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Infrastructure et réseaux

Domain Name System



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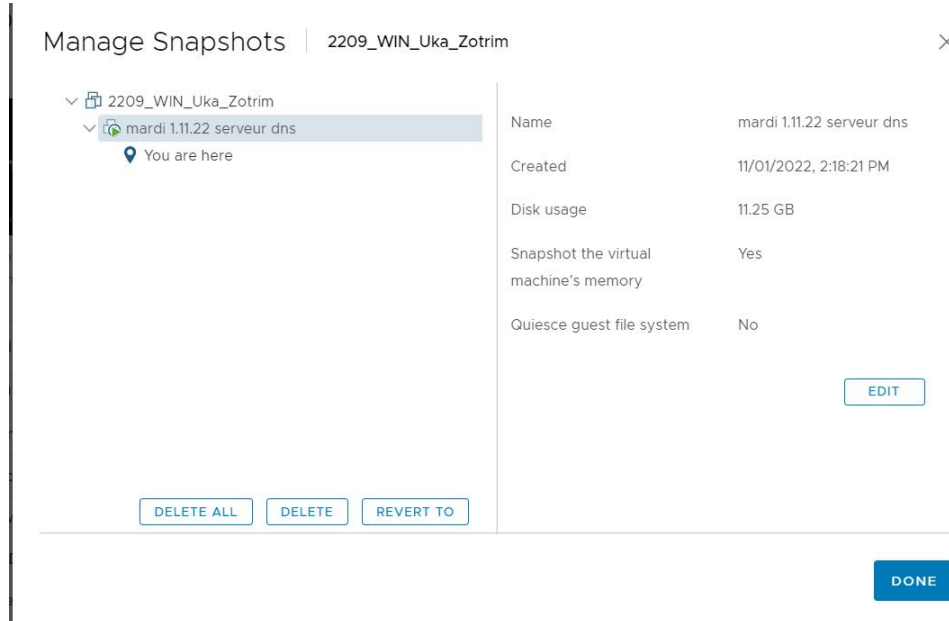
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1. Domain Name System

The domain name service/server is primarily a two-way translation system from a domain name to an IP address. It was created to simplify the recognition of a host for humans. Without it, one would need to know the IPv4 or v6 address of a server, which can be dynamic. The server will therefore respond to resolve the internet protocol (IP).

2. DNS Service

We made a snapshot, just in case we had problems so we could go back.



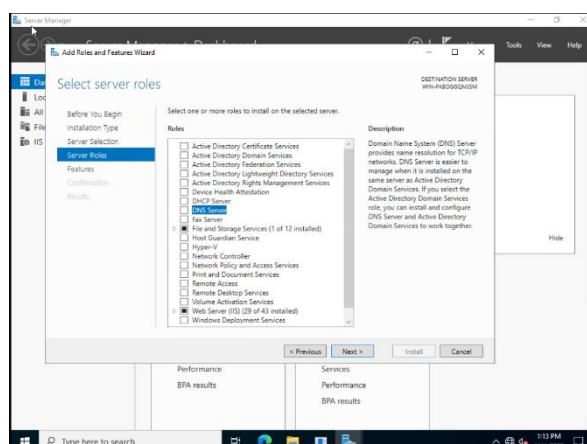
2.1 How to make a snapshot?

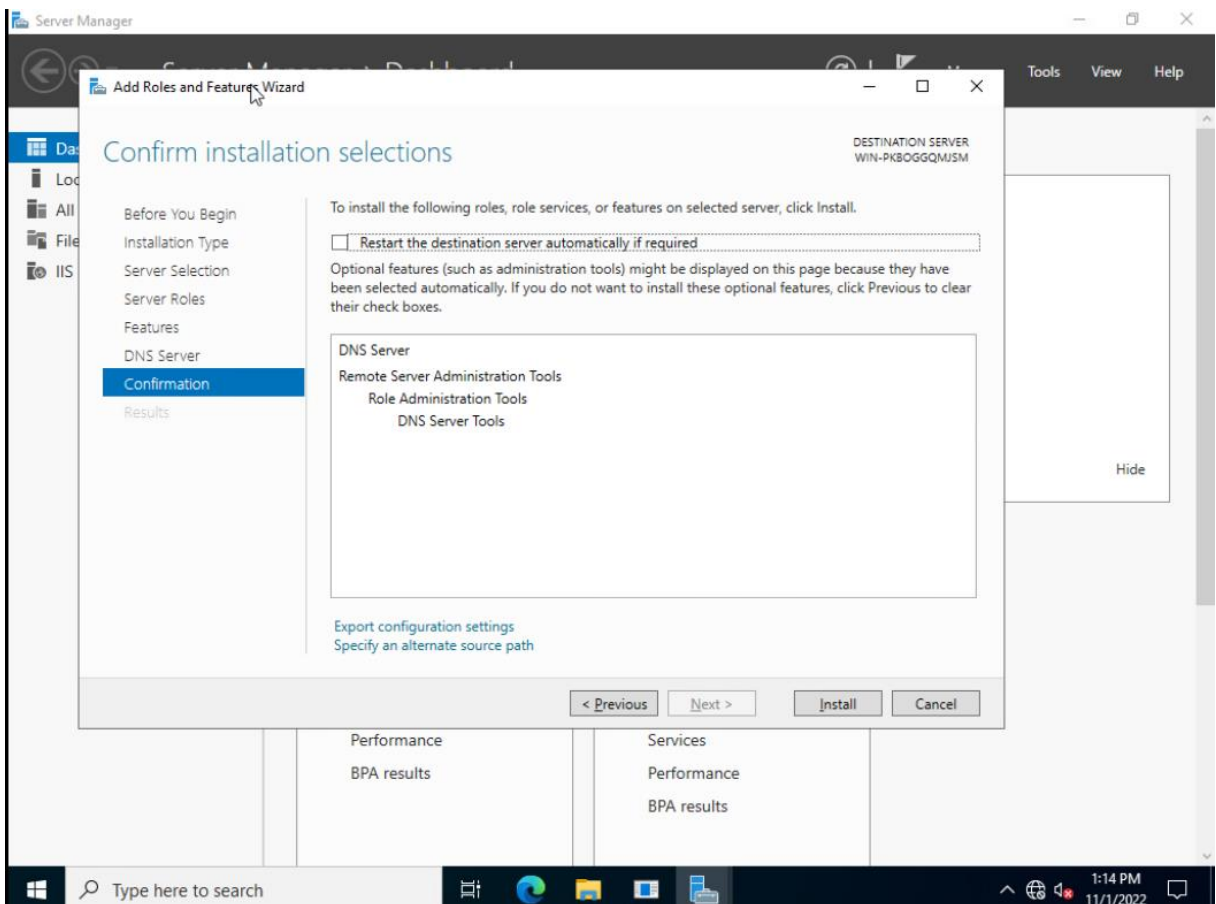
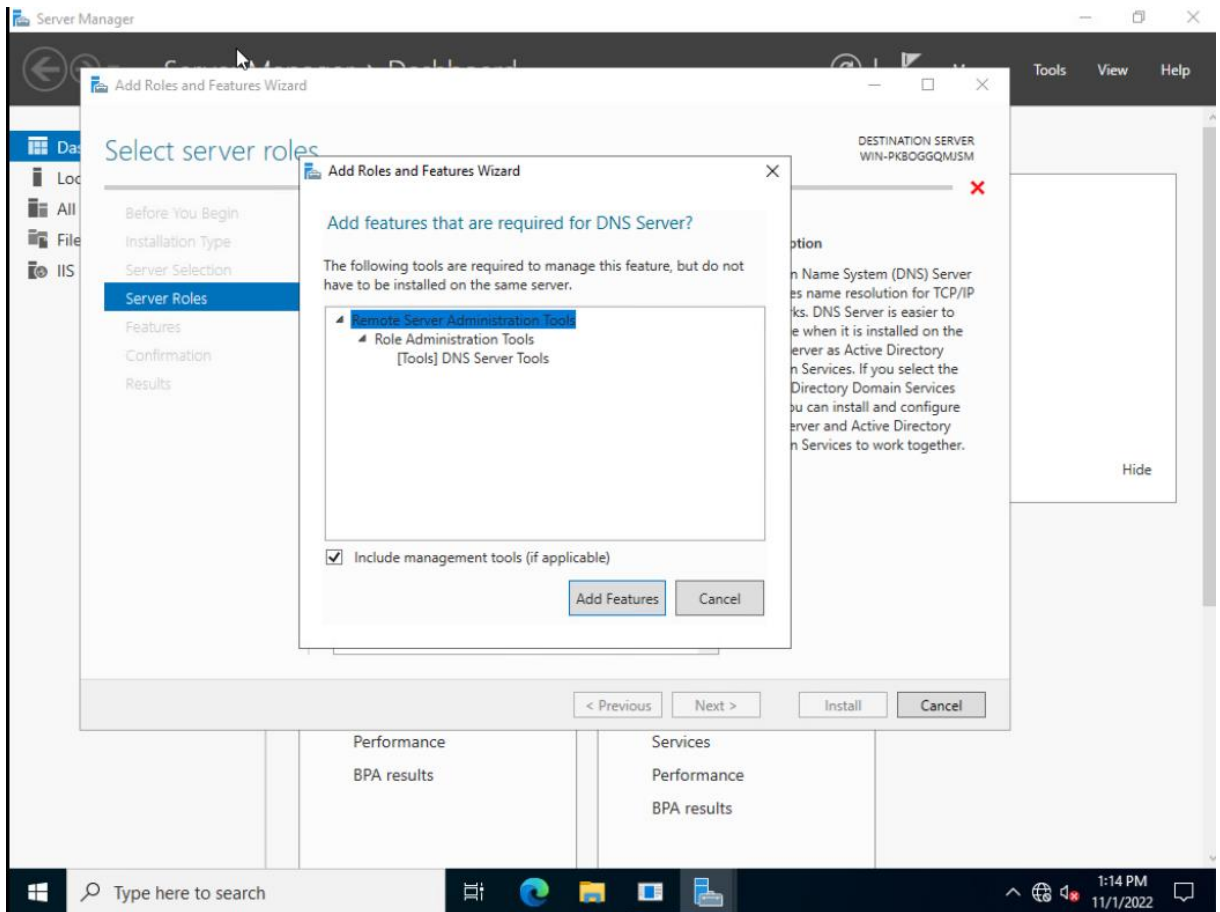
We must go to vSphere Client, choose our server, then in action, snapshots, take a snapshot, rename it as you want and click on ok.

