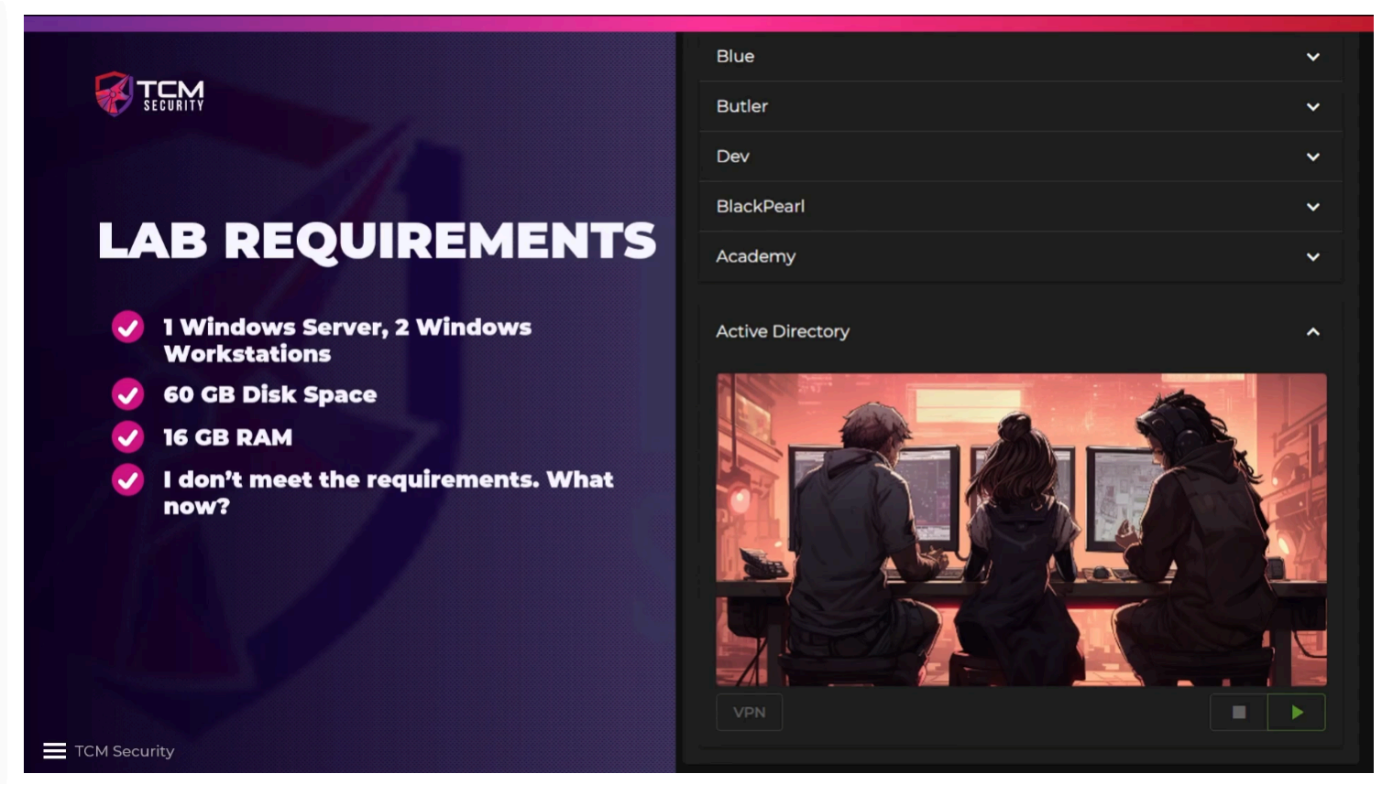
# 9.0 - Setting Up the Domain Controller




So, we are going to set up a windows server with 2 windows workstations.

We are going to download from "https://www.microsoft.com/en-us/evalcenter".

One "Windows 10 Enterprise", and one "Windows Server 2022".

Go to the website, and download it.

Then, we are going to start with the Windows Server 2022, which is going to be our Domain Controller.

