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Lab #4  
Proxmox Server  
Week #06/07/08

NACT-262 Fundamentals of System Administration  
2025-2026 Fall Semester

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# Lab #4 – Proxmox Server

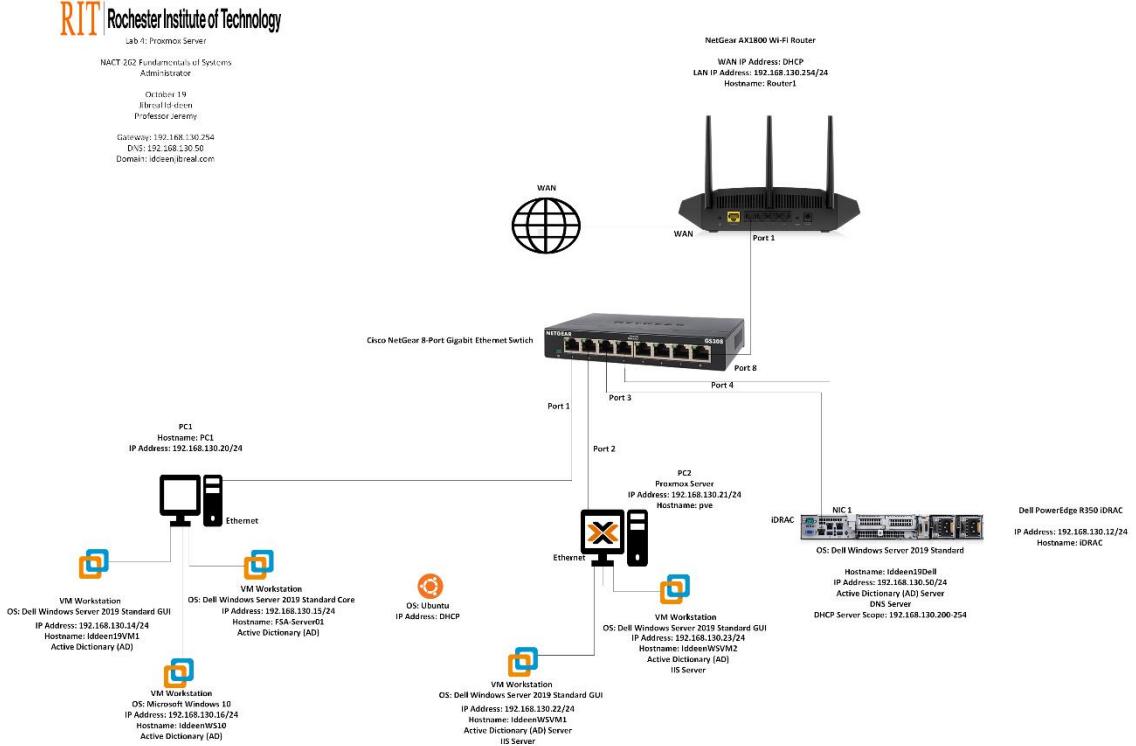
## **OBJECTIVE**

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As an independent working on this, I set up a Proxmox-based lab network and deployed three VMS, joined the Windows VM to iddeenjibreal.com, and verified end-to-end DNS/AD/IIS functionality.

# NETWORK DIAGRAM

---



|   |                   |
|---|-------------------|
| Hostname  | iDRAC             |
| Virtual Machine or Physical?                    | Physical          |
| Operating System                                | iDRAC9 firmware   |
| RAM size  | 128GB             |
| HD size   | 4TB               |
| IPMI IP Address (if none – remove line)         | 192.168.130.12    |
| IPMI Gateway IP address (if none – remove line) | 192.168.130.254   |
| Primary DNS IP Address (if none – remove line)  | 192.168.130.50    |
| Network Services (if none – remove line)        | Remote management |

|   |   |
|---|---|
| Hostname  | Ideen19Dell                                     |
| Virtual Machine or Physical?                        | Physical  |
| Operating System                                    | Windows Server 2019<br>Standard (GUI)           |
| RAM size  | 32GB  |
| HD size   | 4TB   |
| IPMI IP Address (if none – remove line)             | 192.168.130.12                                  |
| IPMI Gateway IP address (if none – remove line)     | 192.168.130.254                                 |
| Ethernet #1 IP Address (if none – remove line)      | 192.168.130.50                                  |
| Ethernet Gateway IP Address (if none – remove line) | 192.168.130.254                                 |
| Primary DNS IP Address (if none – remove line)      | 192.168.130.50                                  |
| Network Services (if none – remove line)            | AD DS, DNS, DHCP (scope<br>192.168.130.200-249) |

|  |                              |
|--|------------------------------|
| Hostname                                       | Router1                      |
| Virtual Machine or Physical?                   | Physical                     |
| Operating System                               | Netgear AX1800 firmware      |
| Ethernet #1 IP Address (if none – remove line) | 192.168.130.254              |
| Network Services (if none – remove line)       | Gateway/NAT (Wi-Fi disabled) |

|   |                 |
|---|-----------------|
| Hostname  | PC1             |
| Virtual Machine or Physical?                        | Physical        |
| Operating System                                    | Window 11       |
| RAM size  | 32GB            |
| HD size   | 1TB             |
| Ethernet #1 IP Address (if none – remove line)      | 192.168.130.20  |
| Ethernet Gateway IP Address (if none – remove line) | 192.168.130.254 |
| Primary DNS IP Address (if none – remove line)      | 192.168.130.50  |

|   |                                    |
|---|------------------------------------|
| Hostname  | Iddeen19VM1                        |
| Virtual Machine or Physical?                        | VM                                 |
| Operating System                                    | Windows Server 2019 Standard (GUI) |
| RAM size  | 8GB                                |
| Ethernet #1 IP Address (if none – remove line)      | 192.168.130.14                     |
| Ethernet Gateway IP Address (if none – remove line) | 192.168.130.254                    |
| Primary DNS IP Address (if none – remove line)      | 192.168.130.50                     |
| Network Services (if none – remove line)            | Domain member                      |

|   |                                      |
|---|--------------------------------------|
| Hostname  | FSA-Server01                         |
| Virtual Machine or Physical?                        | VM                                   |
| Operating System                                    | Windows Server 2019<br>Standard Core |
| RAM size  | 8GB                                  |
| Ethernet #1 IP Address (if none – remove line)      | 192.168.130.15                       |
| Ethernet Gateway IP Address (if none – remove line) | 192.168.130.254                      |
| Primary DNS IP Address (if none – remove line)      | 192.168.130.50                       |
| Network Services (if none – remove line)            | IIS (custom homepage)                |

|   |                        |
|---|------------------------|
| Hostname  | IddeenWS10             |
| Virtual Machine or Physical?                        | VM                     |
| Operating System                                    | Windows 10             |
| RAM size  | 8 GB                   |
| Ethernet #1 IP Address (if none – remove line)      | 192.168.130.16         |
| Ethernet Gateway IP Address (if none – remove line) | 192.168.130.254        |
| Primary DNS IP Address (if none – remove line)      | 192.168.130.50         |
| Network Services (if none – remove line)            | RSAT admin workstation |

|   |                 |
|---|-----------------|
| Hostname  | pve             |
| Virtual Machine or Physical?                        | Physical        |
| Operating System                                    | Proxmox VE      |
| RAM size  | 32GB            |
| Ethernet #1 IP Address (if none – remove line)      | 192.168.130.21  |
| Ethernet Gateway IP Address (if none – remove line) | 192.168.130.254 |
| Primary DNS IP Address (if none – remove line)      | 192.168.130.50  |

|   |                                       |
|---|---------------------------------------|
| Hostname  | IddeenWSVM1                           |
| Virtual Machine or Physical?                        | VM                                    |
| Operating System                                    | Windows Server 2019<br>Standard (GUI) |
| RAM size  | 8GB                                   |
| Ethernet #1 IP Address (if none – remove line)      | 192.168.130.22                        |
| Ethernet Gateway IP Address (if none – remove line) | 192.168.130.254                       |
| Primary DNS IP Address (if none – remove line)      | 192.168.130.50                        |
| Network Services (if none – remove line)            | AD DS, DNS, IIS                       |