To check if it is good, we go back to snapshots, eat snapshot and it should appear.

2.2 Install the DNS related role and feature on your Server.

We launch the virtual machine, we go to the tab manage then to Add Roles and Features Wizard. A new window will open, we will have to check "DNS Server" then we click on next and then we will have to click on Add Features and on install.





3. Network settings

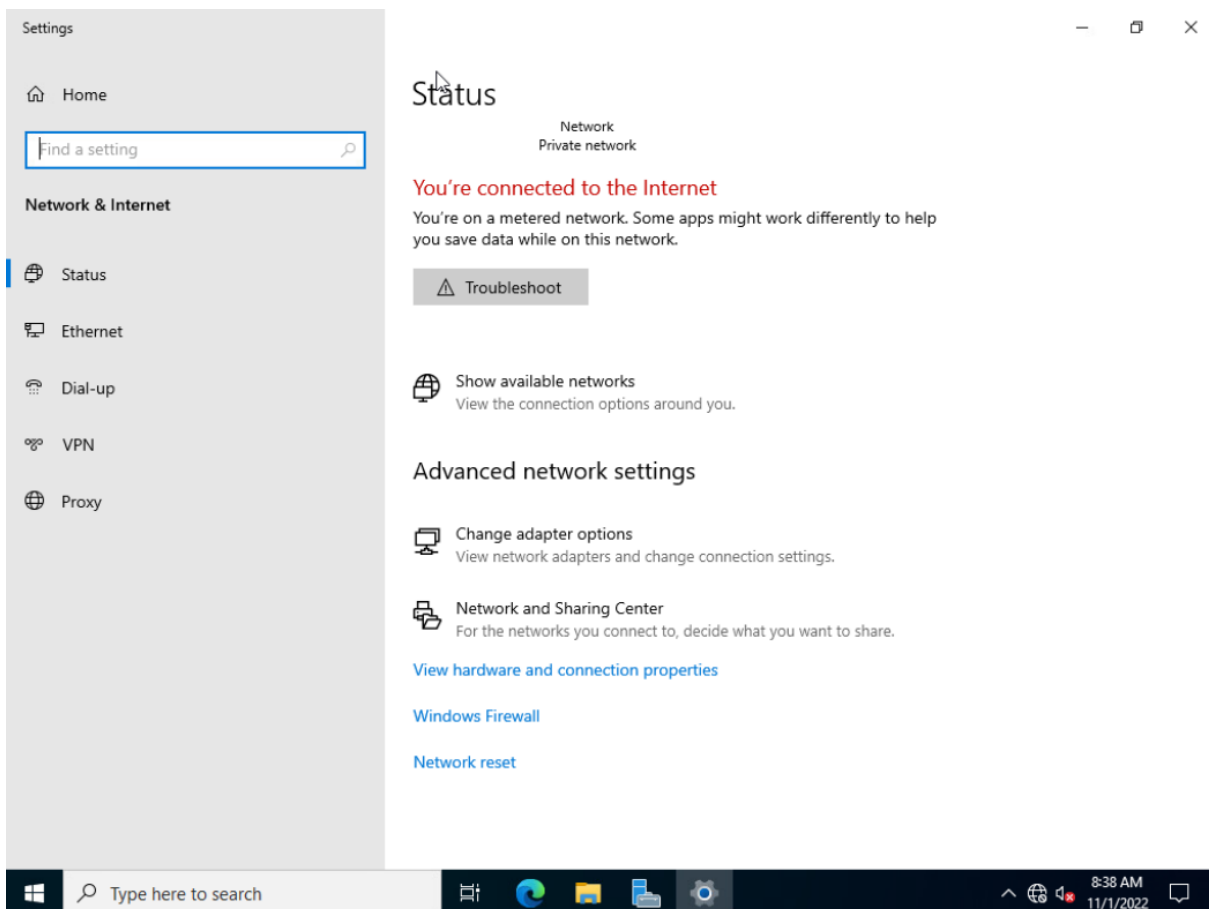
Once installed, we must go to the network parameters to have a static IP address and not dynamic, for this we must go to the network parameters, we click on change adapter option, a new page will open, we make right click on Ethernet0 and we click on properties.

