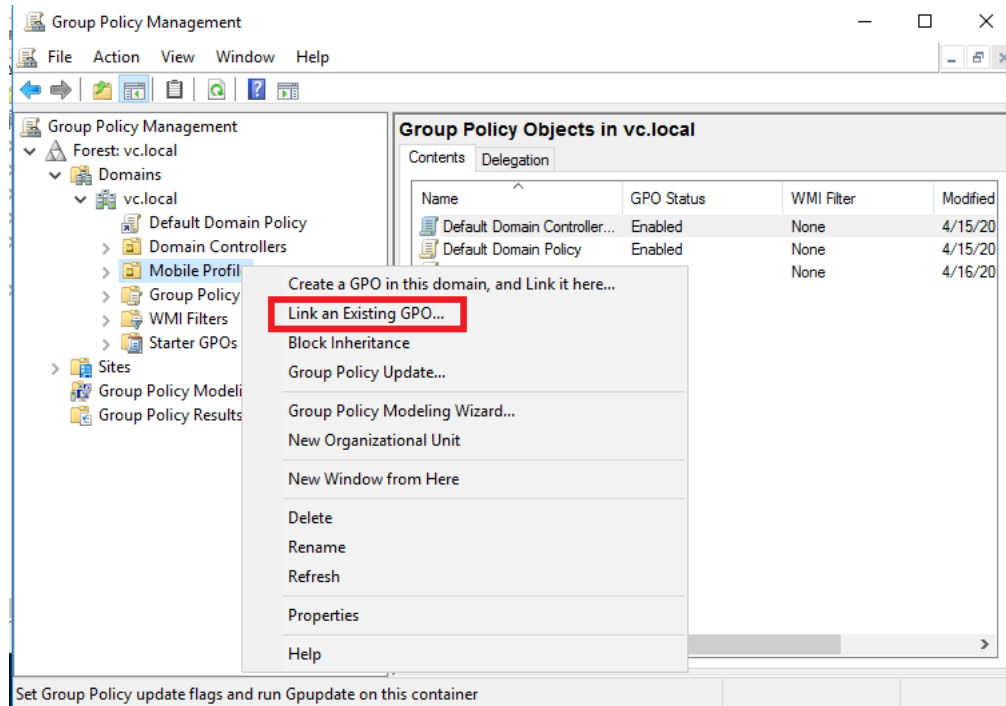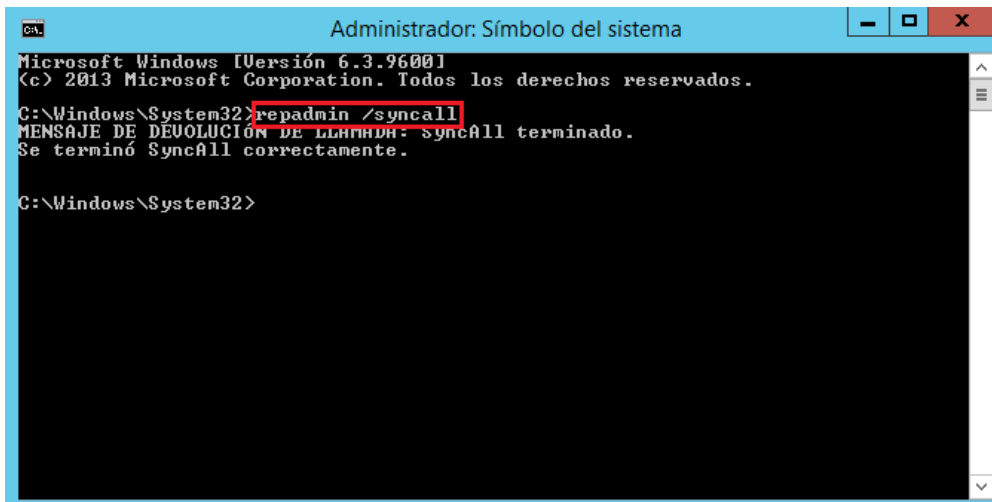

Select the User Folder Redirection policy that we created earlier and click on the OK button.
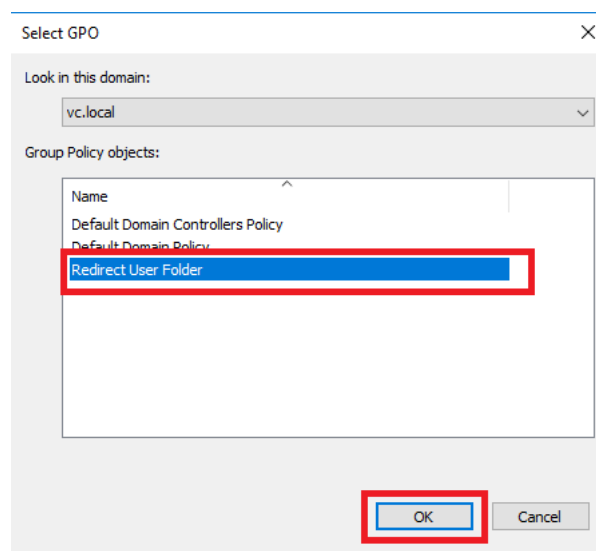
After carrying out this operation, we will have finished. We'll just have to check it out. But we will have to be **alert**, since if we have more than one Active Directory controller, we have to make sure that the changes have been replicated to all the controllers. In order to force it from a system console, with administrator privileges we will execute the command:
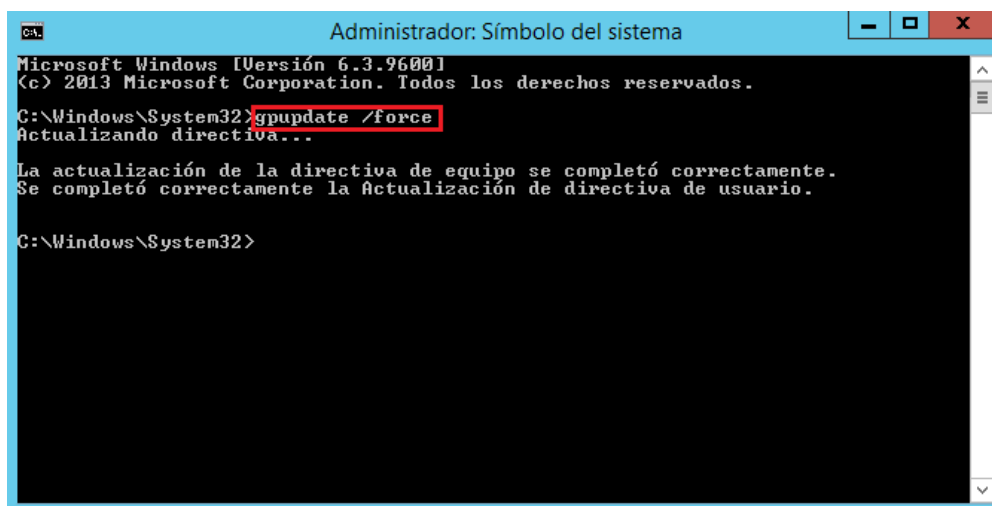
repadmin /syncall

Check on the client computer.