## 1 - Setting Up Domain Controller

We are going to create New Virtual Machine. Pick the ".iso" file for the Windows Server to be installed. You can create a name, the storage location, and VMware also allows to create a Password to be used every time the user wants to boot it. Then, make sure to hit a key after it boots and prompts to hit a key, otherwise it will try to boot from a floppy, and it wont go any further. Then, if it is not booting, and it is asking for the activation code, or if you are getting a error message saying there is no Microsoft key set, or something about key, maybe there is a floppy driver created together with the virtual machine. Just get in the virtual machine settings and delete/remove the floppy disk and try booting again. It should work.

It is going to open the virtual machine.

Select the language desired.

We are going to install the "Windows Server 2022 Standard Evaluation (Desktop Experience)" version.

Select the custom installation. Select the one partition shown, click new, then click apply, then hit ok.

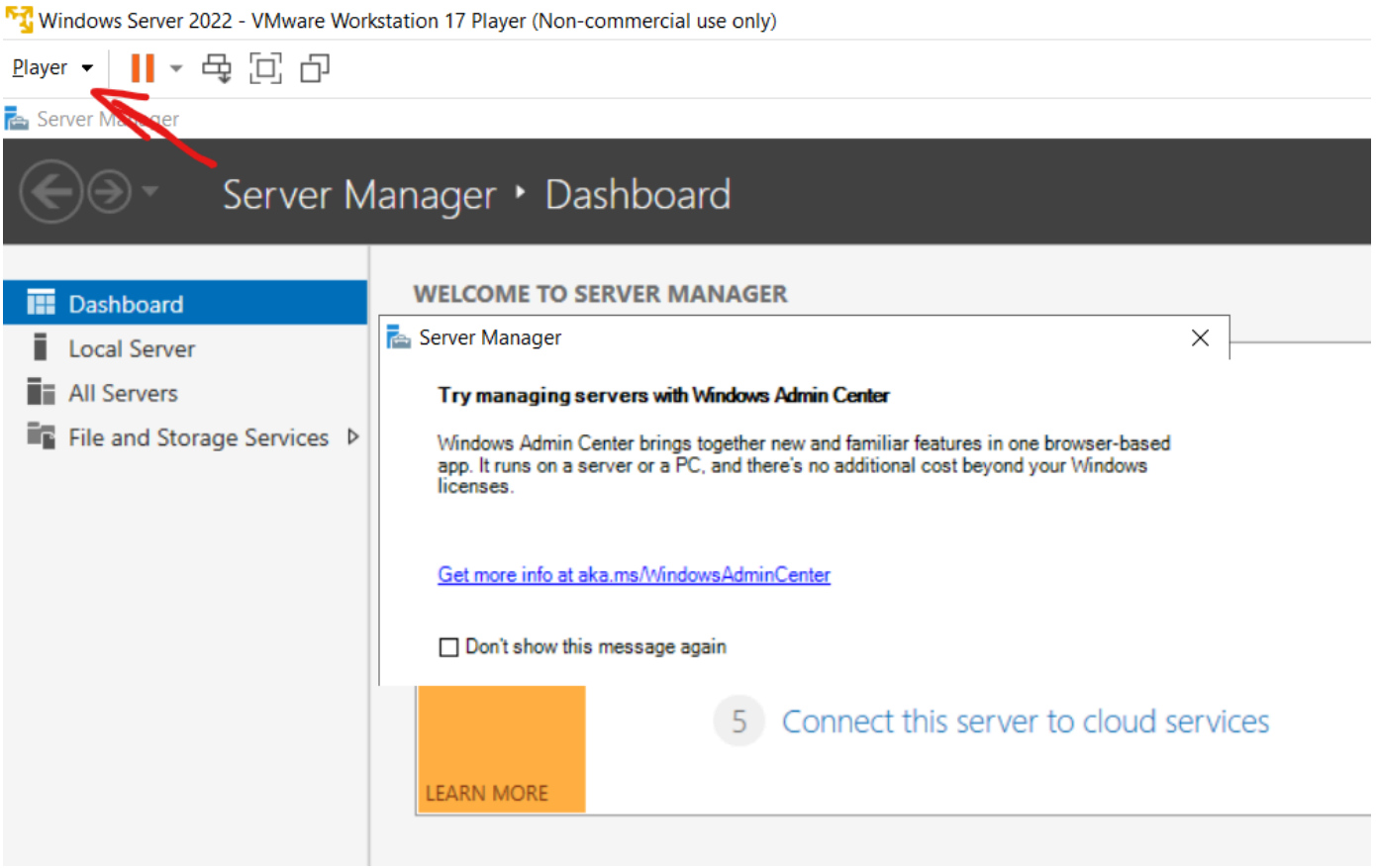
Click Next.