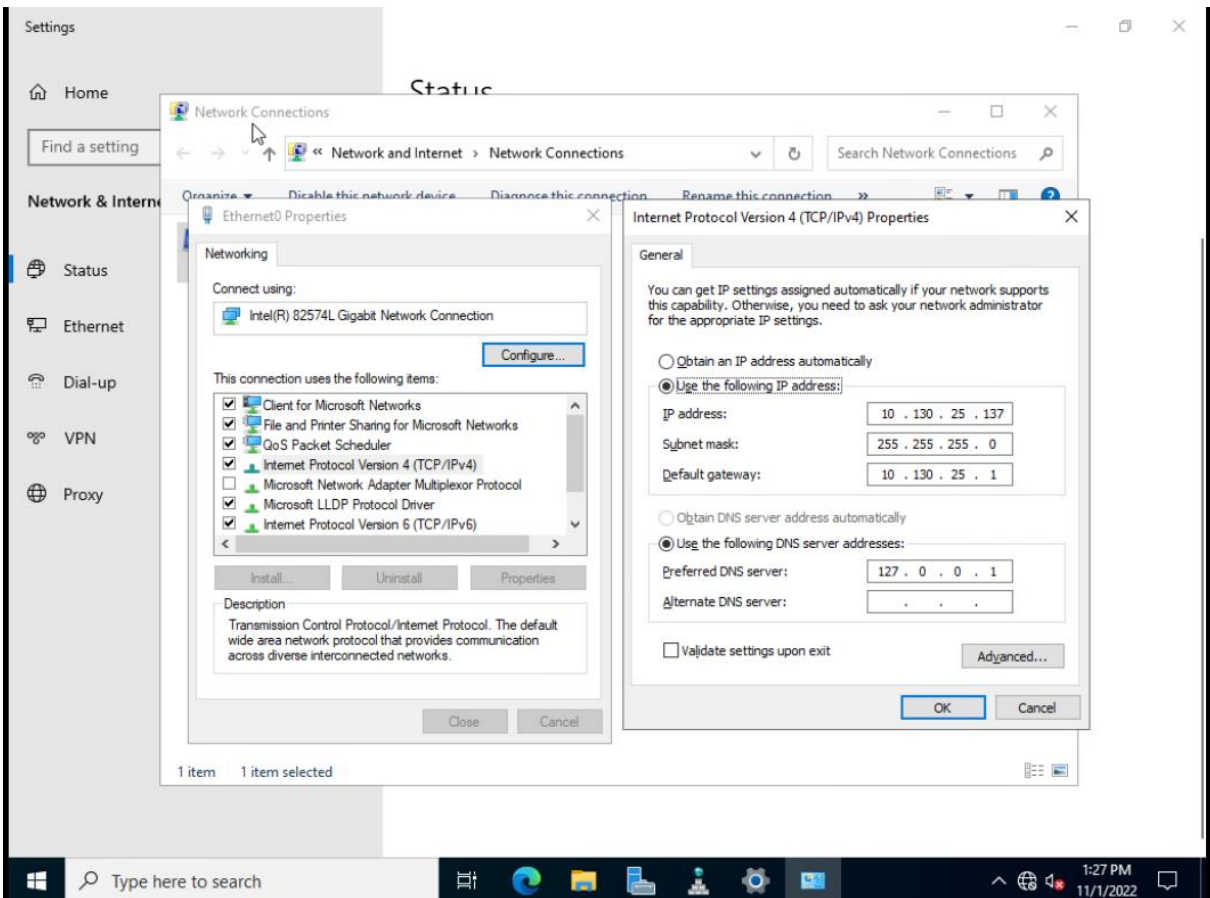
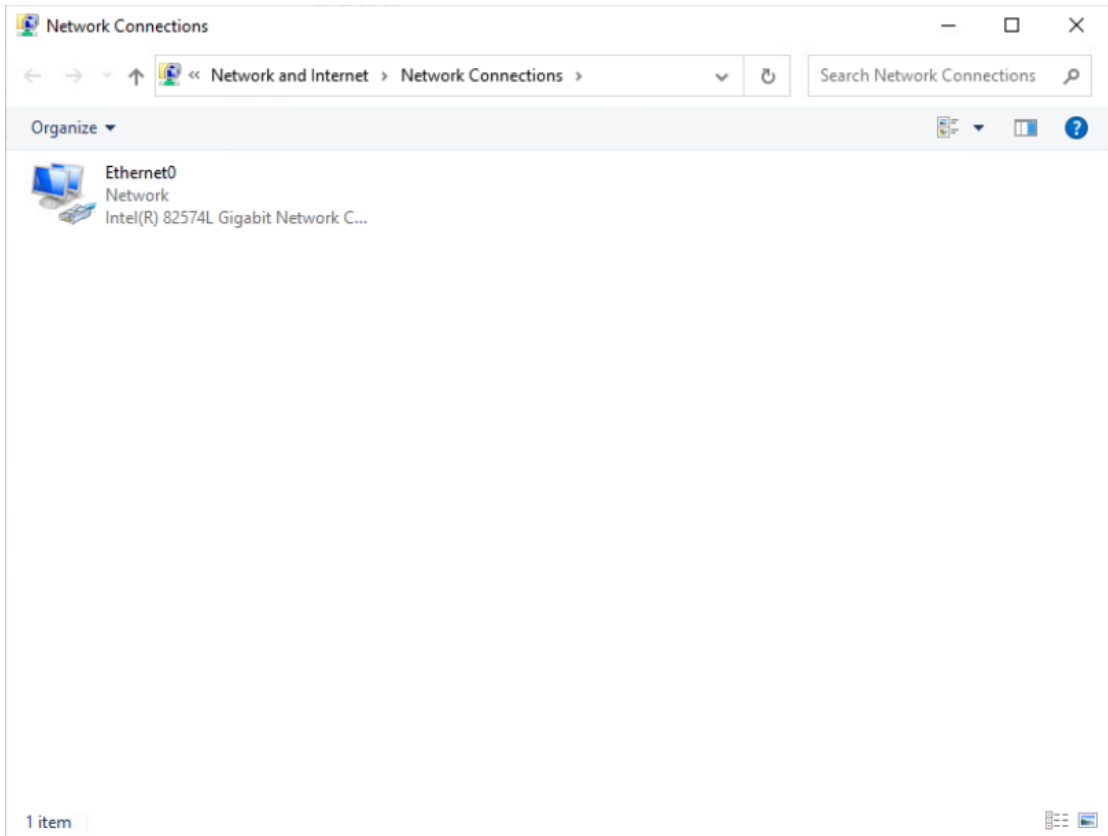
We will have to select Internet protocol version 4 (TCP/IPv4) and click on Configure.