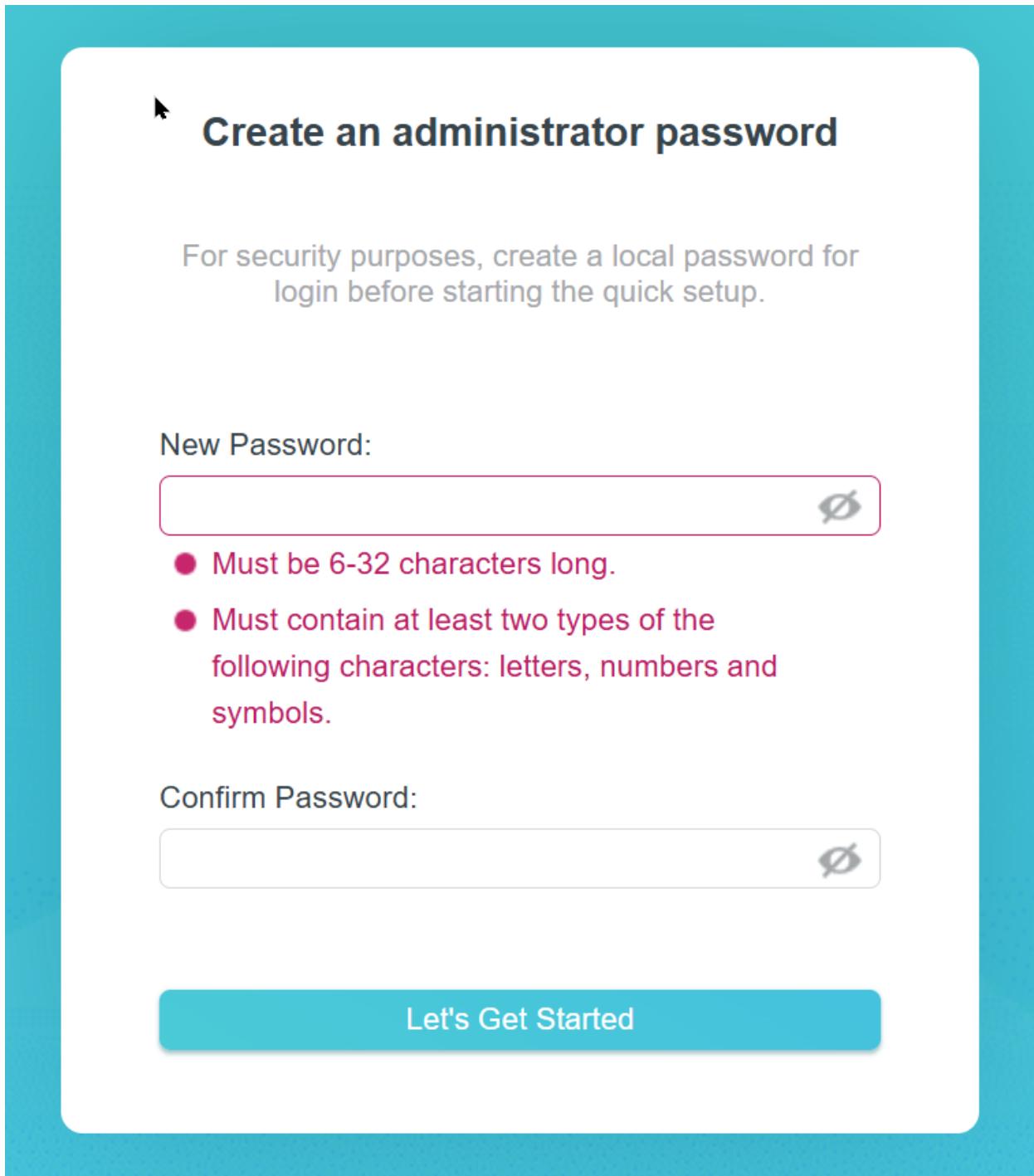
|   |                                       |
|---|---------------------------------------|
| Hostname  | IddeenWSVM2                           |
| Virtual Machine or Physical?                        | VM                                    |
| Operating System                                    | Windows Server 2019<br>Standard (GUI) |
| RAM size  | 8GB                                   |
| Ethernet #1 IP Address (if none – remove line)      | 192.168.130.23                        |
| Ethernet Gateway IP Address (if none – remove line) | 192.168.130.254                       |
| Primary DNS IP Address (if none – remove line)      | 192.168.130.50                        |
| Network Services (if none – remove line)            | IIS                                   |

|   |                        |
|---|------------------------|
| Hostname  | Pve-linux              |
| Virtual Machine or Physical?                        | VM                     |
| Operating System                                    | Ubuntu Desktop         |
| RAM size  | 8GB                    |
| Ethernet #1 IP Address (if none – remove line)      | 192.168.130.200 (DHCP) |
| Ethernet Gateway IP Address (if none – remove line) | 192.168.130.254        |
| Primary DNS IP Address (if none – remove line)      | 192.168.130.50         |

|  |   |
|--|---|
| Network Services (if none – remove line) | AD DS, DNS, DHCP (scope<br>192.168.130.200-249) |
|--|---|

## **PROCEDURE**

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**FIGURE 1 - CREATE AN ADMINISTRATOR PASSWORD ON TP-LINK WI-FI ROUTER**