Let it install.

Then, we are going to create a password for the built-in Administrator account. We are going to use weak password : "P@$$w0rd!".

We can then log in to the administrator account, and install VMware tools, so we can make it bigger and see better.

To do that,




Then,

Manage > Install VMware Tools.

If you cannot select the option (if it is faded out), then it is very like there is a floppy disk installed with the machine. Power the machine down to remove it. It wont make you reinstall anything at this point if

you power off.

Then, on the virtual machine navigate to the "D:" drive, and run "setup64.exe". That will installs the tools. You can select "Complete" instead of "Typical". Restart is not always required for tools to work.

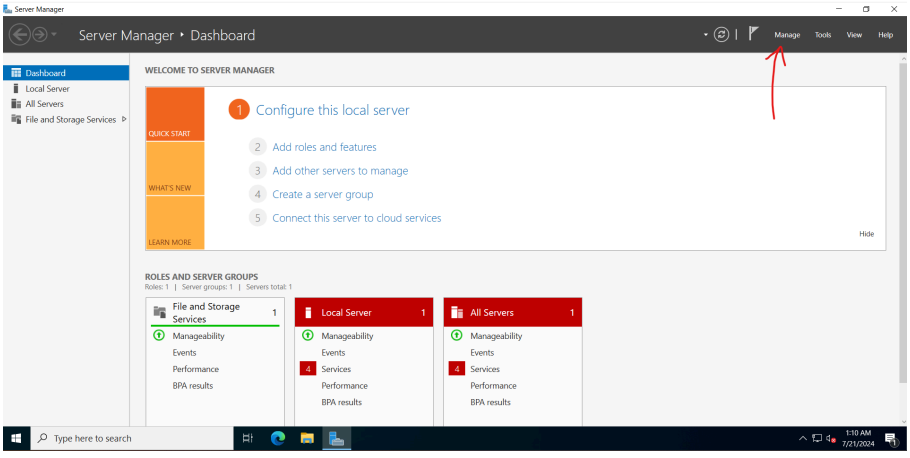
Now, we are going to be renaming this computer. The default name is something very weird. The idea here is that we need to know this is one of our machines in the network. We can create a specific name convention. Lets use MACHINE_NAME-MACHINE_ROLE. This example in particular is not a good idea because it discloses the machine role in its name, and that just make it easier for an attacker. But, it is a good idea to use a name convention that is understood and controlled by the Network Administrator. So, that is why we should change the name, and do not leave the default. Remember this is going to be the Domain Controller Personal Computer name in the network, ergo the name of the Domain Controller machine.

1- Just type "Rename" or "Name" in the Windows search bar > Rename PC.

We will need to restart, so the name sinks to the system. Then, we can proceed to the next step.