A new page will open:

- IP address: This is the personal IP of each student.
- Subnet mask: 255.255.255.0
- Default gateway: 10.130.25.1

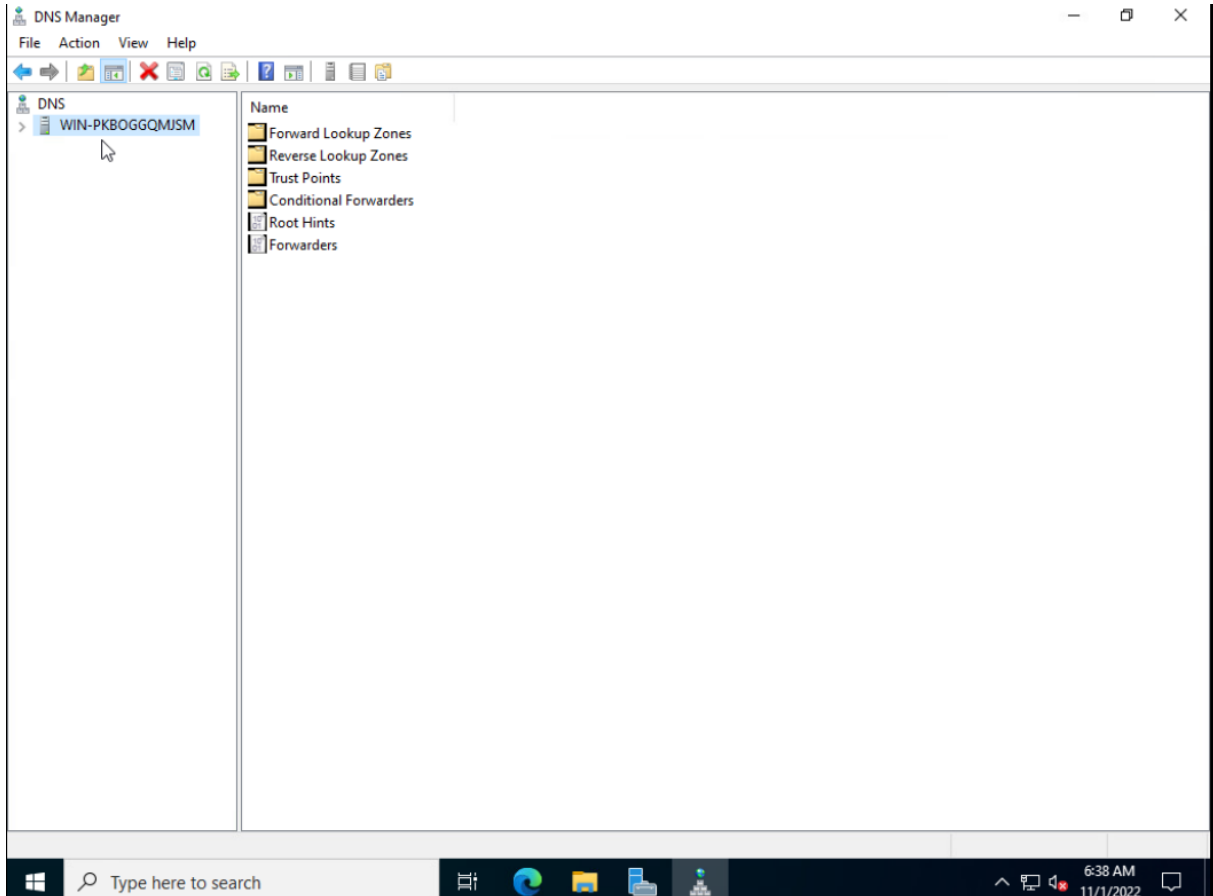
You have to check "use the following DNS server addresses" and put in preferred DNS server: 127.0.0.1 and click on ok.



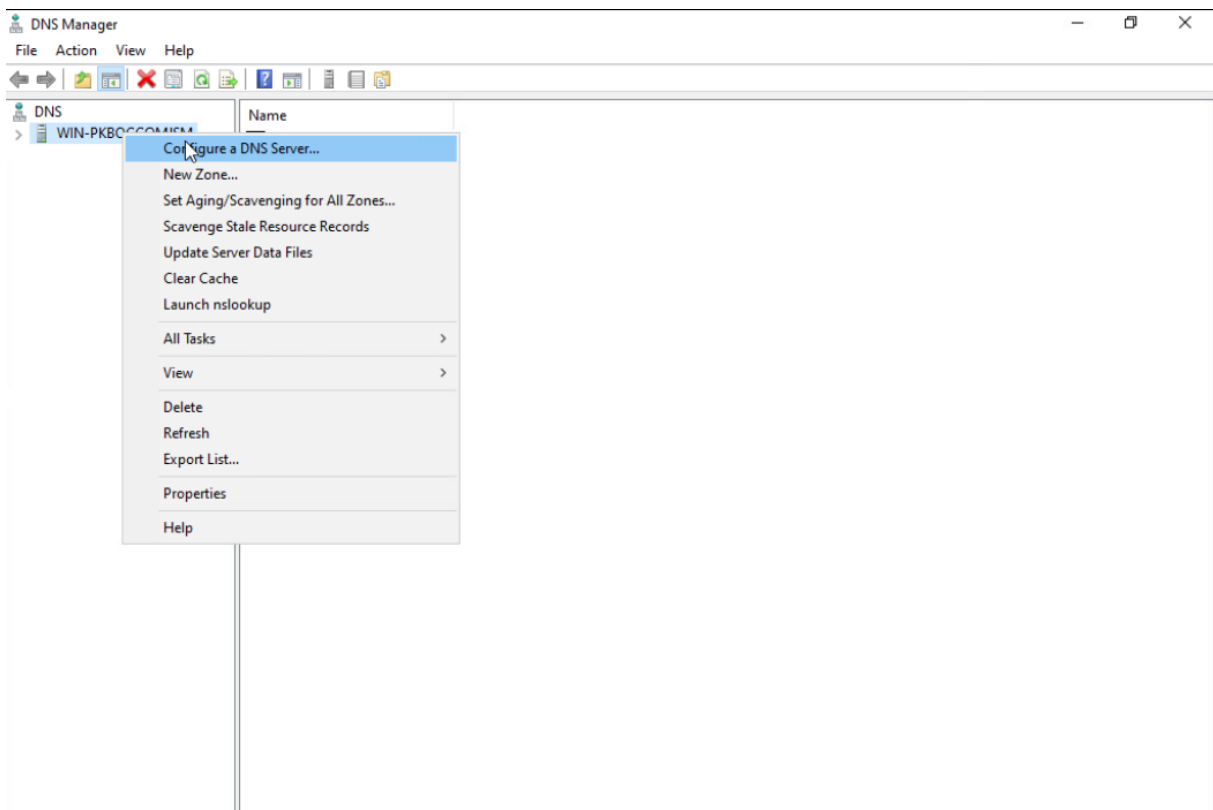


3. Home.arpa

In the windows search bar you write "dns" and open the application downloaded in the previous point.