Let's take the example where the computer was already joined to the domain and the users were already logged in. In this case, we will have to refresh the security policies. To do this, from a system console with administrator privileges we will execute:
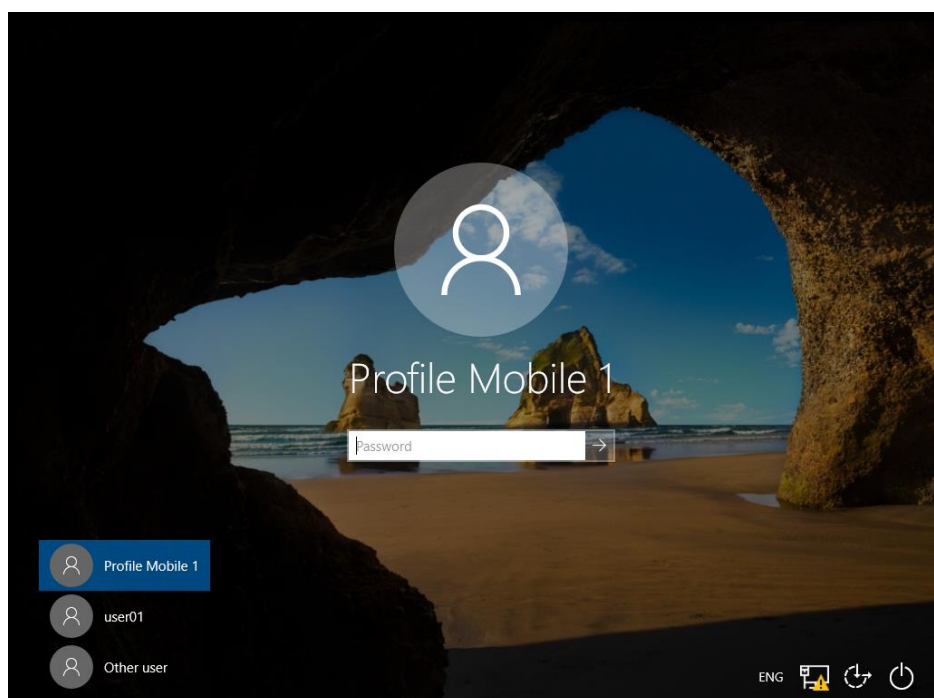
gpupdate /force

Log in with one of the users that we have previously created. If the user had information locally, we would have to move this information to the corresponding folders on the file server.

Upon login, apparently no change has been made. But if we create a new folder on the desktop, right click 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 we have previously created.
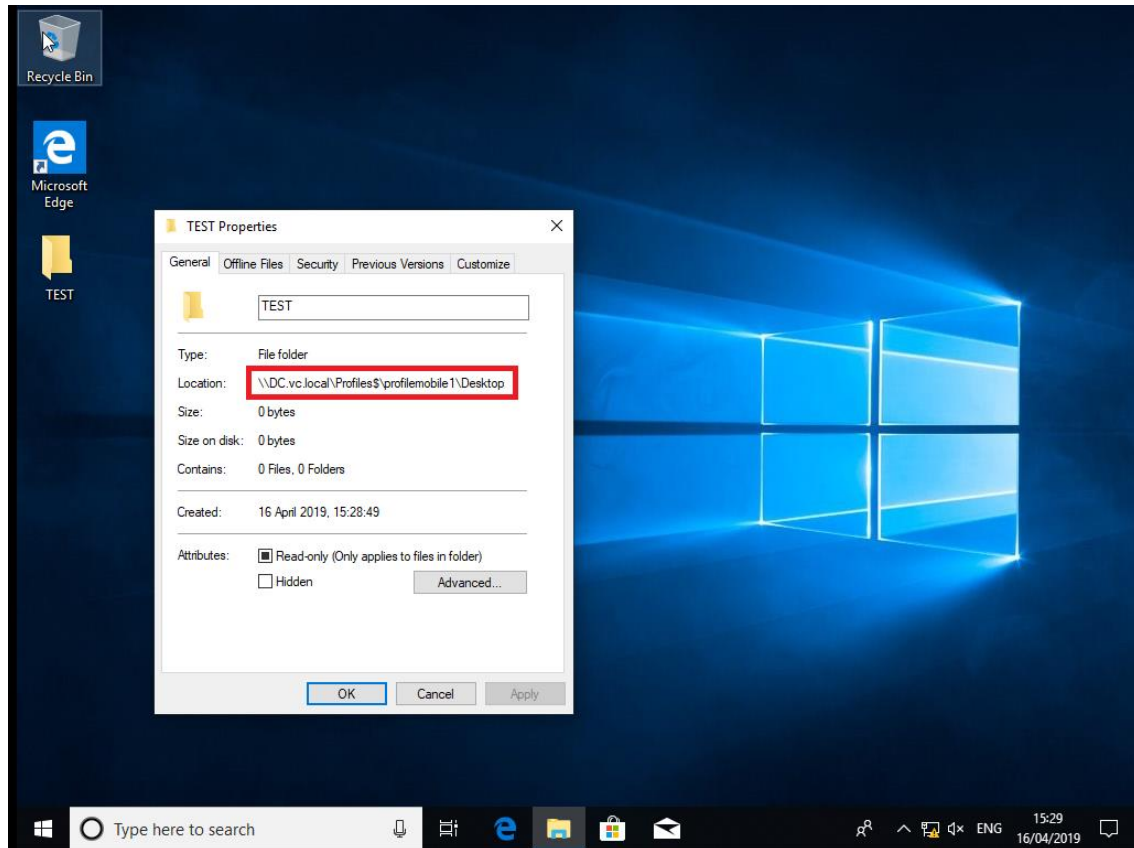
If we go to the user's folder (from the desktop), we can see that all the folders have a green symbol. This symbol tells us that it is an offline file folder.
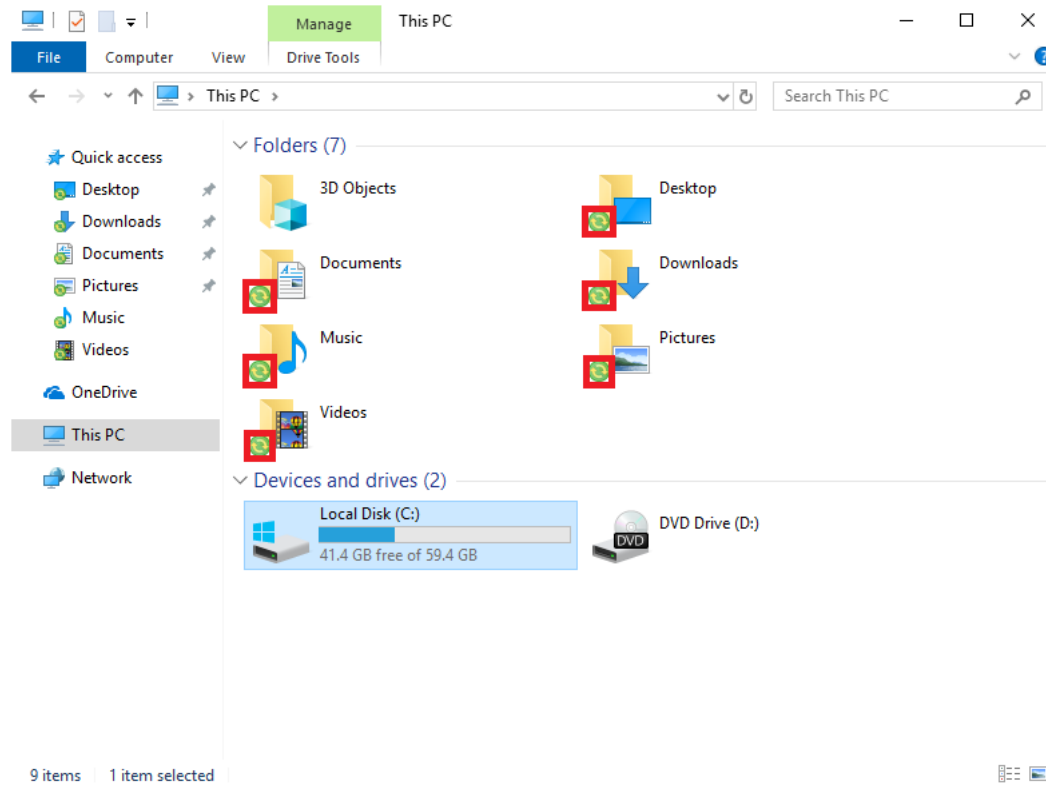
If we go to the user's folder on the hard drive (c:\Users\), we can see that the folder is empty, because the files are not saved on this hard drive. With the exception of the local configuration folders, which are inside the hidden AppData folder (in the folder options you have to allow the display of hidden files).