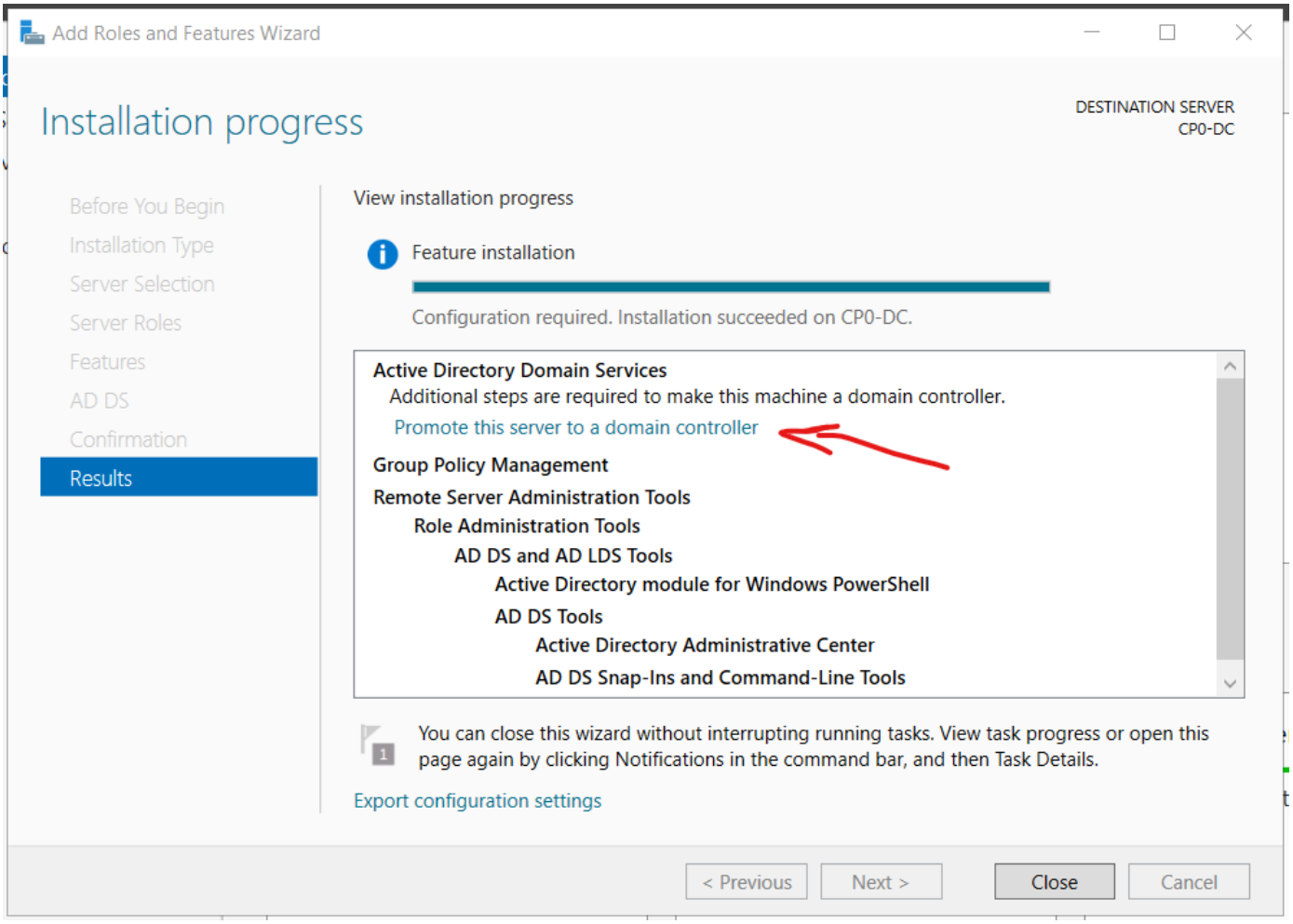
Now, we are going to make this the Domain Controller. For that, we need to add the role and features of a Domain Controller in this machine. Luck enough, the "Server Manager" application allows us to do that fairly easy.

2- Make it Domain Controller > Go to "Manage" on Server Manager > "Add Roles and Features".




The wizard will pop up. Click next > Select "Role-Base or feature-based installation" > Leave Server Selection as default > On Server Roles, we want to add "Active Directory Domain Service" > Add Features > Click Next until the Confirmation screen > On the Confirmation screen, select "Restart the destination server automatically if required." > Install.

Before doing anything else, we want to "Promote this server to a domain controller."