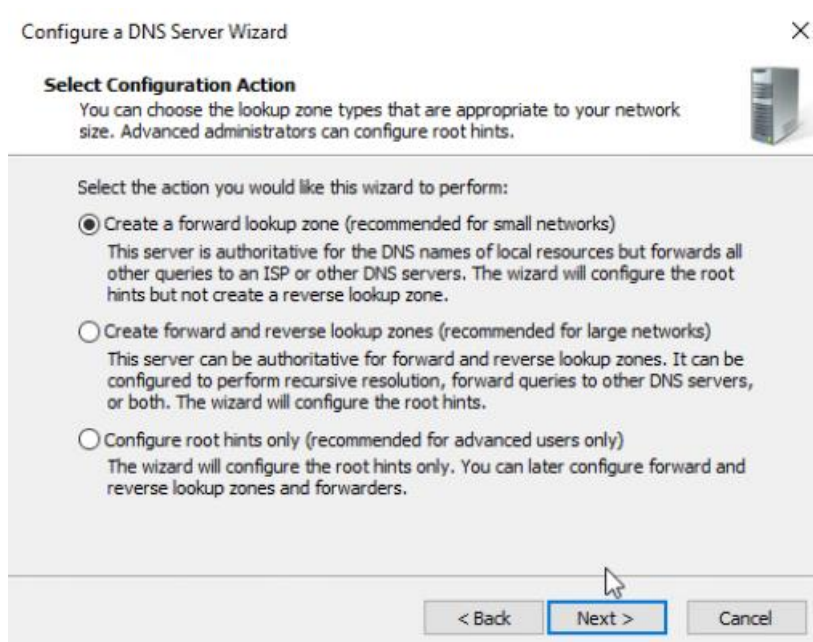
First of all you left click on "WIN-PKBOGGQMISM". Then you click on "Configure DNS Server".



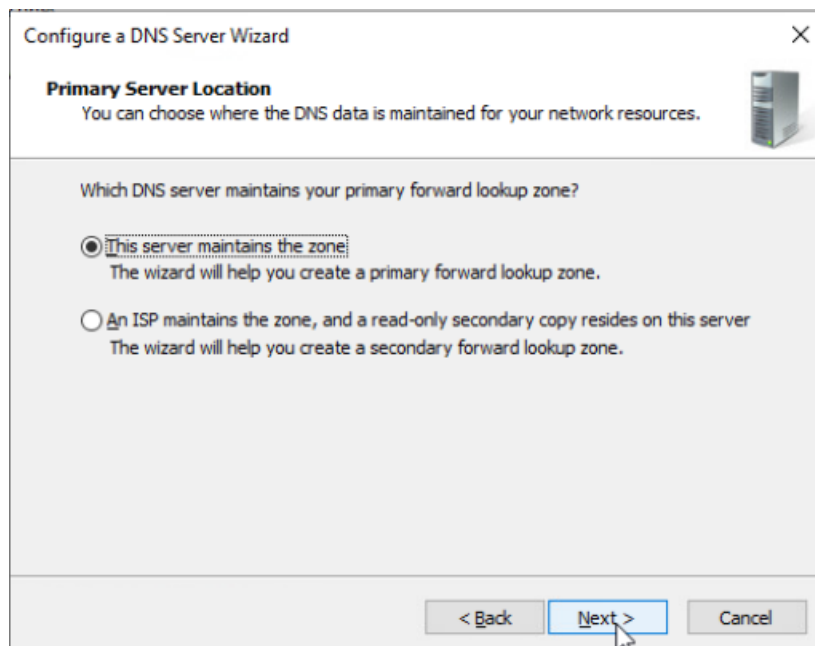
A new page will open, click on next.



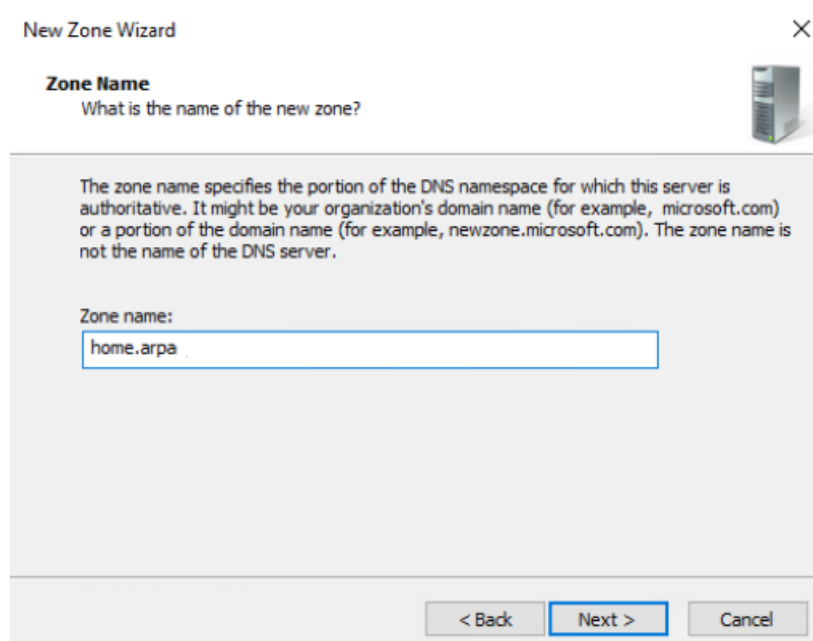
Make sure that the first box is checked and click on next.



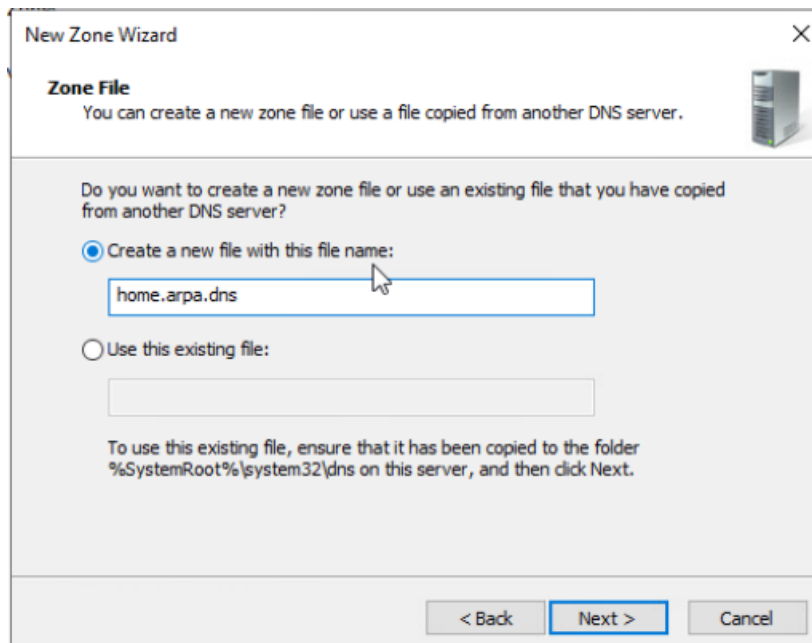
Check again if the first box is checked and click on next