Mobile Profile with OST on mapped unit

The default Microsoft Outlook data file defaults to a local path, which is not synced, even if the profile is roaming. To solve this problem, we can automatically save the OST to the user's profile.

Storage of profiles.

It is recommended to have a drive or partition to host users' .ost files. We can use the same as the user profile. In this example, we are going to use another drive, which we will identify as F:\. All the .ost files (Microsoft Outlook) will be saved in this drive.

Sharing and permissions.

Create a folder where the Roaming Profiles will be stored within the unit. In this example we will use F:\.

We share the directory with the name of the network resource that we want and give all the permissions to any user. We can carry out the same steps that we followed when configuring the Storage of data and permissions (page 2).
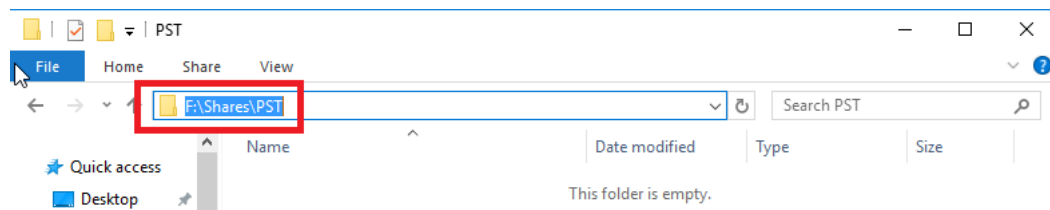
Redirect OST data files

▪ **First Method:**

In this section we will show through an example the way in which we can redirect the OST data files that Microsoft Outlook creates when configuring a user account.
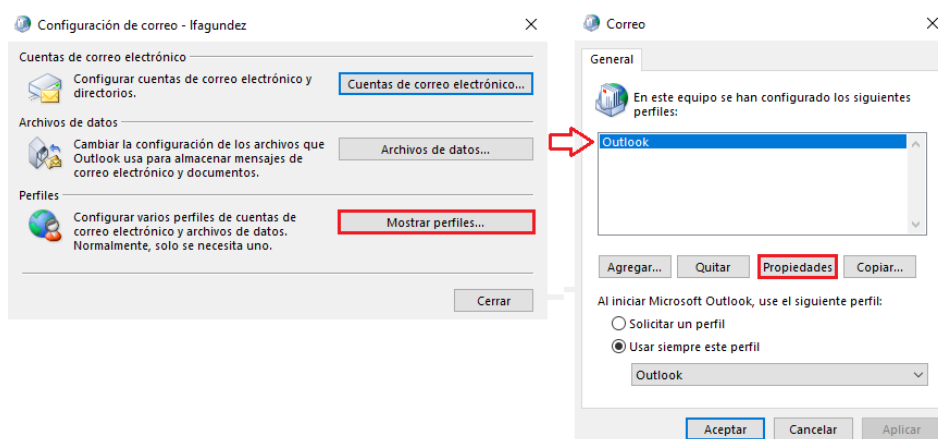
If we already have an OST file from an account that is configured in a profile, we can copy the file to the location we want. In this case we will copy it to the location of the resource that we have shared.

To be able to carry out this operation, we must have Microsoft Outlook installed. After meeting this requirement, we will open the Control Panel and click on Mail.
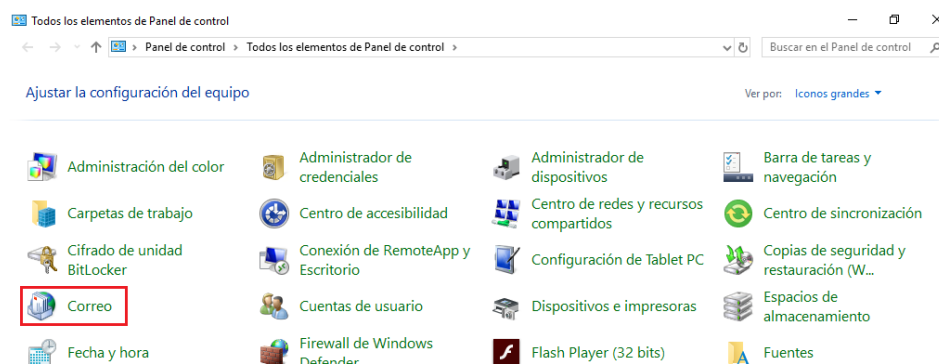
Click on Show profiles and here we will find the email profiles that we have configured. In this example we will configure the one for Outlook (the one that appears by default), where we already have an account configured. If you don't have a profile created yet, follow the steps to create an Outlook profile in the followingLink.