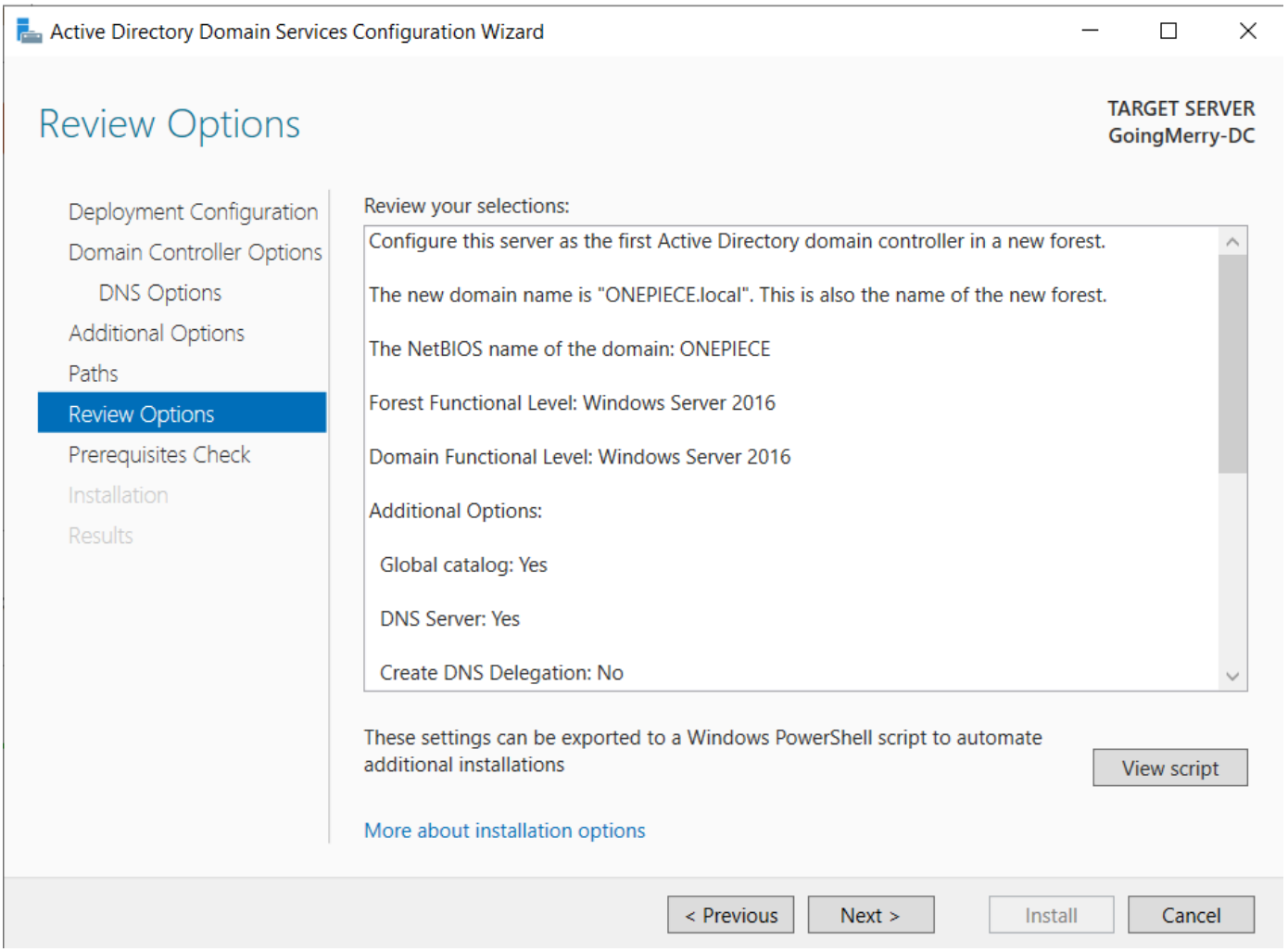


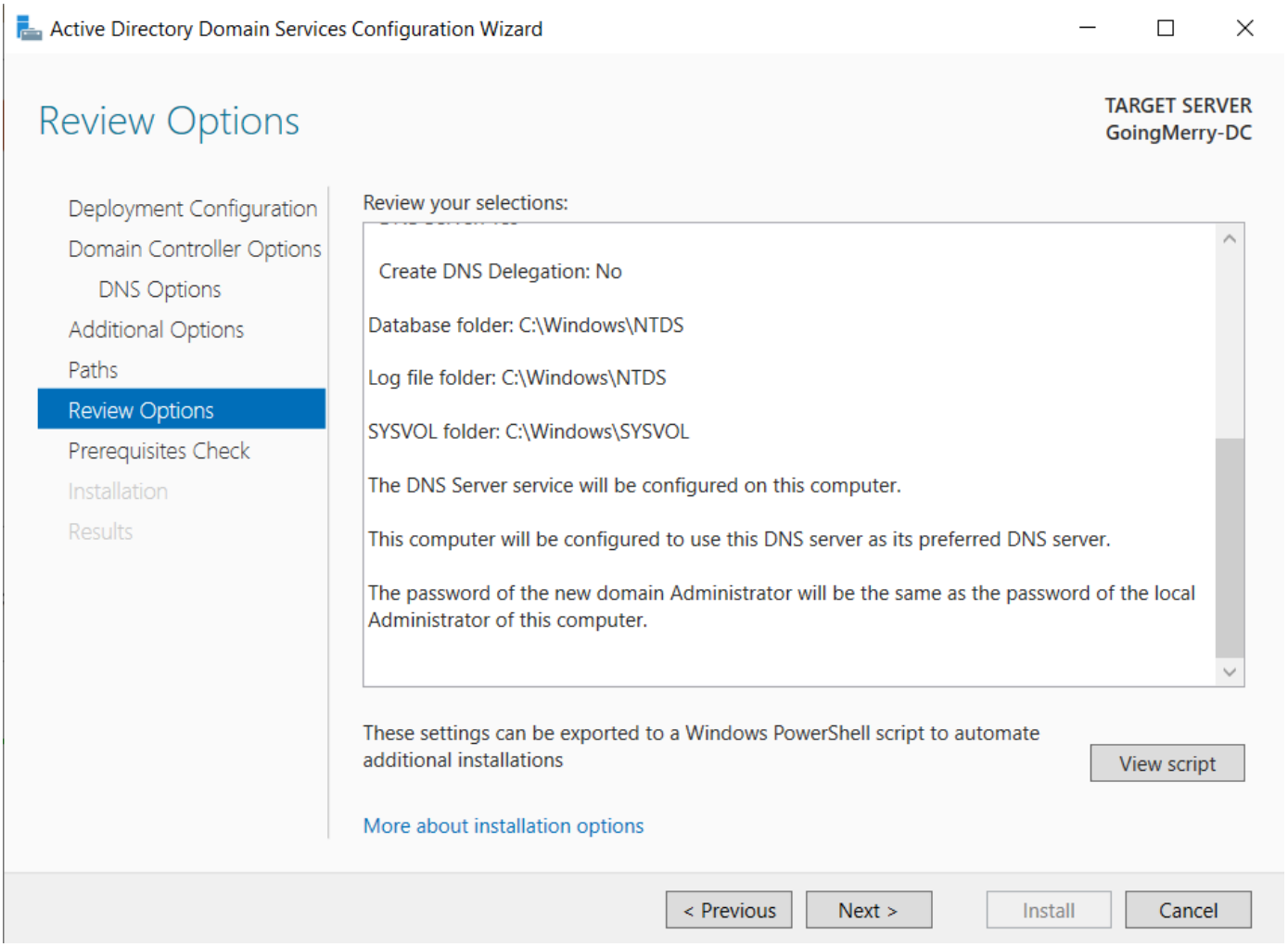

So, do not click close.

At this point there is no existing domain we can add our machine to. We cannot add a new domain to an existing forest (there is no forest). So, we are going to "Add a new forest".

We will "add new forest", then we can join our Domain to it. Name convention here is going to be "ANY_NAME.local" > Set password to be the same as Administrator password > Click Next > Next >