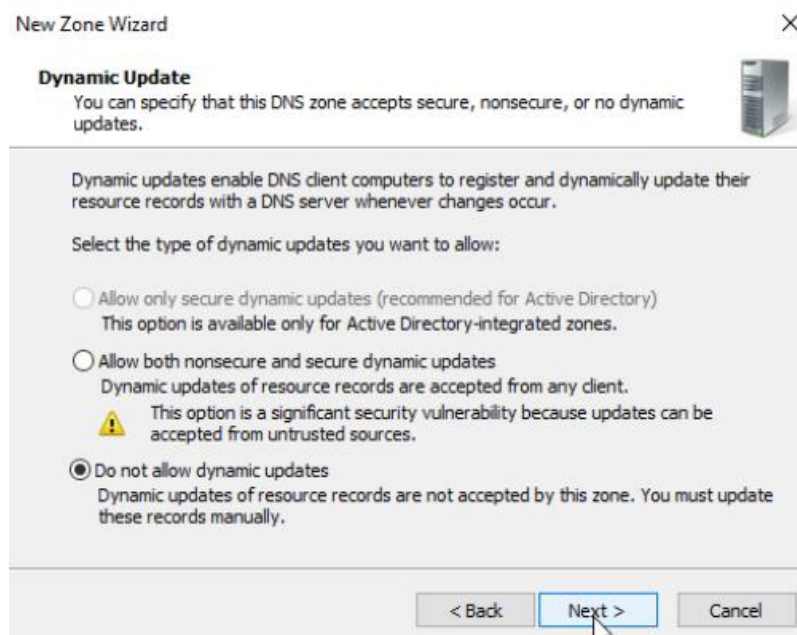
The next page you should enter the zone name "home.arpa" if it does not work add an "s" to "arpa" and click on next.



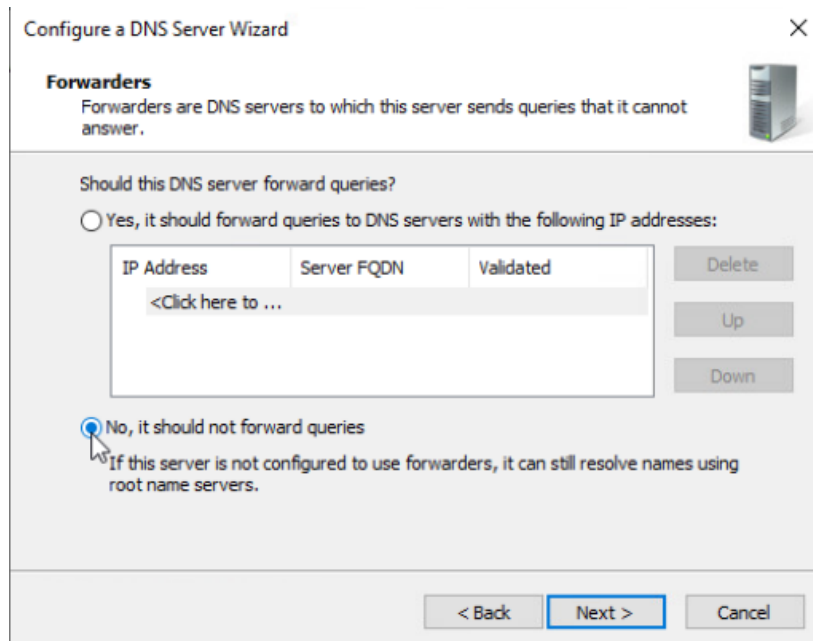
Then you leave it like that and click on next.



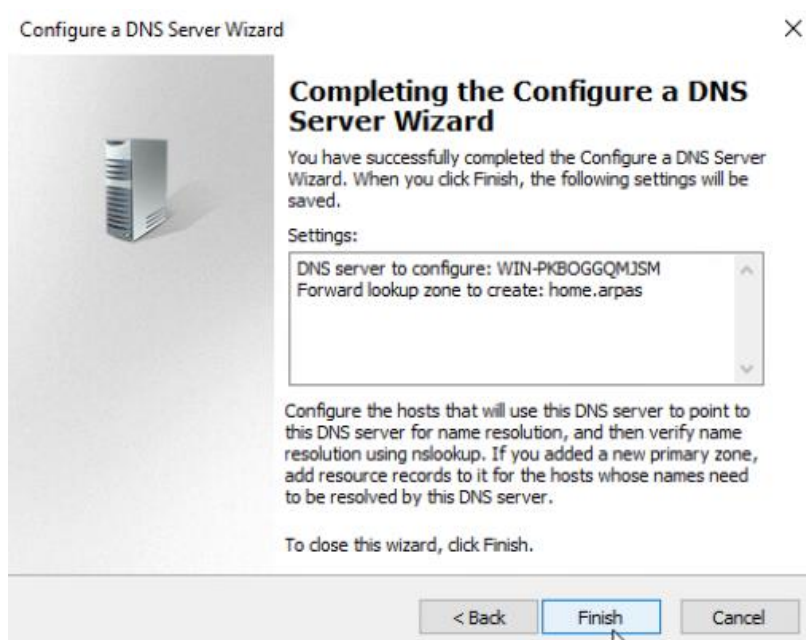
Make sure that the last box is checked and press next.



Here you have to check the second box, because we do not want a forward.

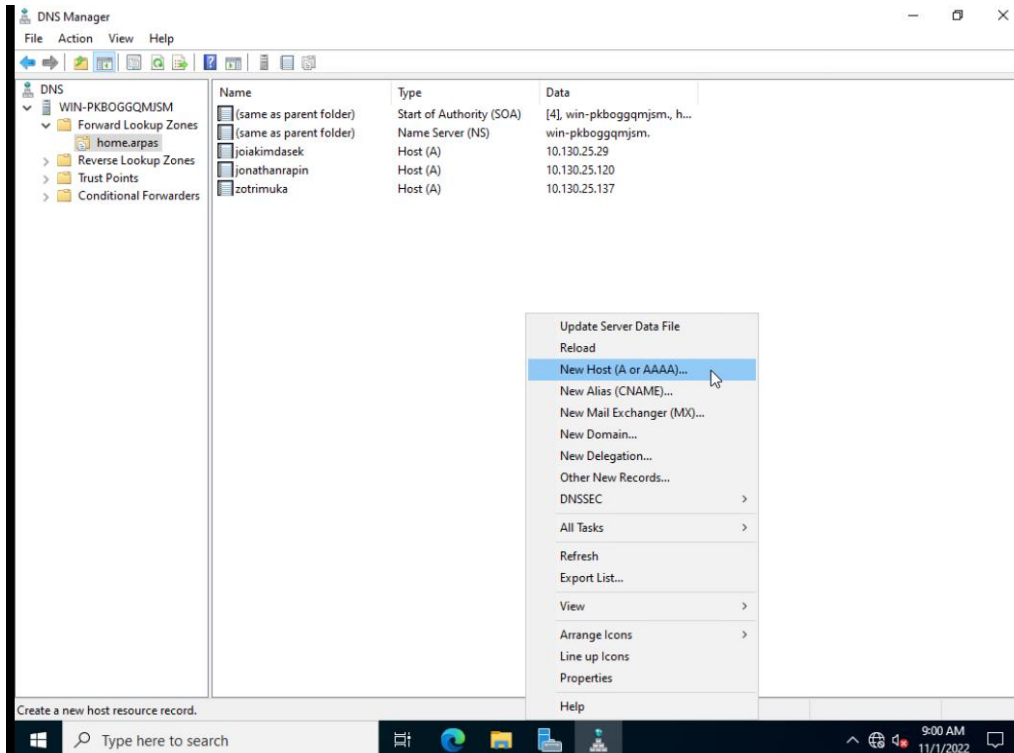


And on the last page you click on finish.