We will select the profile and click on properties.
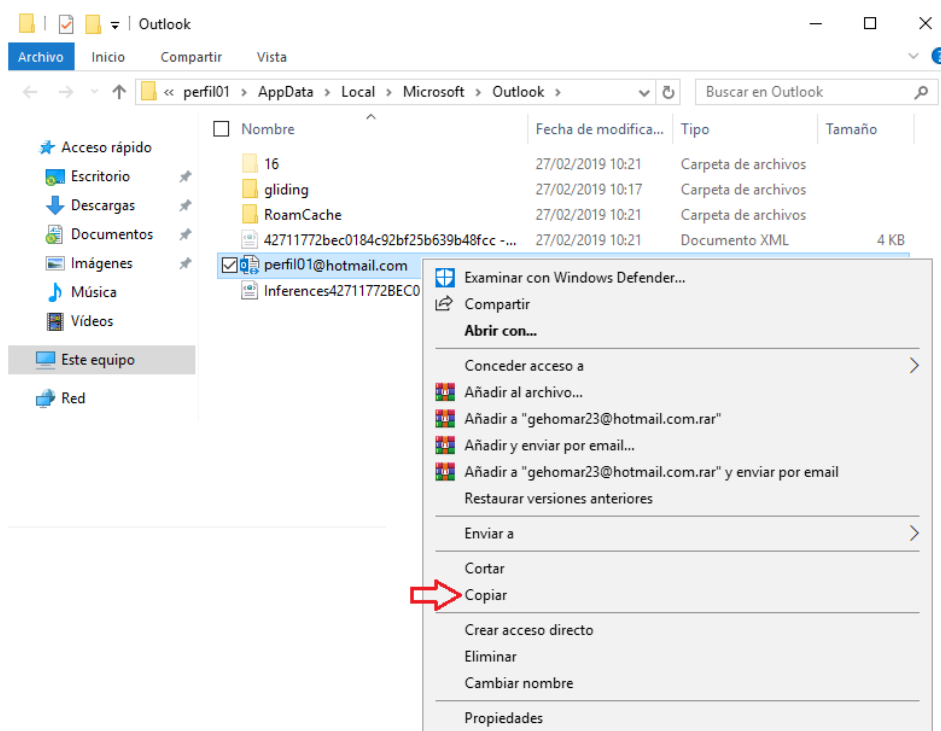
Click on Data Files...
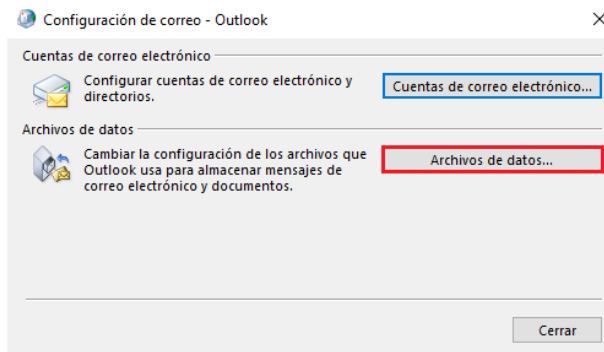
In the following screenshot, the .ost file is located in the path: C:\User\profile01\AppData\Local\Microsoft\Outlook\
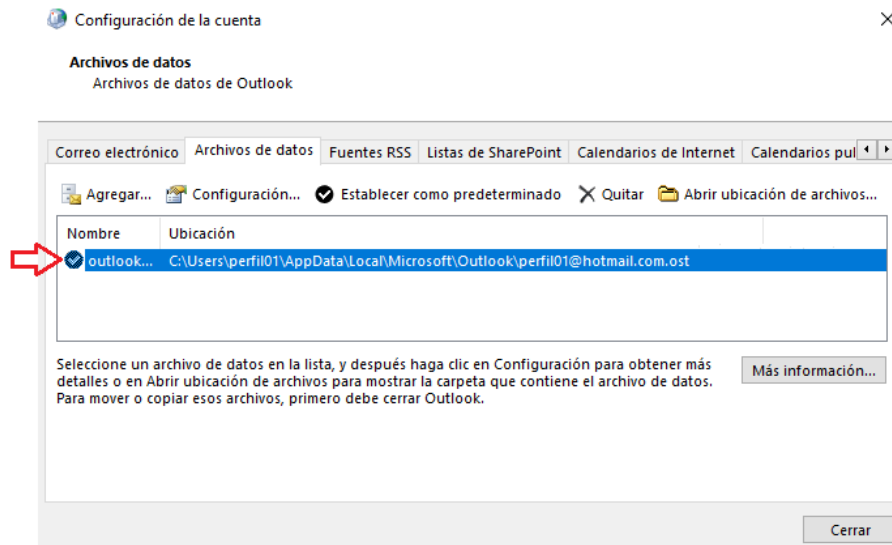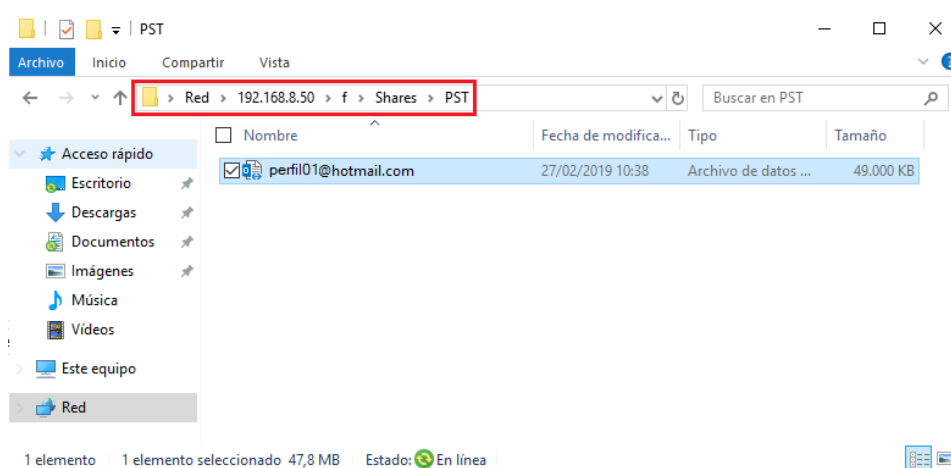

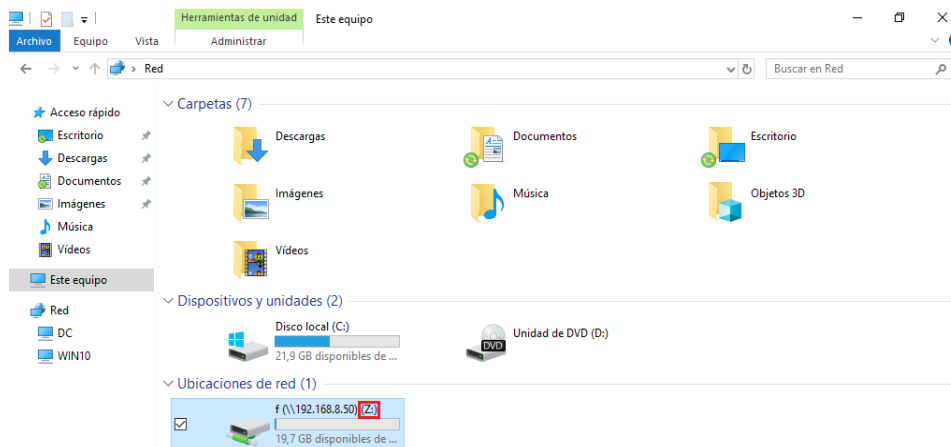Click on Open file location to easily find the .ost file
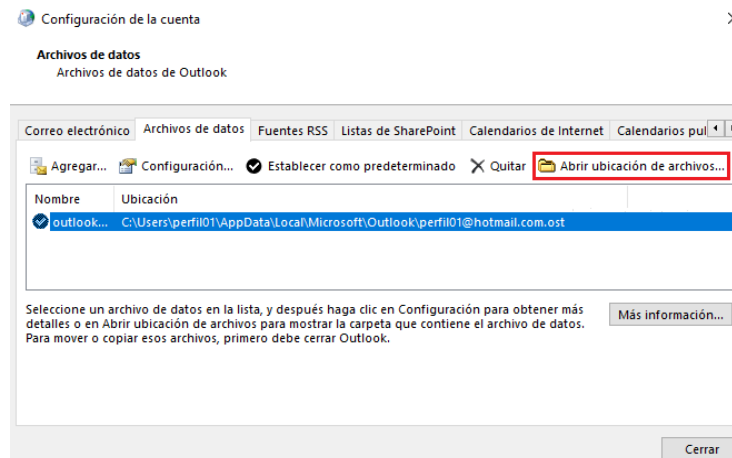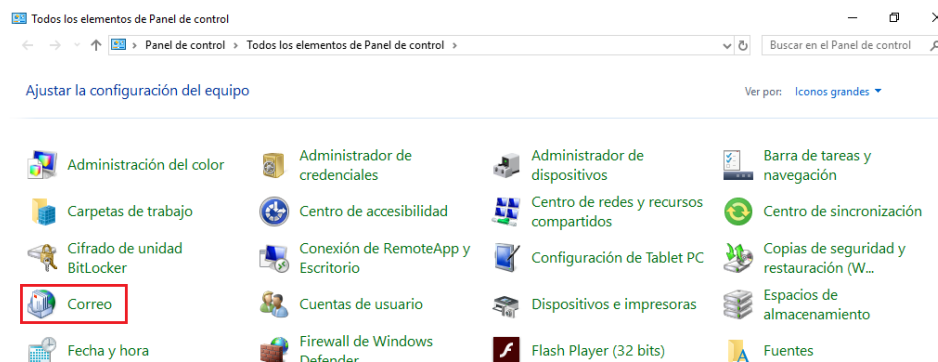
Select the file and copy it:

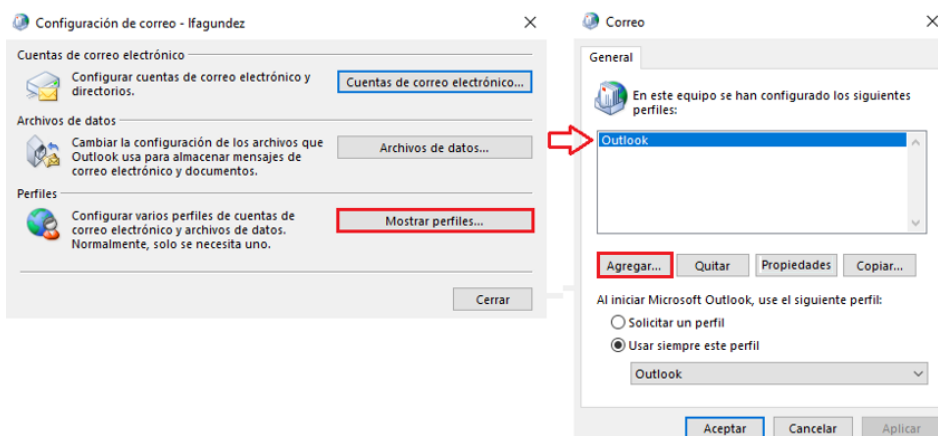Paste it into the drive F:\Shares\PST that we have shared before.