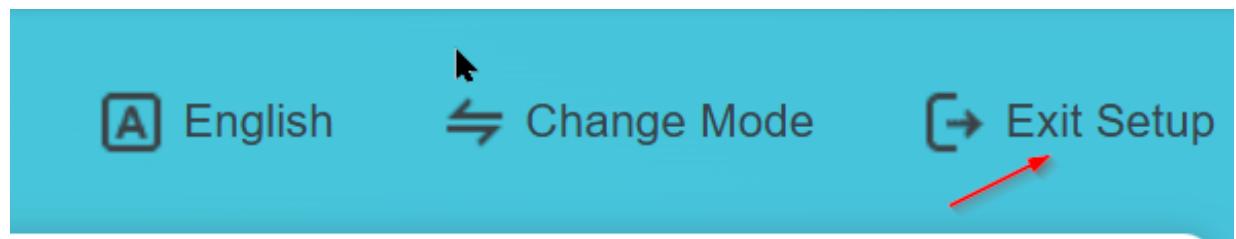


FIGURE 2 - CLICK "EXIT SETUP" IN THE WIZARD PROCESS

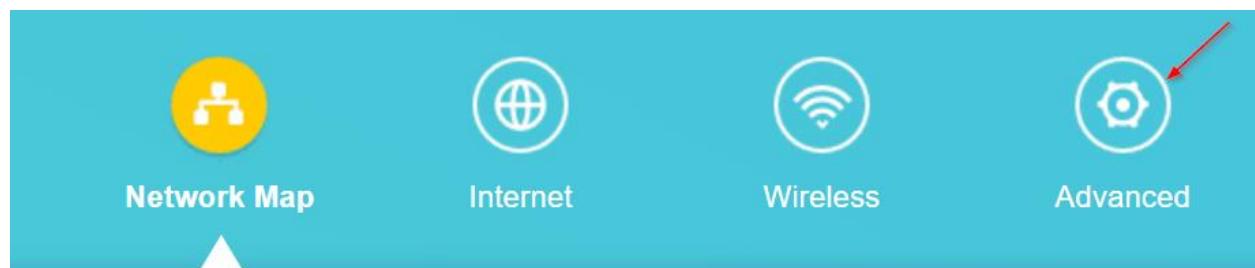
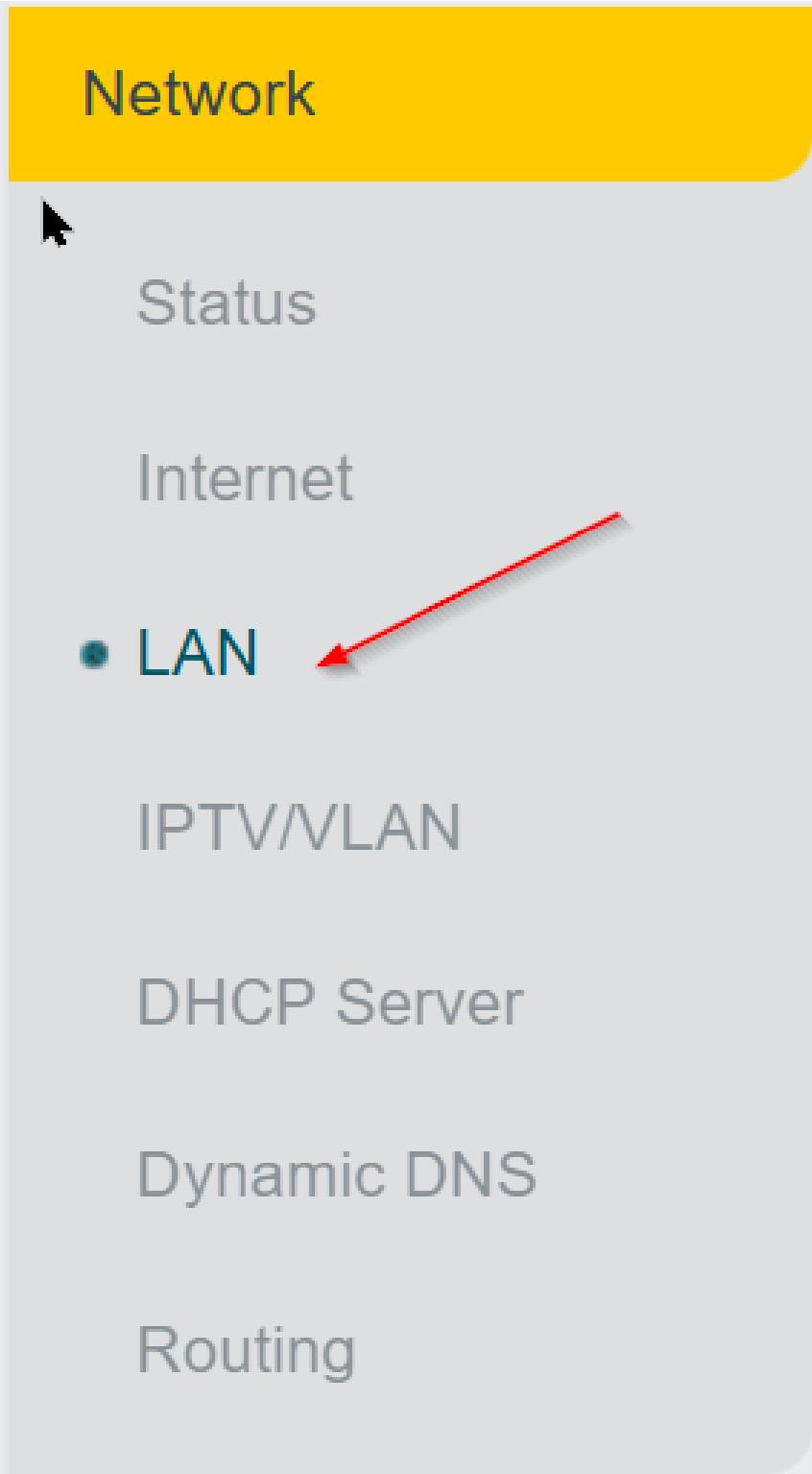


FIGURE 3 - CLICK "ADVANCED"



**FIGURE 4 - CLICK "LAN"**

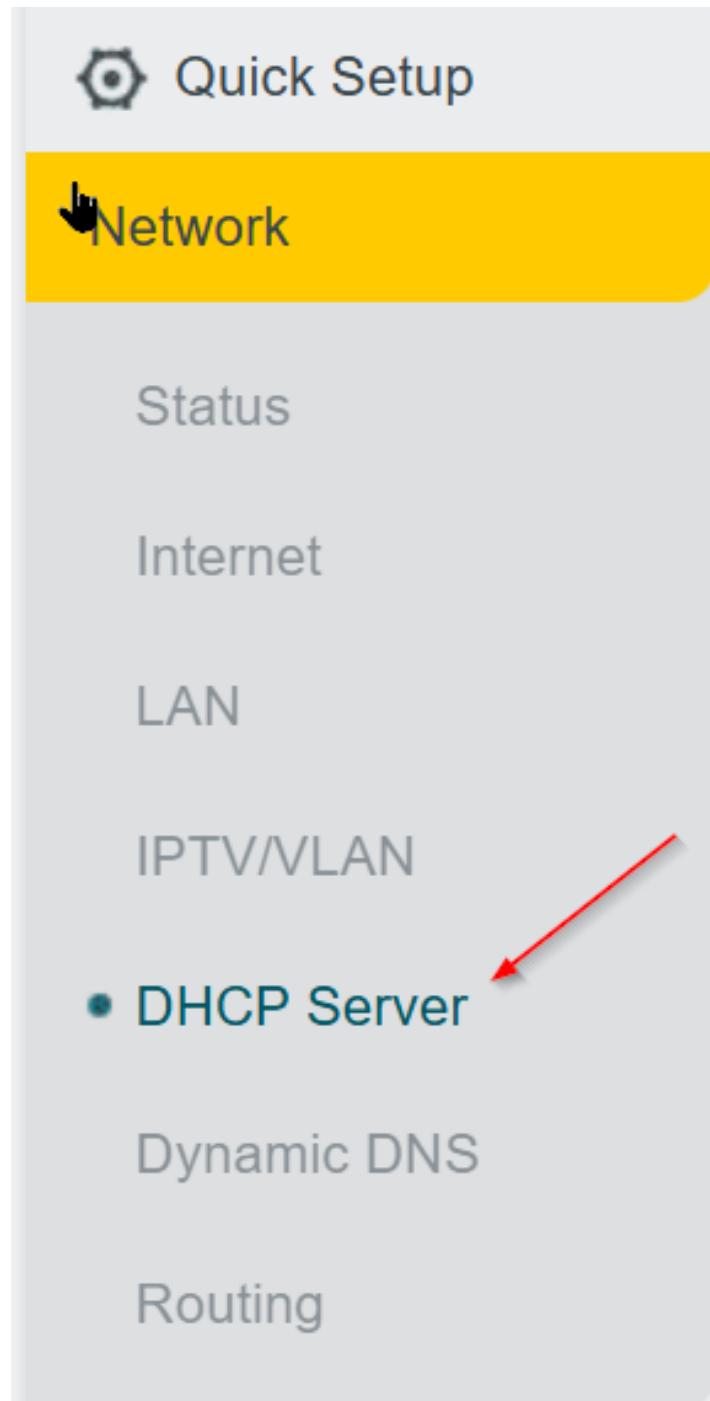
View and configure LAN settings.

A screenshot of a LAN configuration interface. At the top, a header reads "View and configure LAN settings." Below it, a red arrow points from the left towards the "IP Address" field. In the center, there is a "MAC Address" field containing "78-8C-B5-12-5A-54". Below that is an "IP Address" field containing "192.168.130.254", which has a red arrow pointing towards it from the right. Underneath the IP address field is a "Subnet Mask" field containing "255.255.255.0" with a dropdown arrow icon to its right.

**FIGURE 5 - CHANGE THE LAN IP ADDRESS**



**FIGURE 6 - SAVE IT**



**FIGURE 7 - CLICK "DHCP SERVER"**

**DHCP Server**

---

DHCP Server:  **Enable**

IP Address Pool: 192.168.130.2 - 192.168.130.253

Address Lease Time: 120 minutes

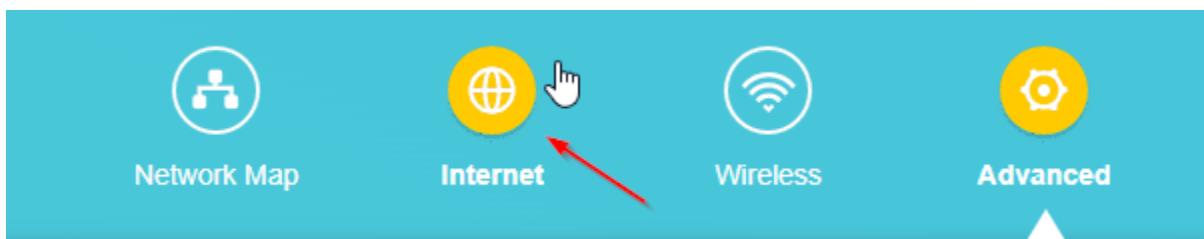
Default Gateway: 192.168.130.254 (Optional)

Primary DNS: (Optional)

Secondary DNS: (Optional)



**FIGURE 8 - DISABLE THE DHCP SERVER**



**FIGURE 9 - CLICK "INTERNET"**

## Wireless Settings

Personalize settings for each band or enable Smart Connect to configure the same settings for all bands.