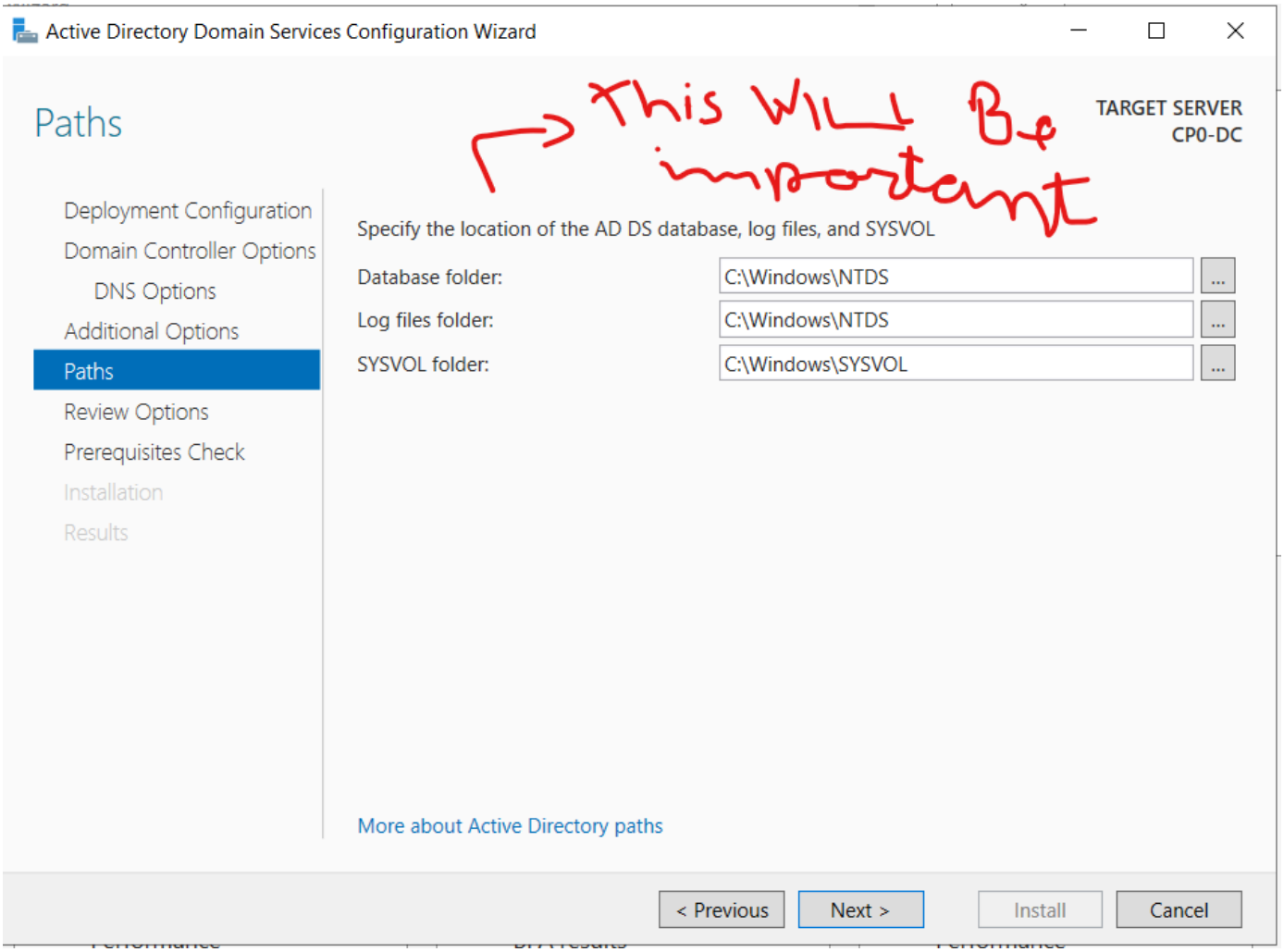
Next > On the "Review Options" screen, we can double check all the information.






We can see it is possible to export these settings to a PowerShell script. Not sure why Microsoft gives us that option.


This will come up later on in this course.




Keep clicking next.

After prerequisite check, go ahead and install.

We are going to getting a warning that we are being signed out. Go ahead and click close.