Create a network drive on the computer. In this example we will create the drive Z:\, to be able to configure Outlook.
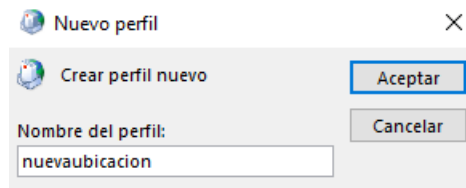
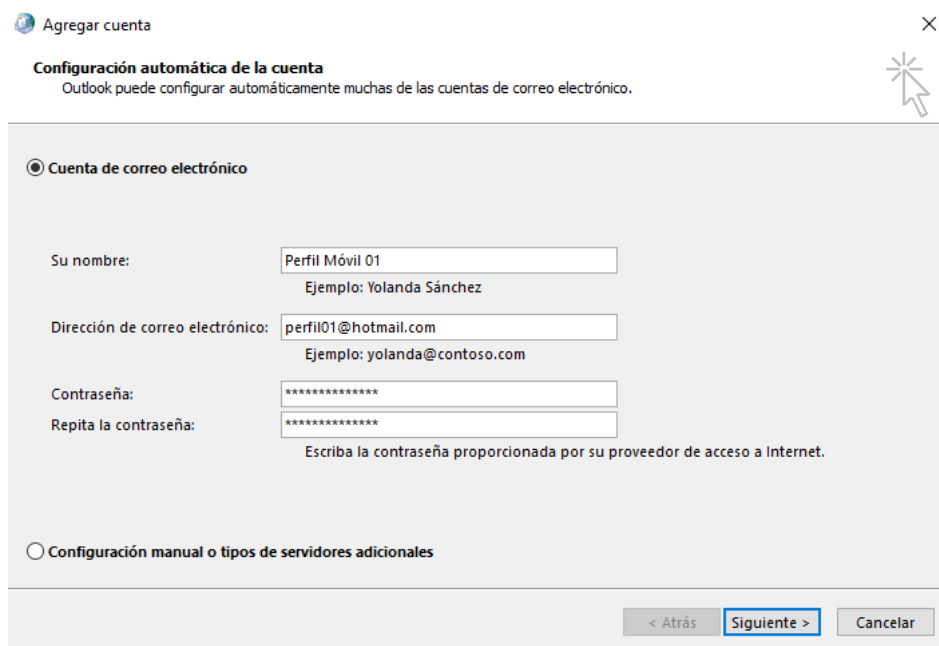

After creating the network drive, we will open the Control Panel and again click on Mail:

Click on Show profiles... and this time we will click on Add... to create a new profile.

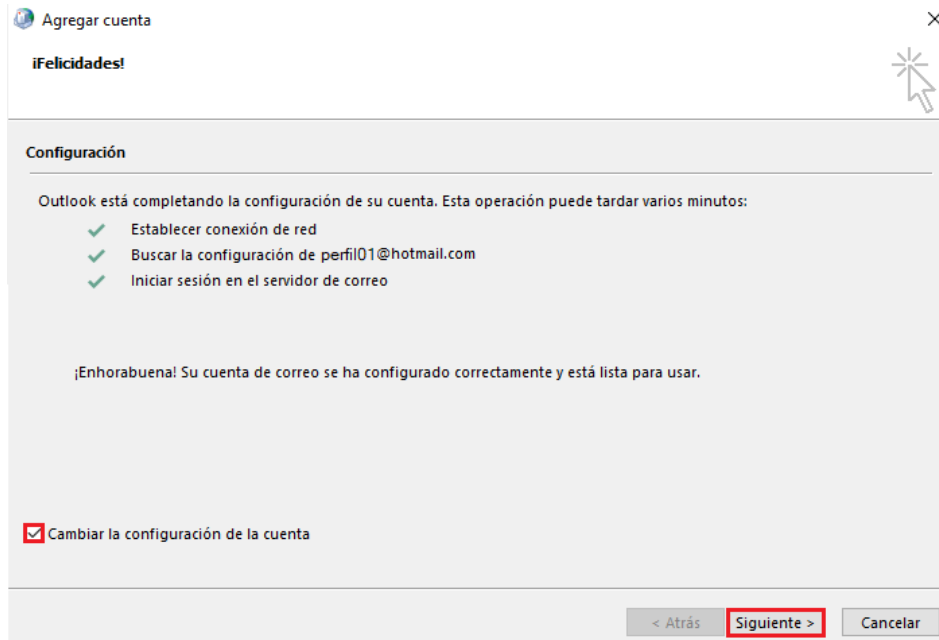We will add a name. In this example we will use "newlocation" and click OK.

After completing this configuration, an assistant will ask us to configure the email account. We will enter the name, the email address, the password and we will repeat the password and click on Next.