OFDMA:  Enable [?](#)

TWT:  Enable [?](#)

Smart Connect:  Enable [?](#)

**2.4GHz:**  Enable [?](#) Share Network  Hide SSID

Network Name (SSID): TP-Link\_5A54

Security: WPA2-PSK[AES]

Password: 75849627

Channel Width: 20/40MHz

Channel: Auto

Mode: 802.11b/g/n/ax mixed

**5GHz:**  Enable [?](#) Share Network  Hide SSID

Network Name (SSID): TP-Link\_5A54\_5G

Security: WPA2-PSK[AES]

Password: 75849627

Channel Width: 20/40/80MHz

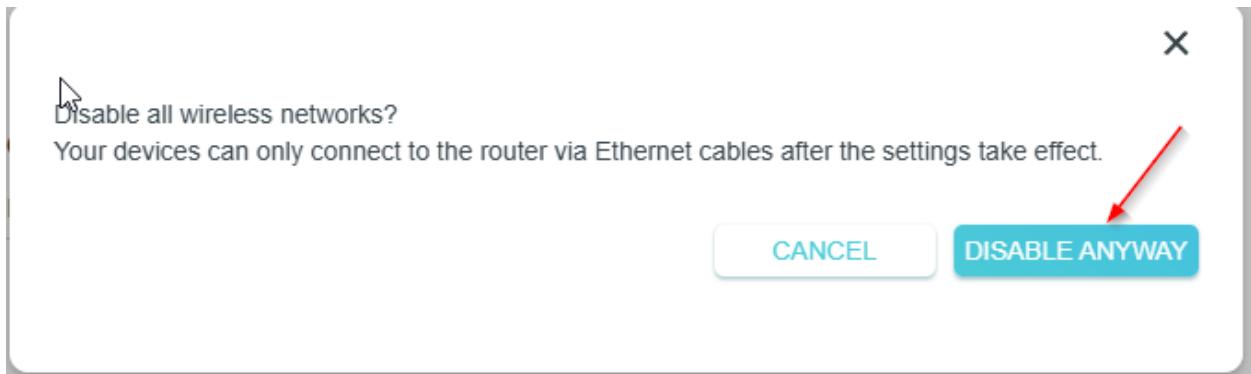
Channel: Auto

Mode: 802.11a/n/ac/ax mixed

**FIGURE 10 - DISABLE 2.4GHZ AND 5GHZ**



**FIGURE 11 - SAVE IT**



**FIGURE 12 - CLICK "DISABLE ANYWAY"**

## Operating System

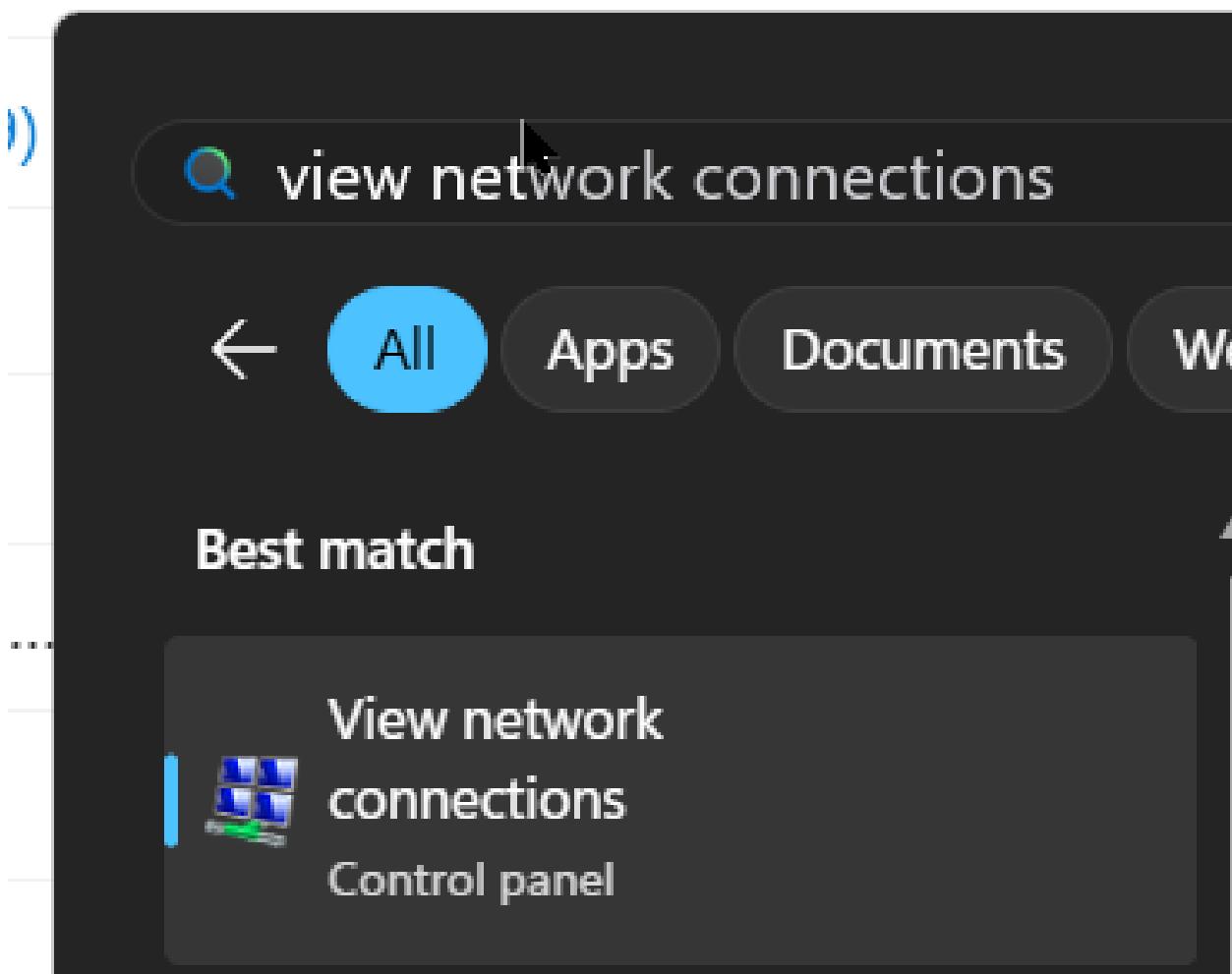


FIGURE 13 - TYPE THE REQUIRED TEXT AND CLICK "NETWORK CONNECTIONS"