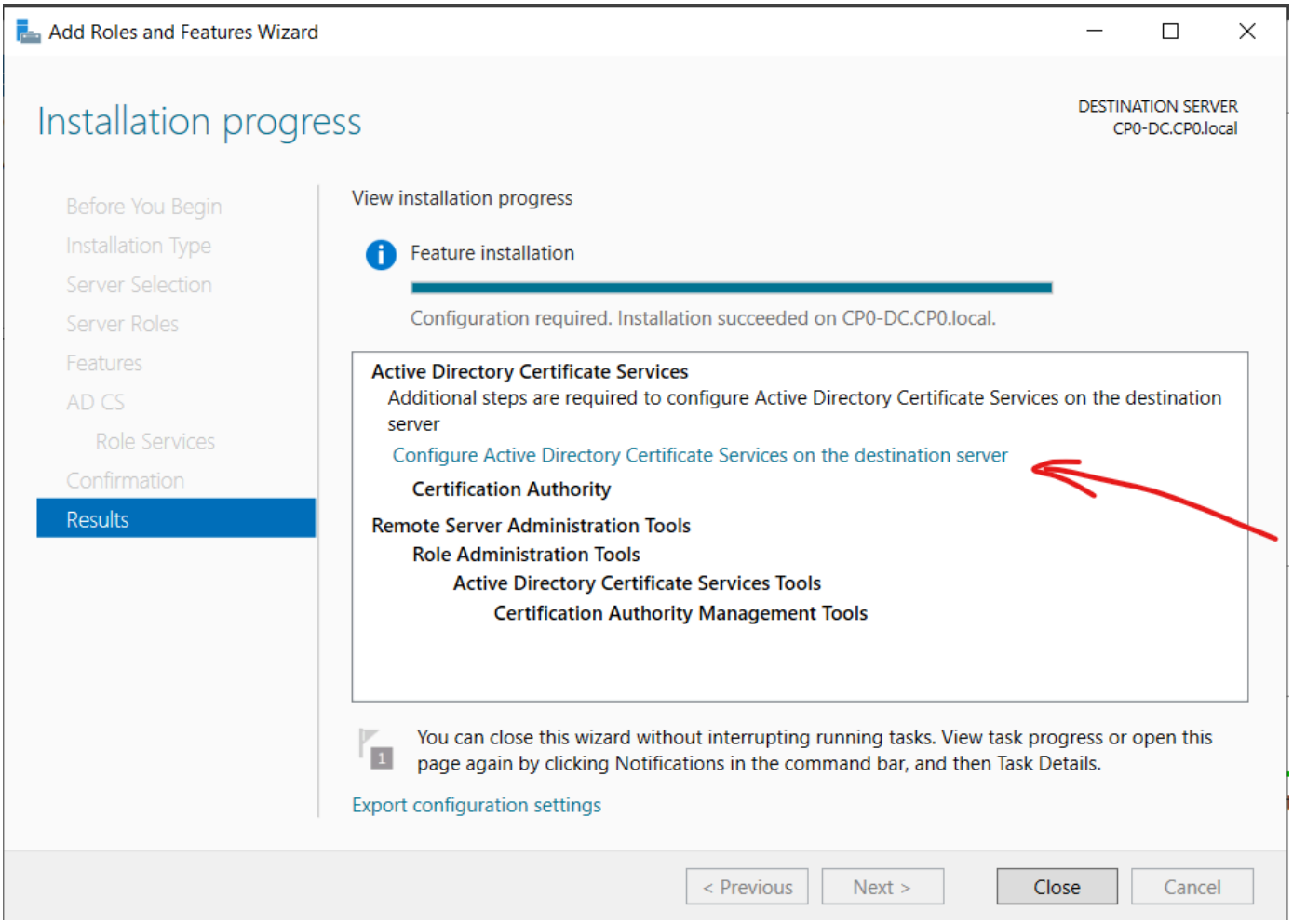
It is going to reboot.

Log in with the built-in Administrator password.

Last step is to set up "Certificates Services".

Open "Server Manager" > Go to "Manage" > "Add Roles and Features" > click next until Server Roles screen > On Server Roles, select "Active Directory Certificate Services" > Add feature > Next... > On the Confirmation screen, select "Restart the destination...." > Install.

Do not close the screen. Select "Configure Active Directory Certificate...."




On "Credentials" click Next > Make sure "Certification Authority" is selected >Enterprise CA > Root CA > Select "Create a new private key" > SHA256 > Default > Default > "Valid Period", Change it to 99 years > Configure.

Reboot it, and we are done.