We will wait for the account setup to be done. After completing the configuration correctly, we will mark the option Change account settings and click on next.
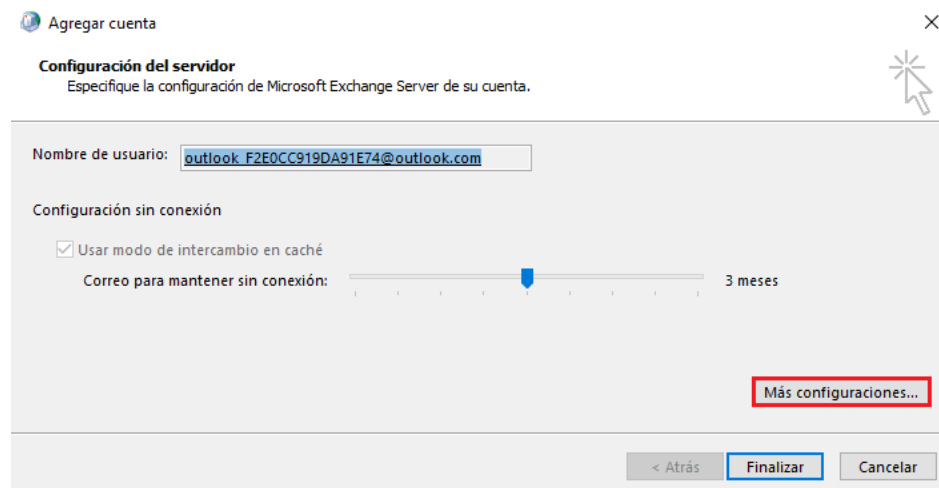
In the next window of the wizard we will click on More configurations...
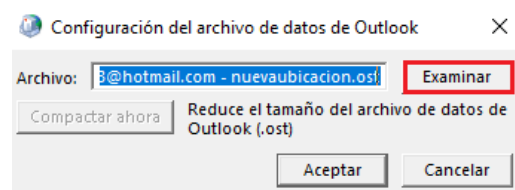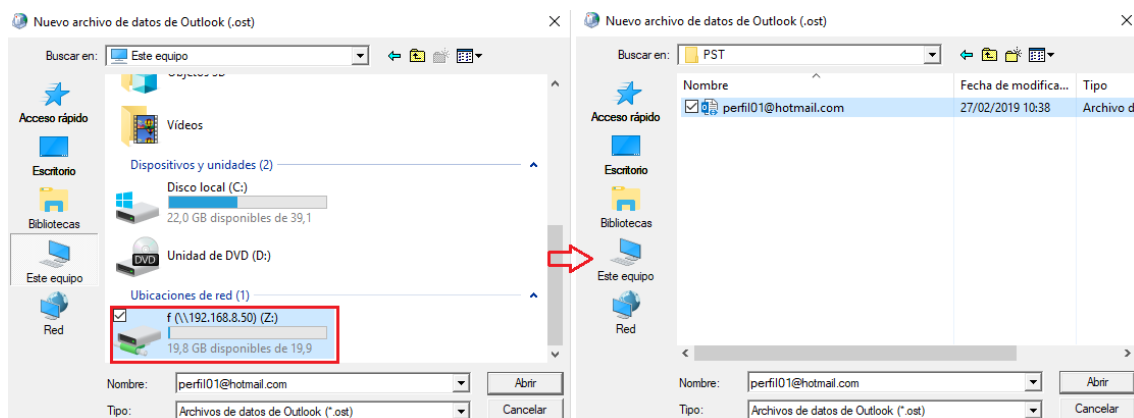
In the window that opens, enter the Advanced tab and click on the Outlook data file configuration... button.
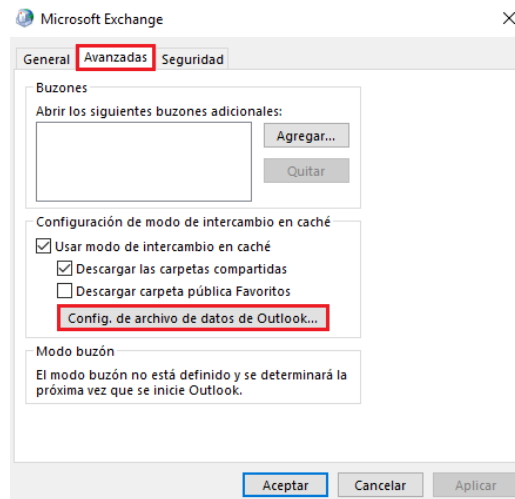

Click on the Browse button

A window will open for us. There we can select where the .ost files will be stored. In this example, we will select the network drive that we created earlier and browse to the .ost file that we previously created. Then we will click on Open.
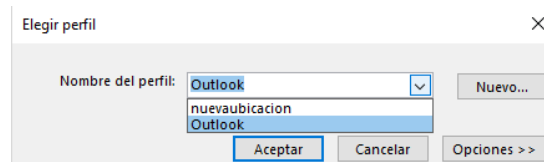
The wizard will close and we can see that the path where the .ost file is located has been modified. We will click on Accept.
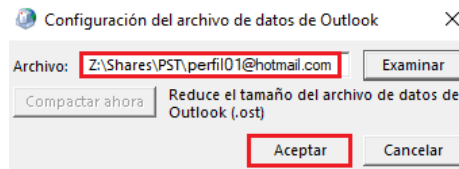
After making the modification of the route, we will open Microsoft Outlook and confirm that the route has been changed.
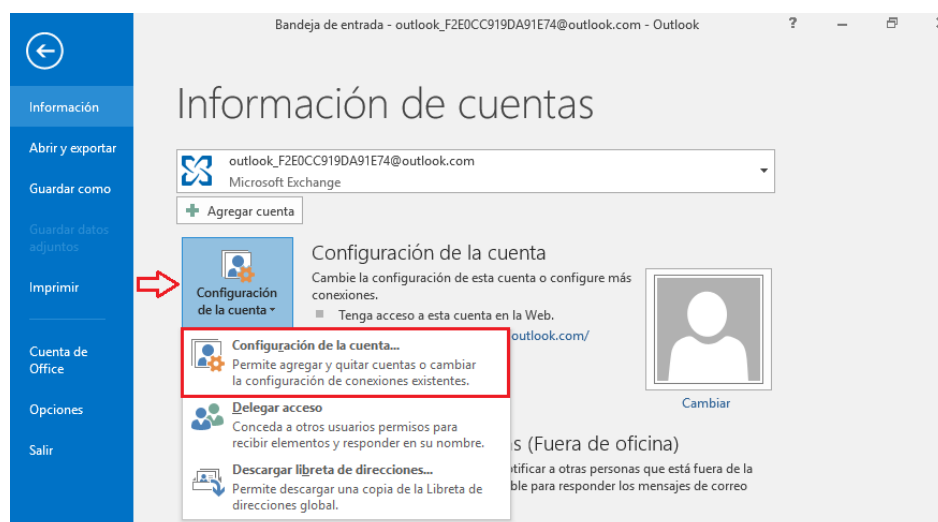
To do this we will select the new profile:

Wait for Outlook to load the profile:

Go to Account Settings and click Account Settings...

Select the Data Files tab. If the process has been carried out correctly, the location of the .ost file will have been changed, which means that from that moment Outlook can be opened on any computer in the organization that is in that domain and we will not have to wait for all mails are loaded again.
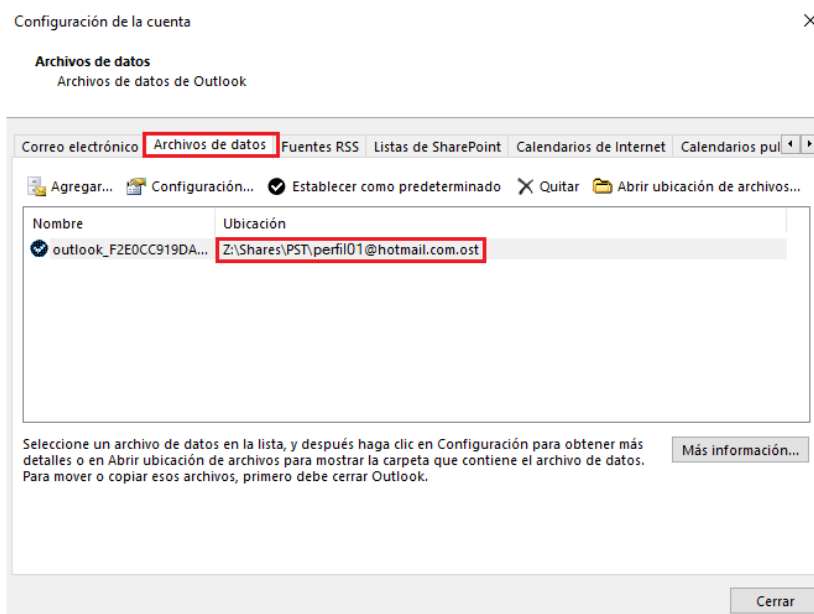
▪ **Second Method:**