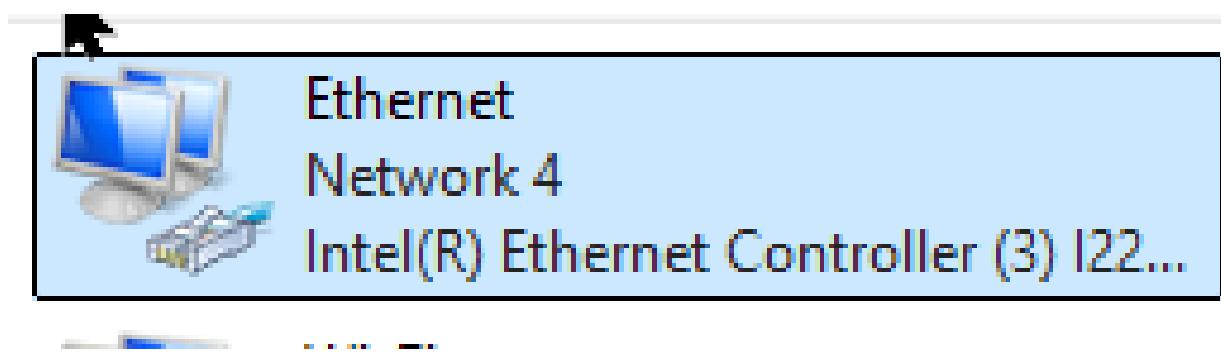


FIGURE 14 - CLICK ETHERNET

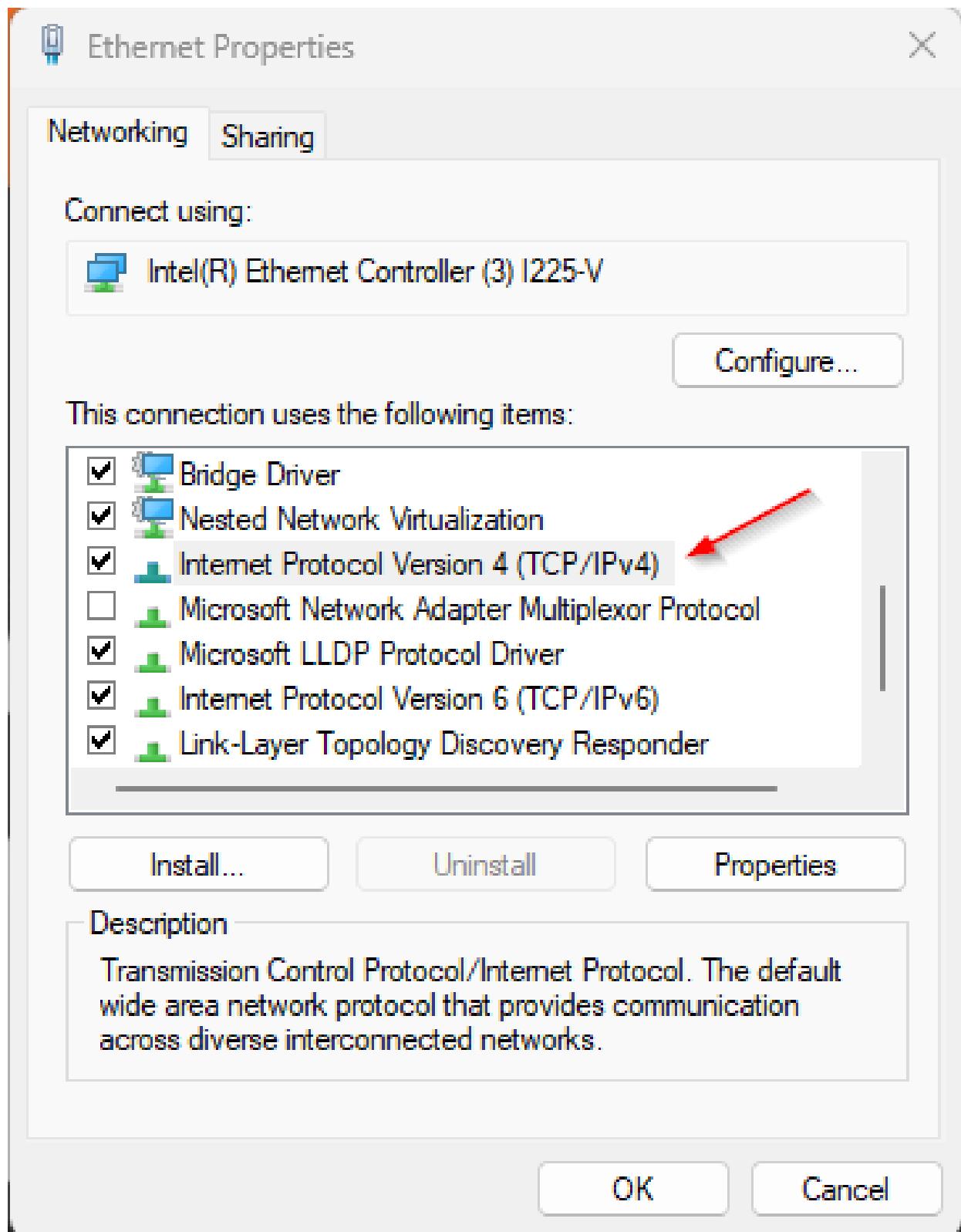


FIGURE 15 - CLICK IPv4

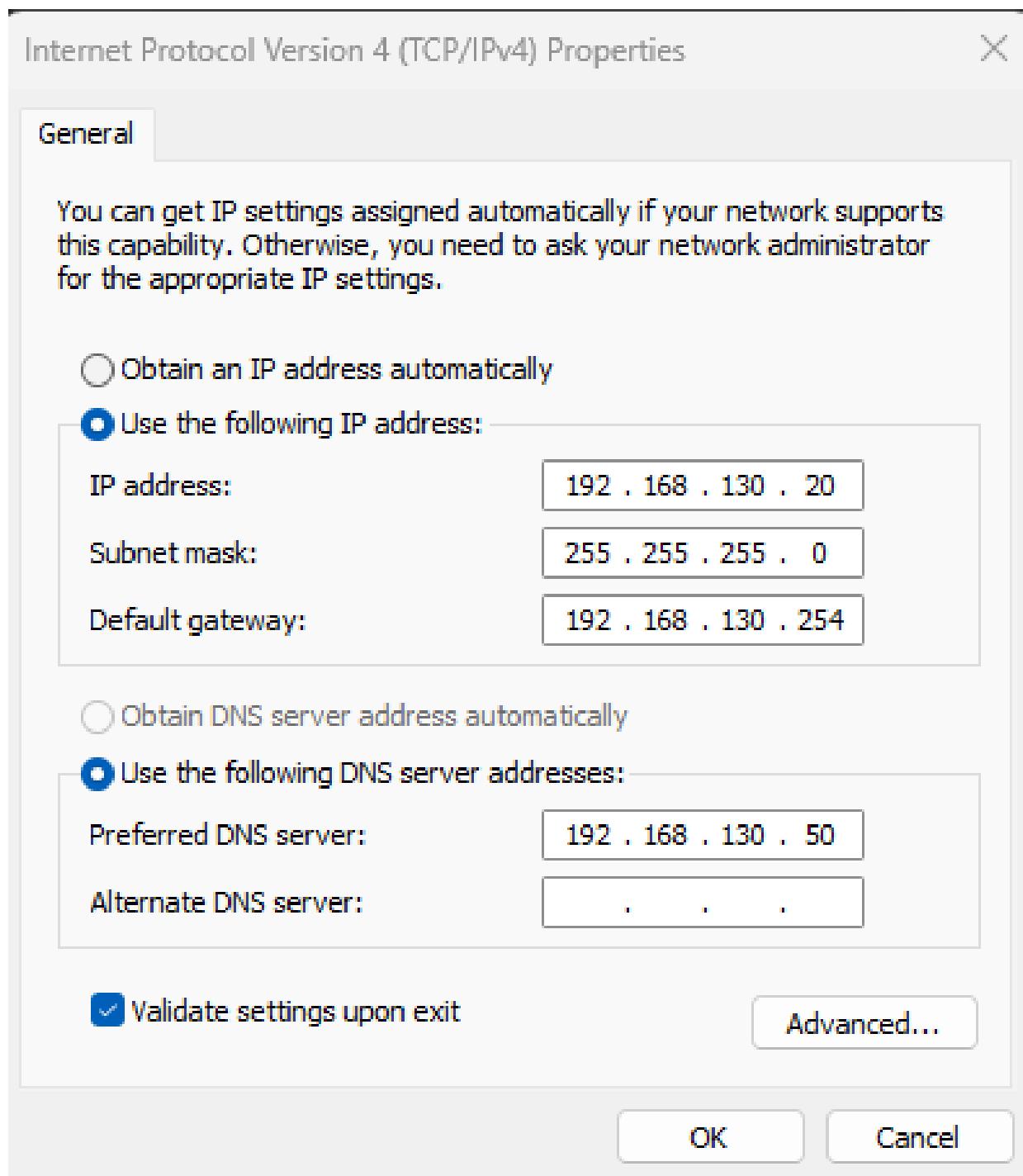
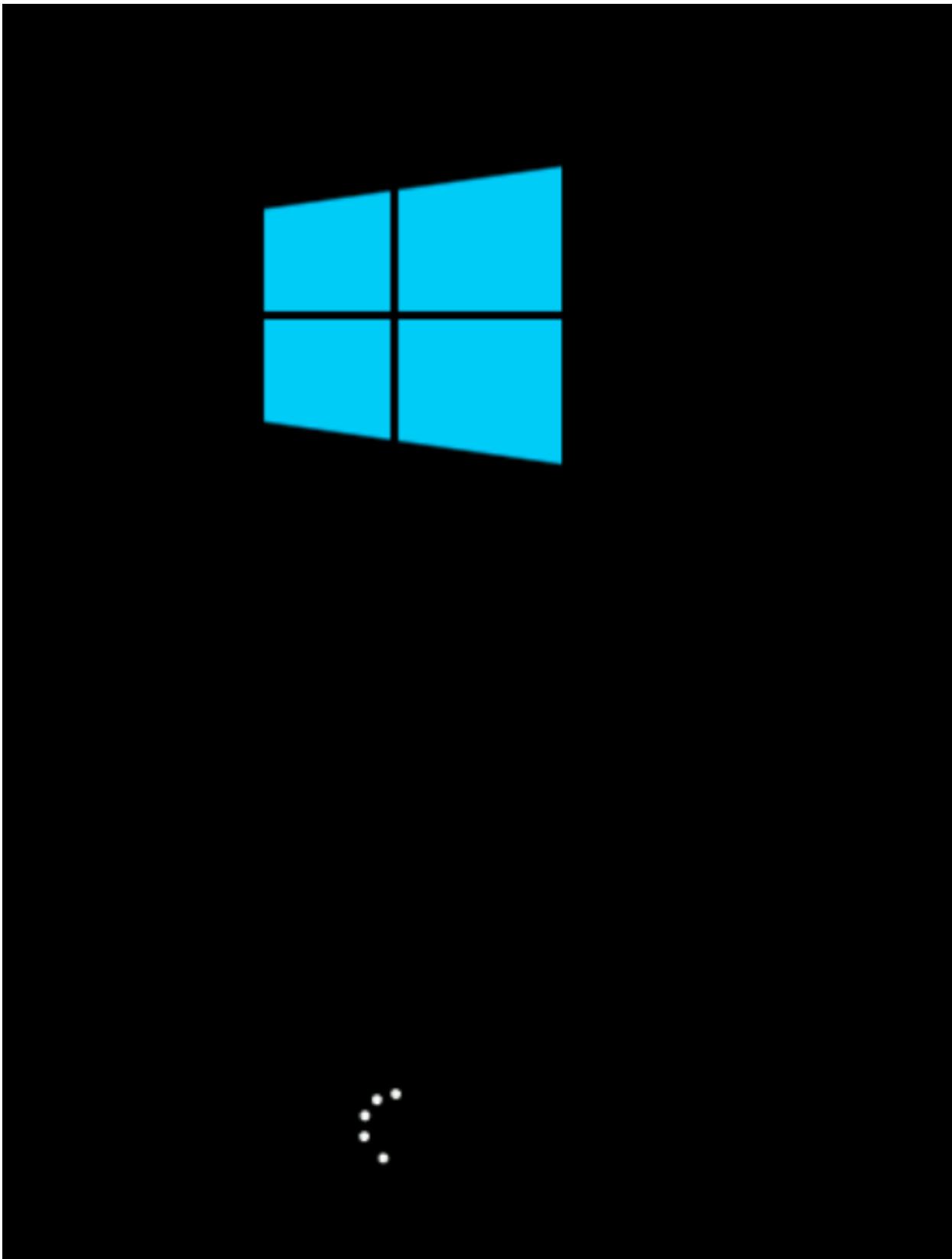