4. Configure

Now your folder appears, you select and in the large white area, you right click and you click on "New Host (A or AAAA)"

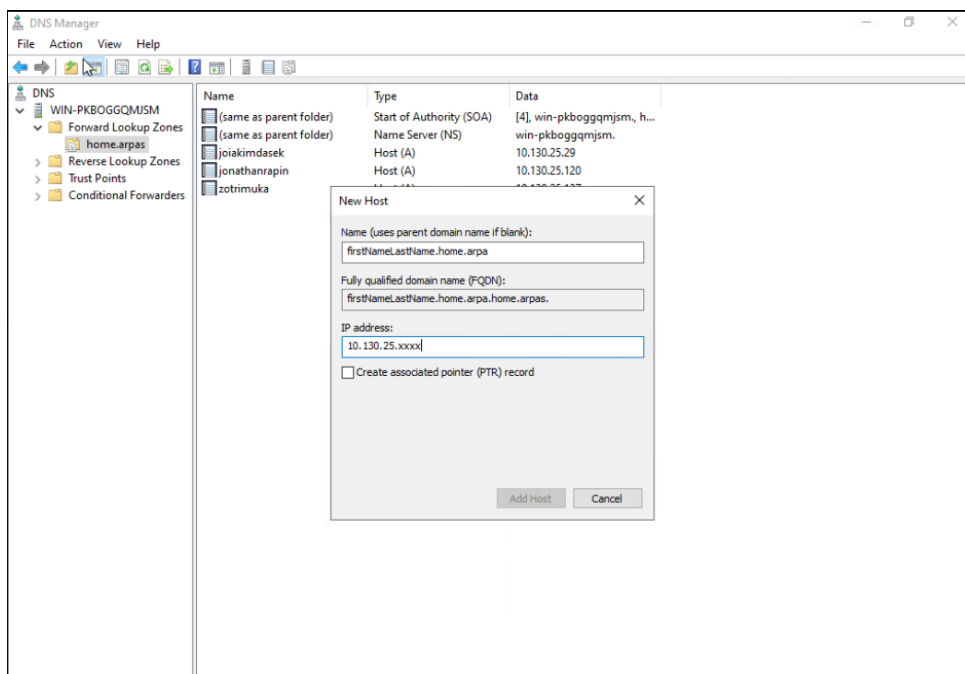


Here we will enter different hosts.

you put the first name first followed by the last name without space then you put a dot followed by home you put a dot followed by arpa.

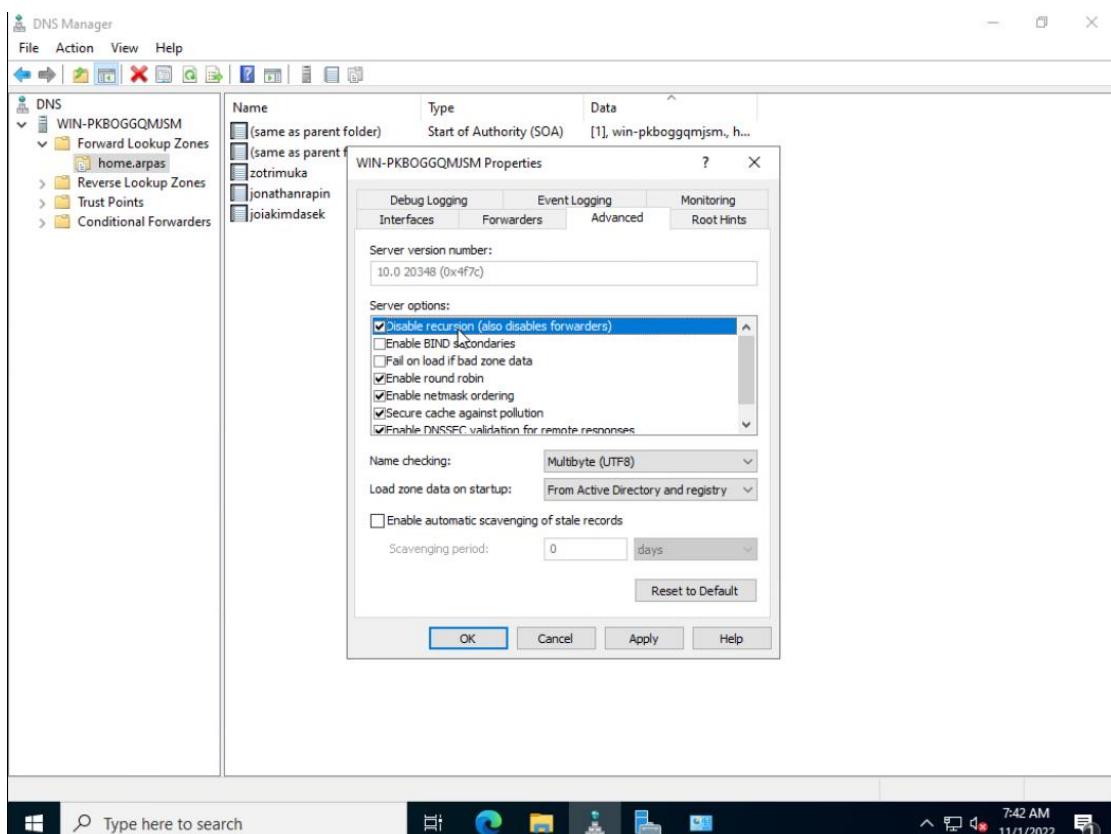
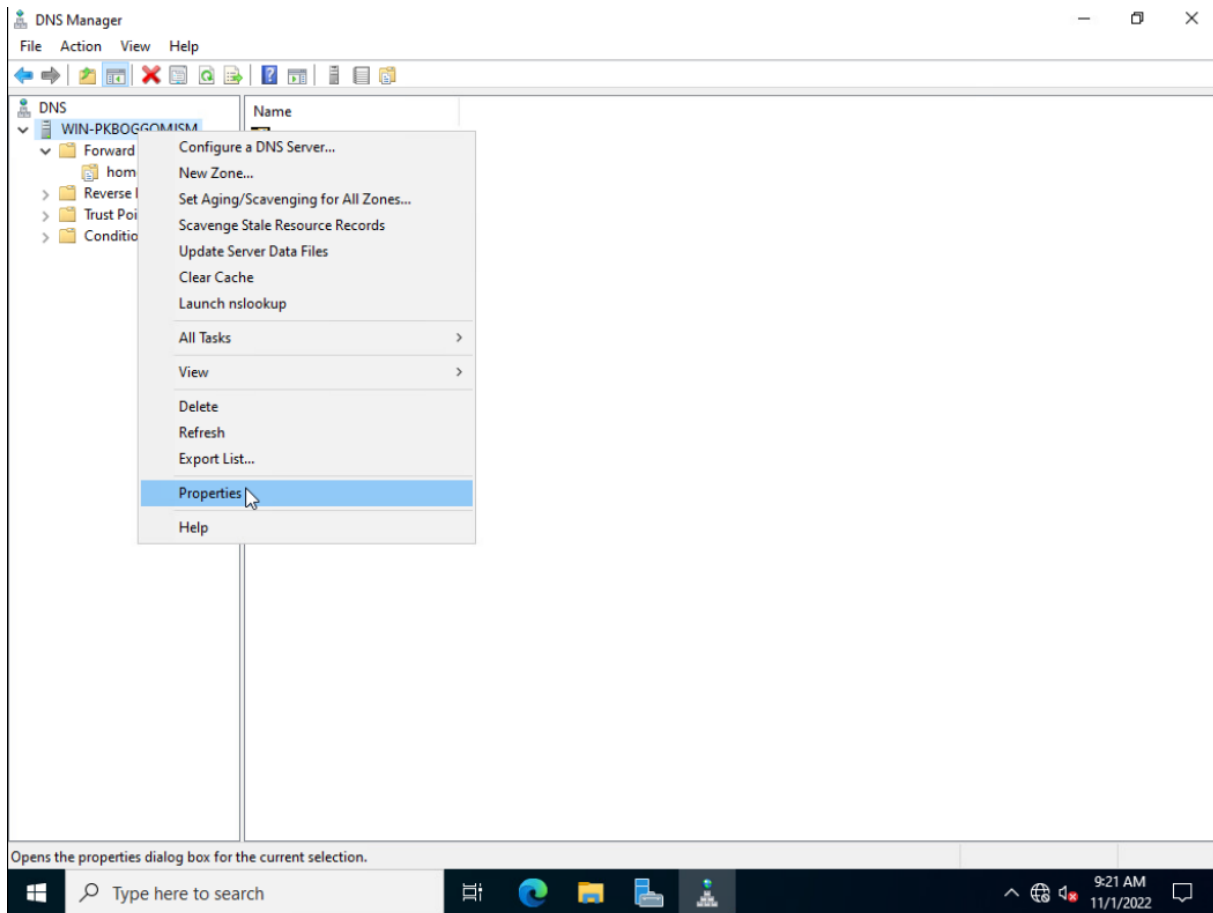
And in the IP address you put the personal IP address of each student: 10.130.25.XXXX