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

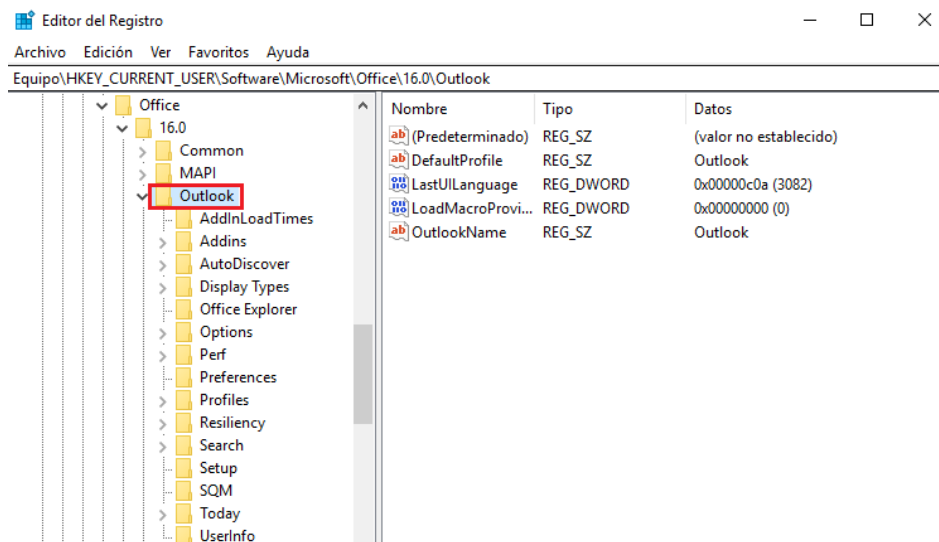Press the Windows + R keys, the Run window will open. Type regedit and click OK
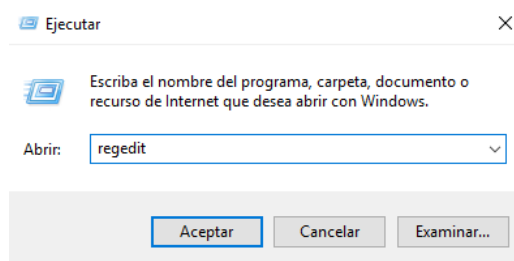
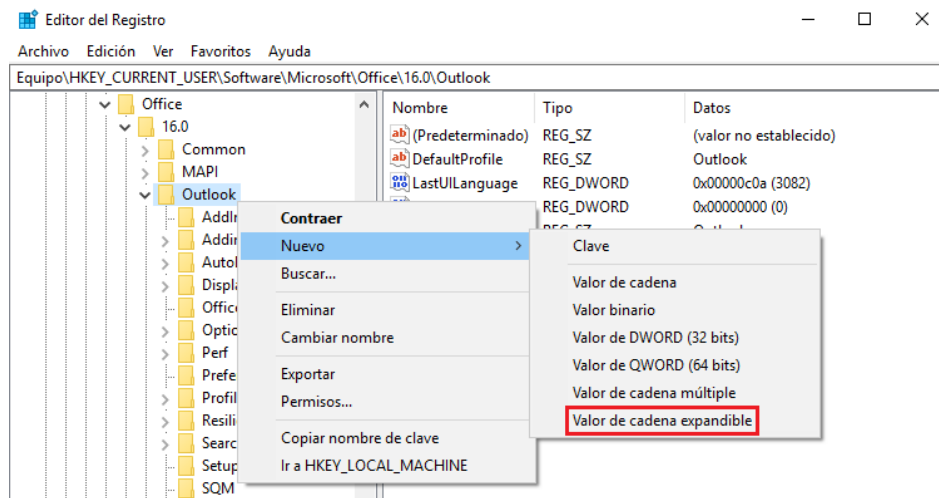A pop-up window will open with the Registry Editor:
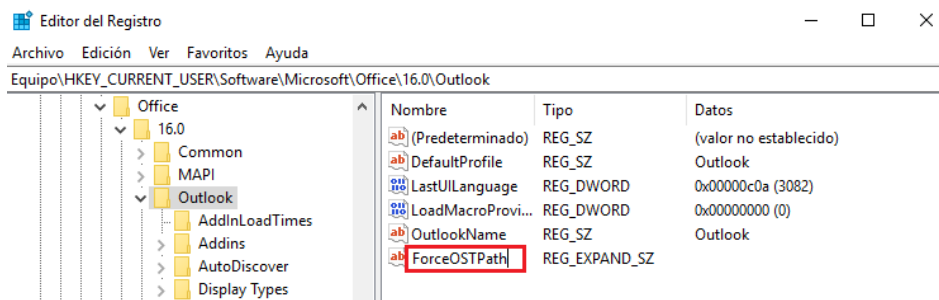

Go to the following route:

HKEY_CURRENT_USER→Software→Microsoft→office→("we choose the office version", in our case we have the 2016 version installed) 16.0**→Outlook**
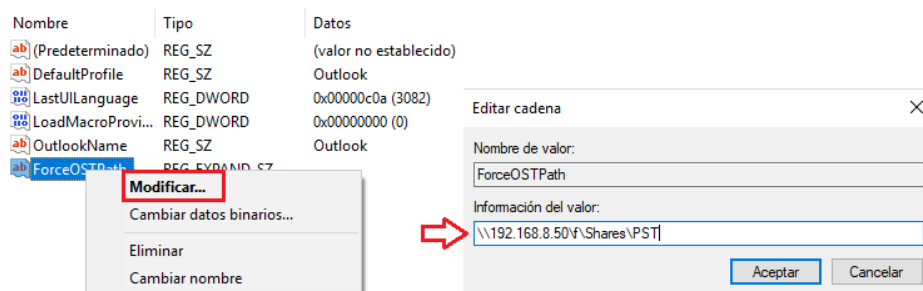
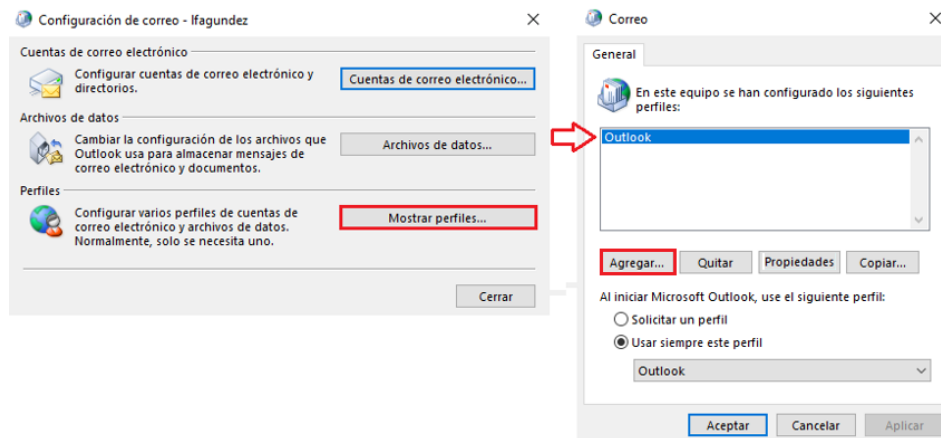Right-click on Outlook and select New➔**expandable string value**
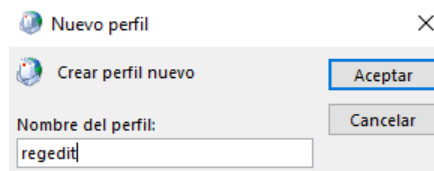