FIGURE 16 - TYPE THE REQUIRED MANUALLY IPv4 PROPERTIES AND CLICK "OK"



**FIGURE 17 - IN DELL SERVER, WAIT FOR THE WINDOW SERVER 2019 TO BOOT UP**

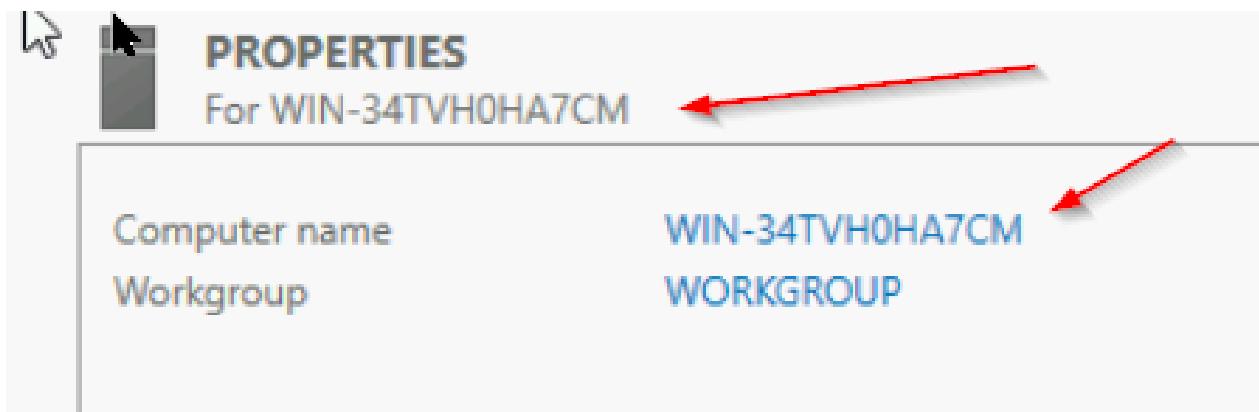


FIGURE 18 - CLICK "COMPUTER NAME"

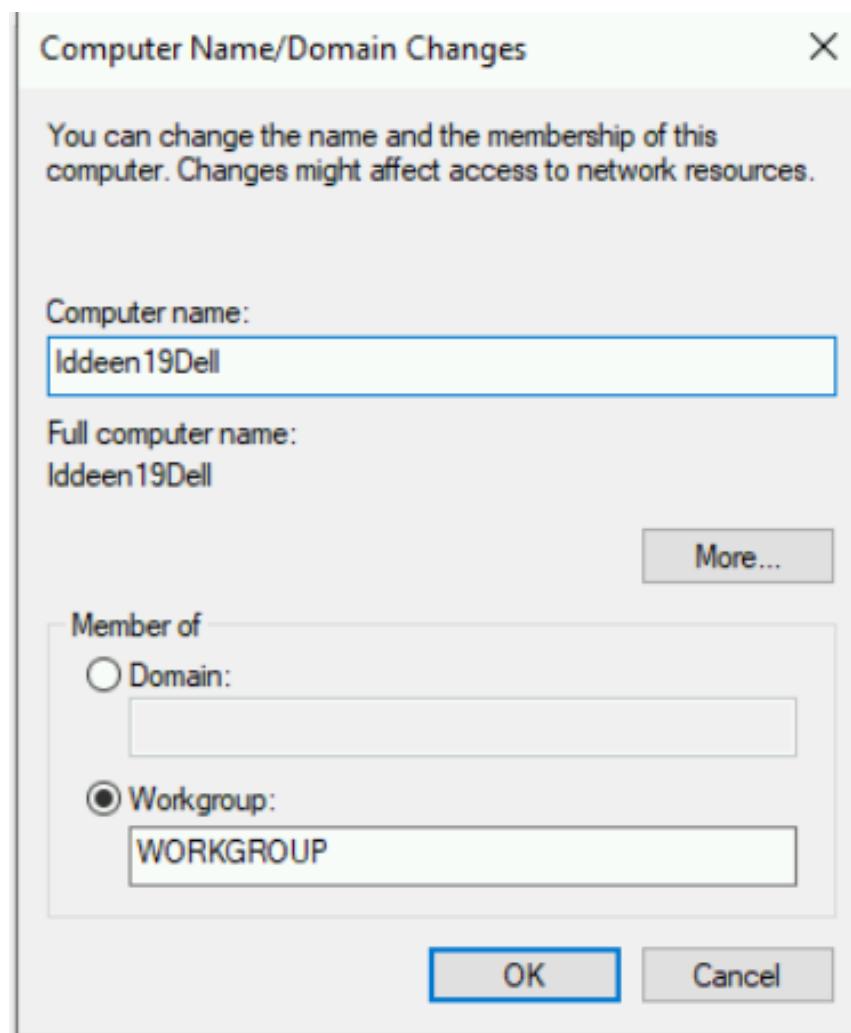


FIGURE 19 - TYPE THE REQUIRED TEXT AND CLICK "OK"