You repeat the action as many times as you want with different students



Now we will disable the recursively mode. To do this you right click on the server "WIN-PKBOGGQMJSM" and click on properties.

Then you go to the "Advanced" tab and you check the box "Disable recursion(also disables forwarders)" then you click on apply and ok.

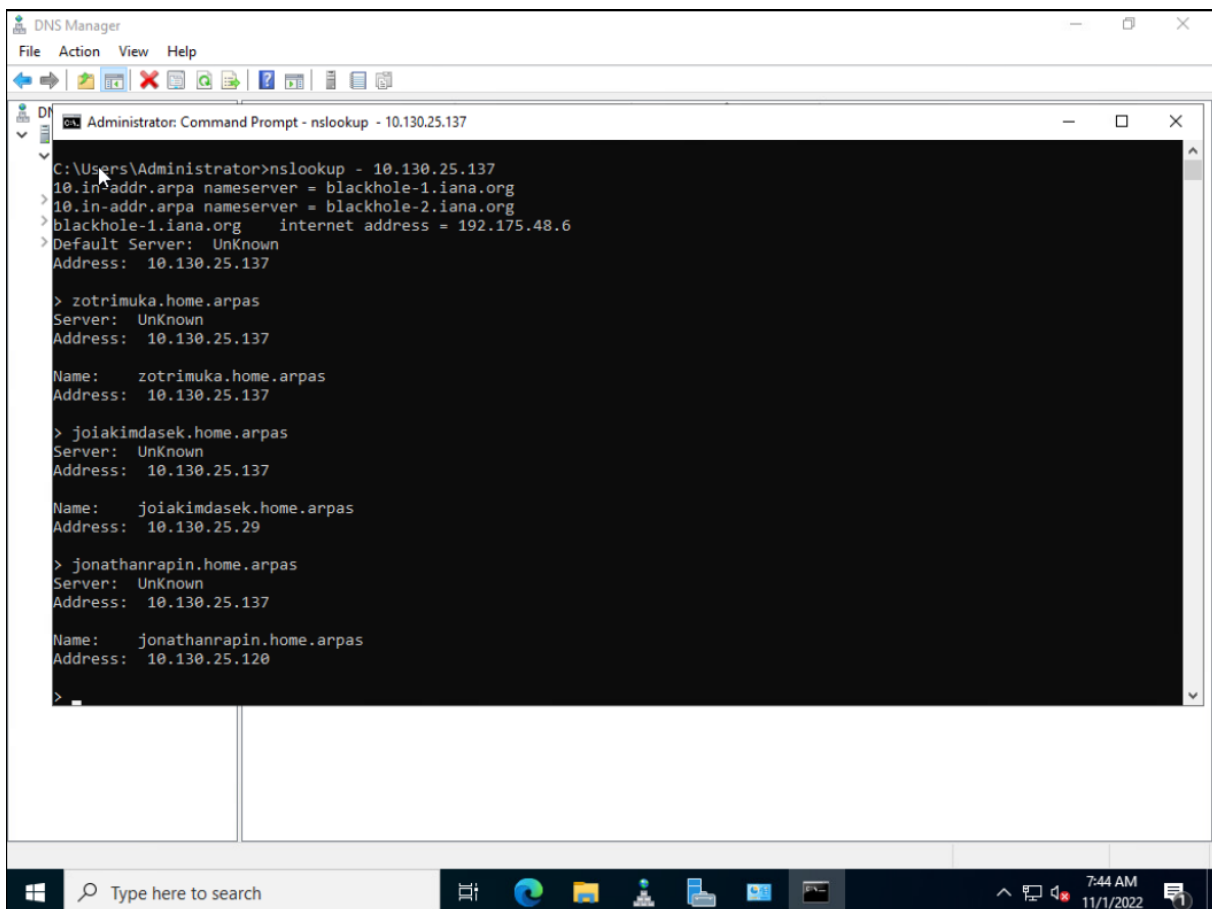


5. Test

Now we will test the server. To do this open Administrator command prompt. Once open enter the following command: "nslookup – IP"

You need to put the ip of your dns server.

Then you simply enter the different users: FirstnameLastname.home.arpa



```
DNS Manager
File Action View Help
Administrator: Command Prompt - nslookup - 10.130.25.137
C:\Users\Administrator>nslookup - 10.130.25.137
10.in-addr.arpa nameserver = blackhole-1.iana.org
10.in-addr.arpa nameserver = blackhole-2.iana.org
blackhole-1.iana.org internet address = 192.175.48.6
Default Server: UnKnown
Address: 10.130.25.137

> zotrimuka.home.arpas
Server: UnKnown
Address: 10.130.25.137

Name: zotrimuka.home.arpas
Address: 10.130.25.137

> joiakimdasek.home.arpas
Server: UnKnown
Address: 10.130.25.137

Name: joiakimdasek.home.arpas
Address: 10.130.25.29

> jonathanrapin.home.arpas
Server: UnKnown
Address: 10.130.25.137

Name: jonathanrapin.home.arpas
Address: 10.130.25.120
```