Introduce the name ForceOSTPath

Edit the registry by pressing the right button Modify... A window will open in which we will enter the path where the .ost type files are located, in this example we will use: \\192.168.8.50\f\Shares\PST
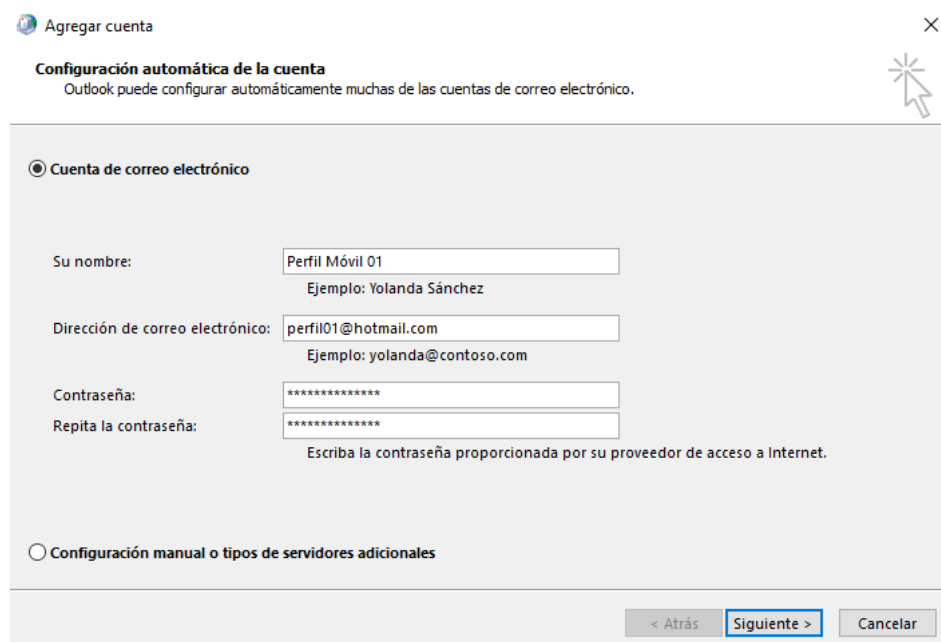
After making this modification, we will test the creation of a new profile:
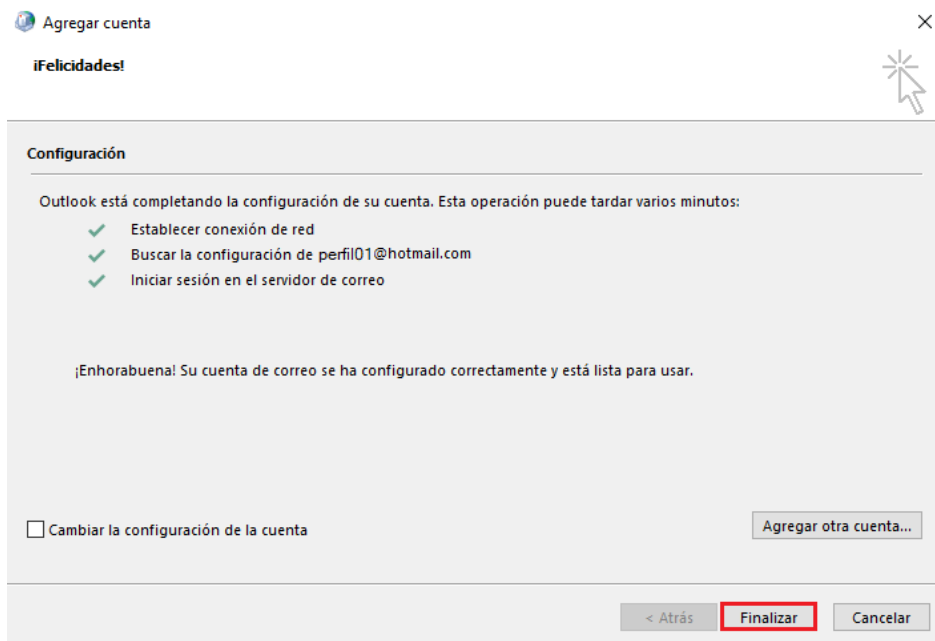

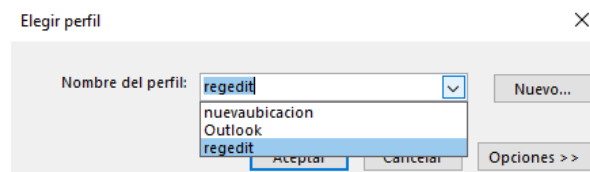In this example, we'll call it regedit:

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

Once the account configuration is finished correctly, we will click on finish and open Outlook
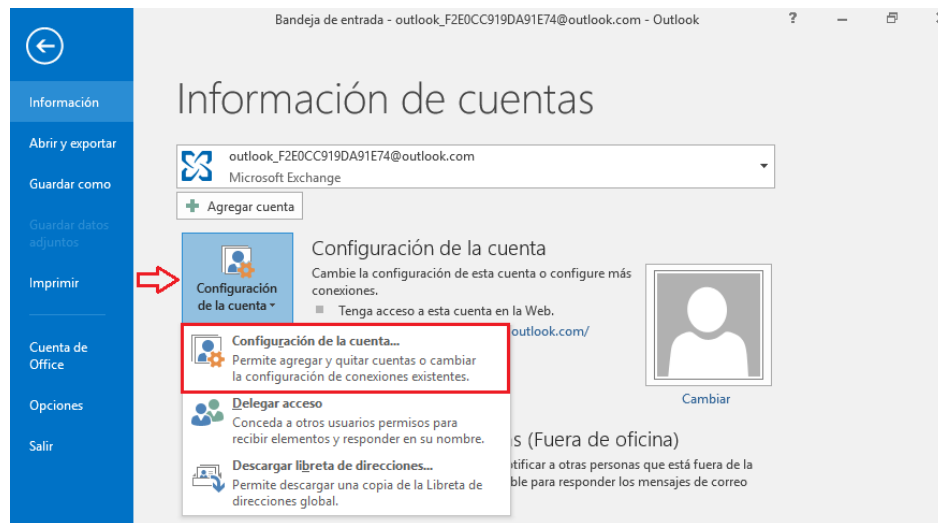

Once we have Outlook open, we will select the file that we have created previously:


We will wait for the profile to load:

After finishing loading the profile, we will open the Account Settings and select Account Settings again...

We will open the Data files tab and we will be able to verify that the path where the .ost files are saved, from this moment on is in the network unit that we have previously configured. In this way, we will be able to open Outlook on any computer within our organization that is within the domain and we will not have to wait for all our emails to load again.
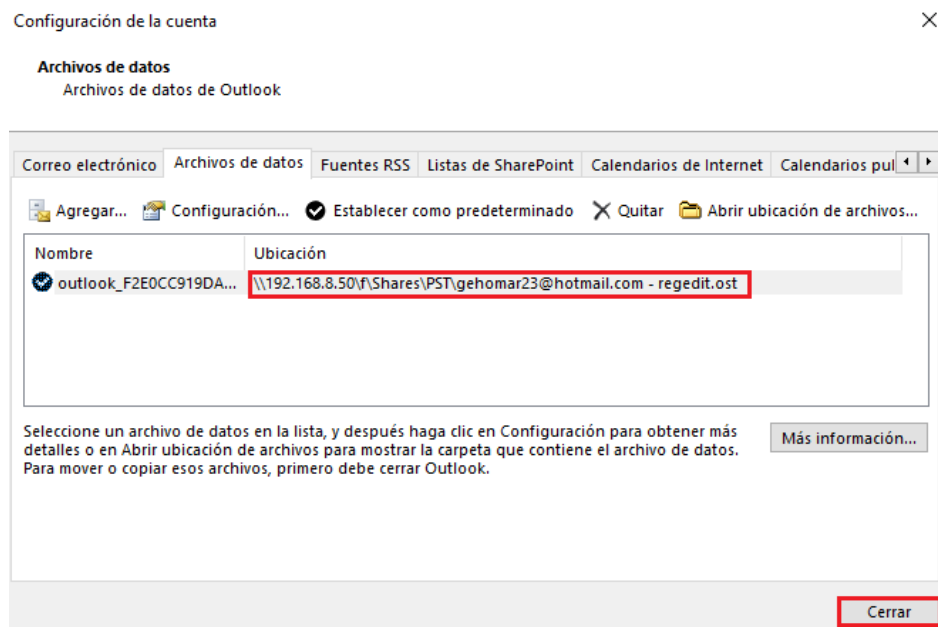
About VirtualCable

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