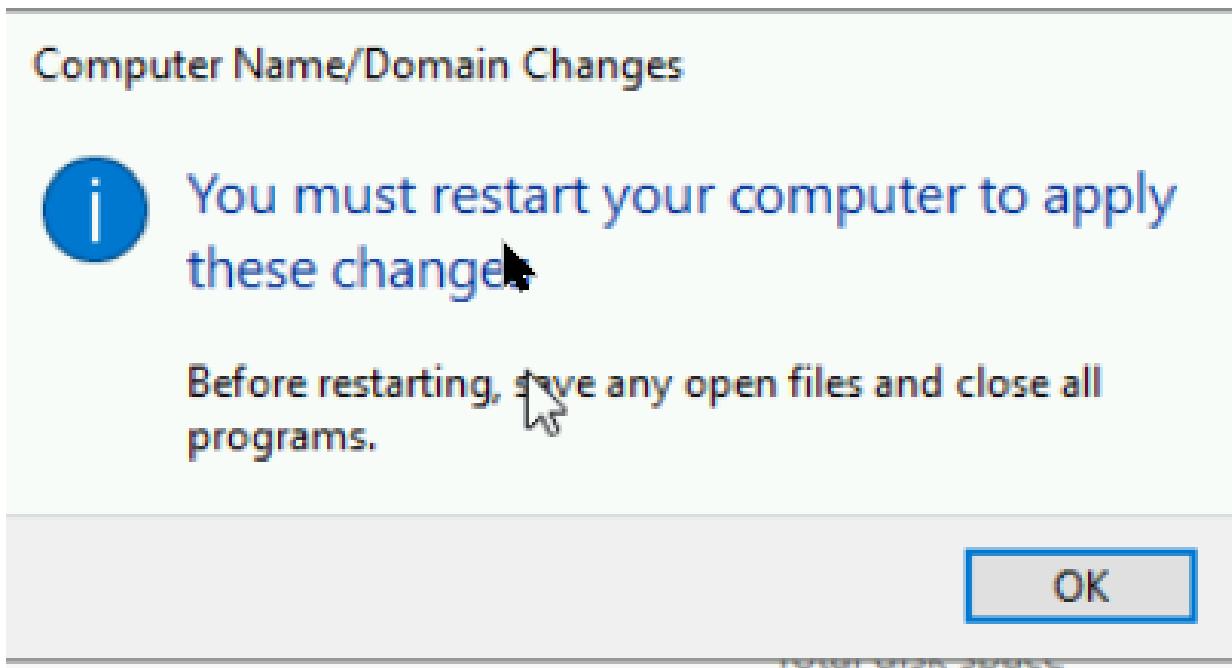


FIGURE 20 - RESTART THE COMPUTER TO APPLY THESE CHANGES

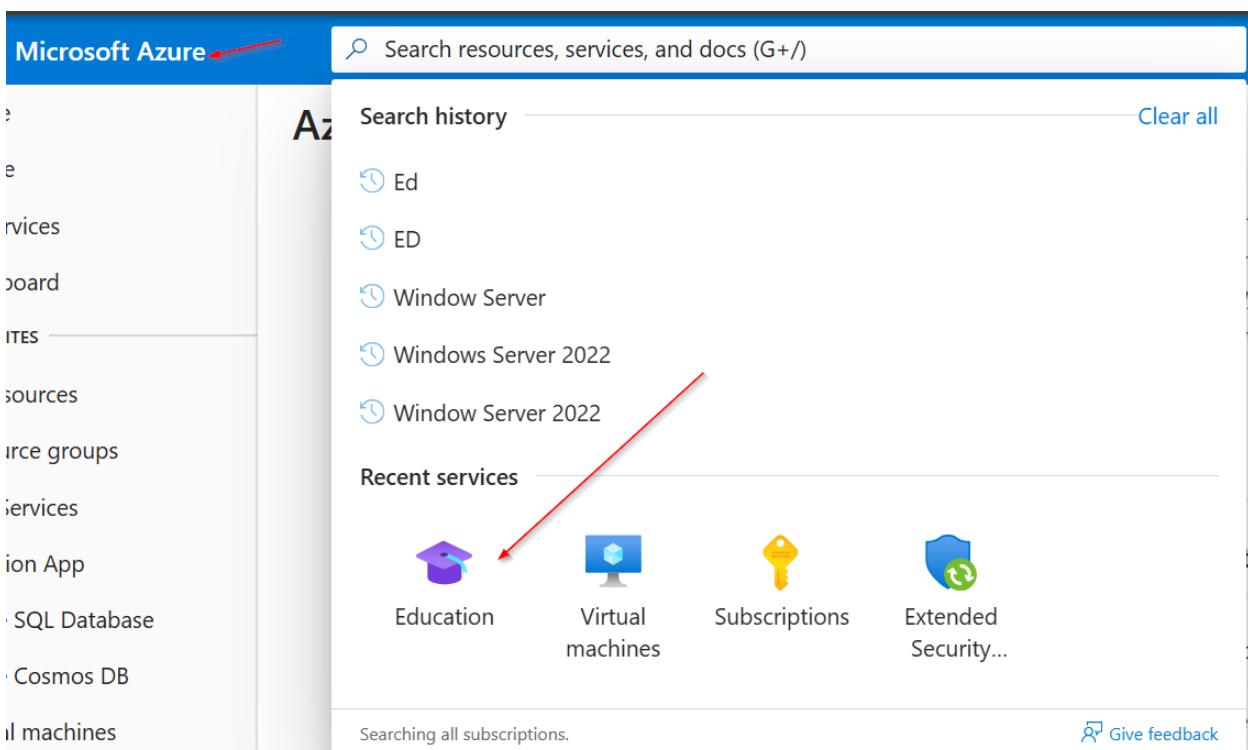


FIGURE 21 - GO TO MICROSOFT AZURE, THEN CLICK "EDUCATION"

Home >



# Education | Overview



X

<<



## Overview

### Learning resources



Roles



Software



Learning



Templates



GitHub

### Need help?



**FIGURE 22 - CLICK "SOFTWARE"**

|  |                  |         |
|--|------------------|---------|
| Windows Server 2019 Language Pack      | Operating System | Windows |
| Languages and Optional Features fo...  | Operating System | Windows |
| Windows Server 2022 Standard (up...)   | Operating System | Windows |
| Windows Server 2025 Standard           | Operating System | Windows |
| Access 2021                            | Database         | Windows |
| Windows Server 2019 Standard (up...)   | Operating System | Windows |
| SQL Server 2019 Standard               | Database         | Windows |
| Windows Server 2019 Datacenter (u...)  | Operating System | Windows |
| Windows 10, version 2004 or later 0... | Operating System | Windows |

**FIGURE 23 - CLICK "WINDOW SERVER 2019 STANDARD" TO DOWNLOAD**

# Windows Server 2019 Standard

## (updated Mar 2023)

Windows Server 2019 Standard is ideal for customers with low density or non-virtualized environments. Windows Server 2019 offers additional features in Standard and Datacenter editions. Features exclusive to the Windows Server 2016 Datacenter edition include Shielded Virtual Machines, software-defined networking, Storage Spaces Direct, and Storage Replica. While no features from the Windows Server 2016 R2 Standard edition have been removed, we have added features like Nano Server and unlimited Windows Server containers to the Windows Server 2019 Standard edition.

### **Operating System**

Windows

### **Product language**

English

### **System**

64 bit

[View Key](#)

 [Help improve this page](#)

 [Download](#)

[Cancel](#)

**FIGURE 24 - DOWNLOAD IT**

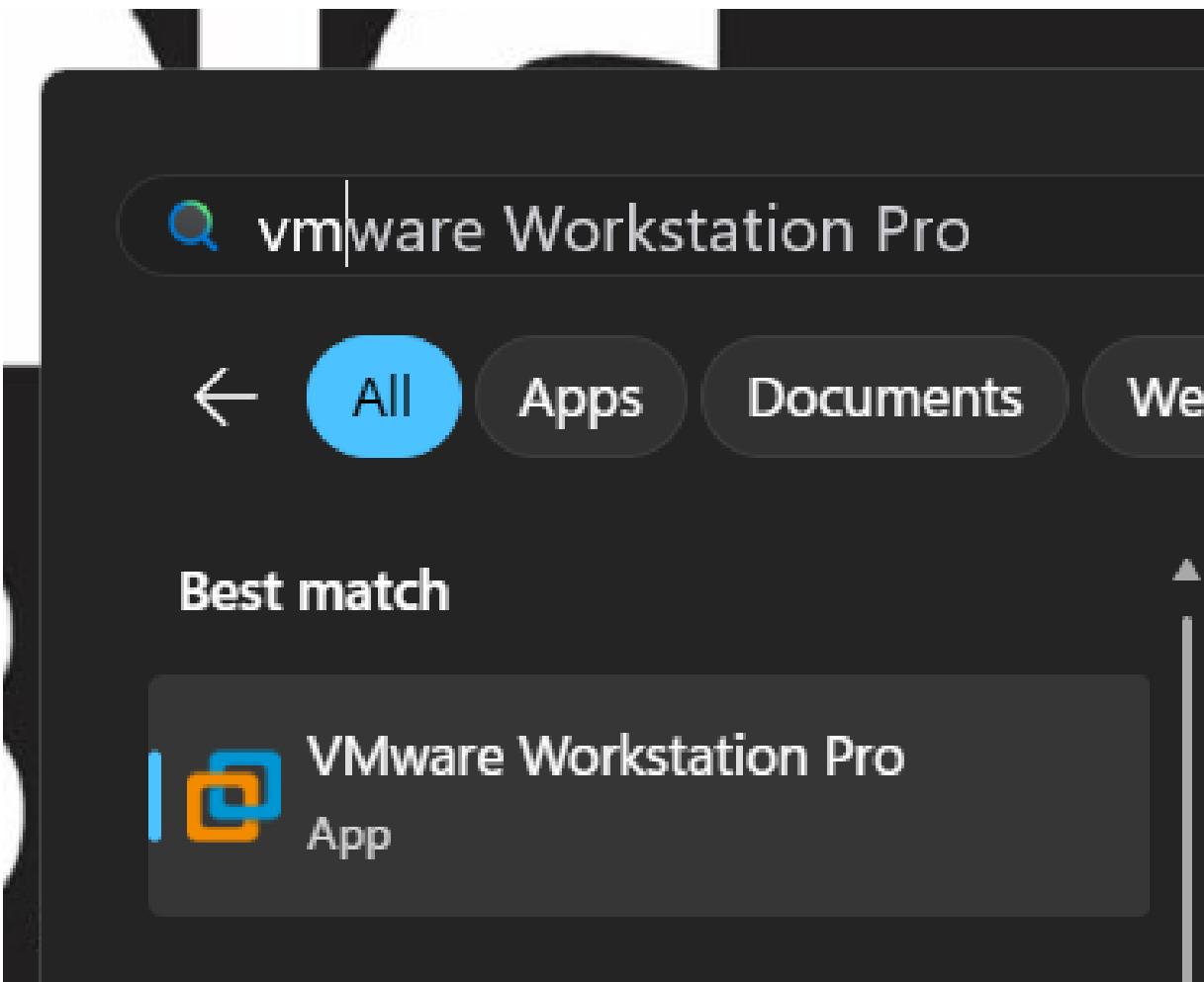
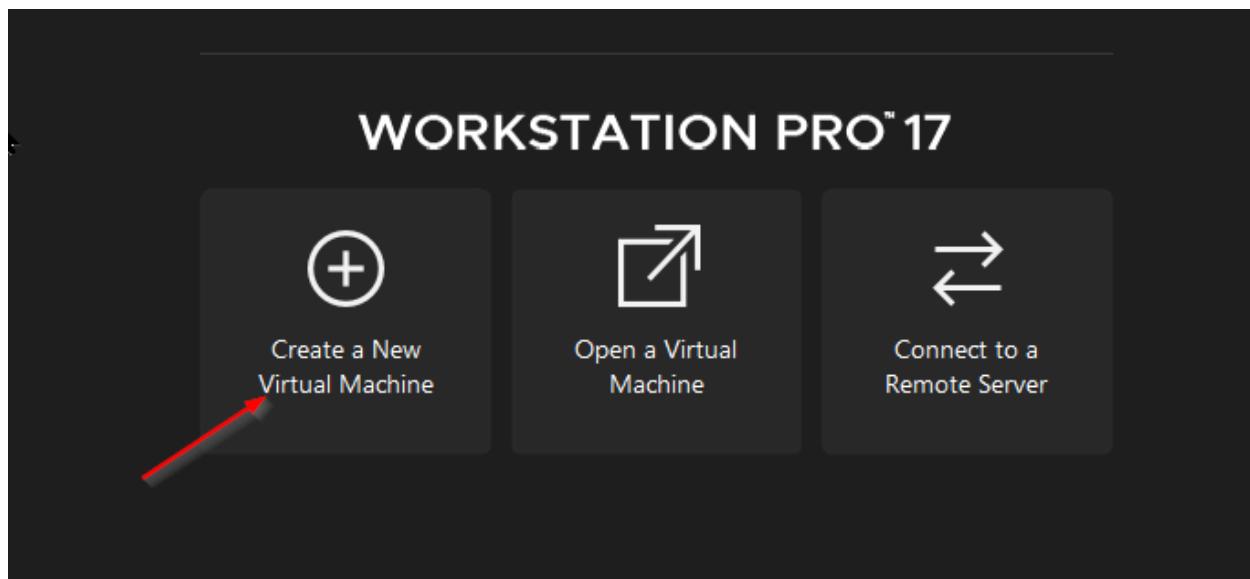


FIGURE 25 - TYPE THE REQUIRED TEXT TO OPEN THE VMWARE WORKSTATION PRO



**FIGURE 26 - CREATE A NEW VIRTUAL MACHINE**



FIGURE 27 - PROCED THE VM WIZARD

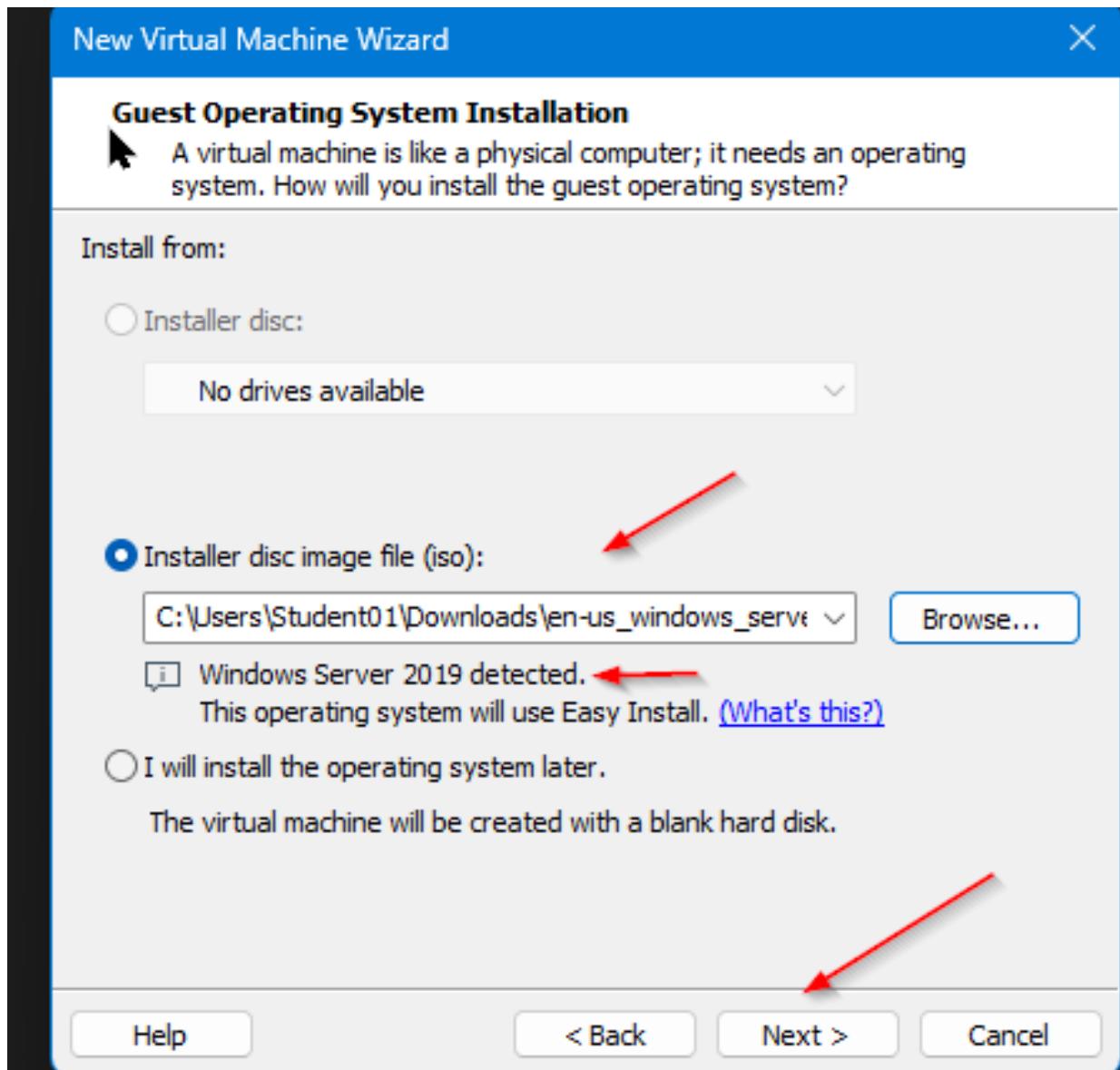


FIGURE 28 - MAKE SURE TO SELECT THE WS SERVER 2019 AS ISO

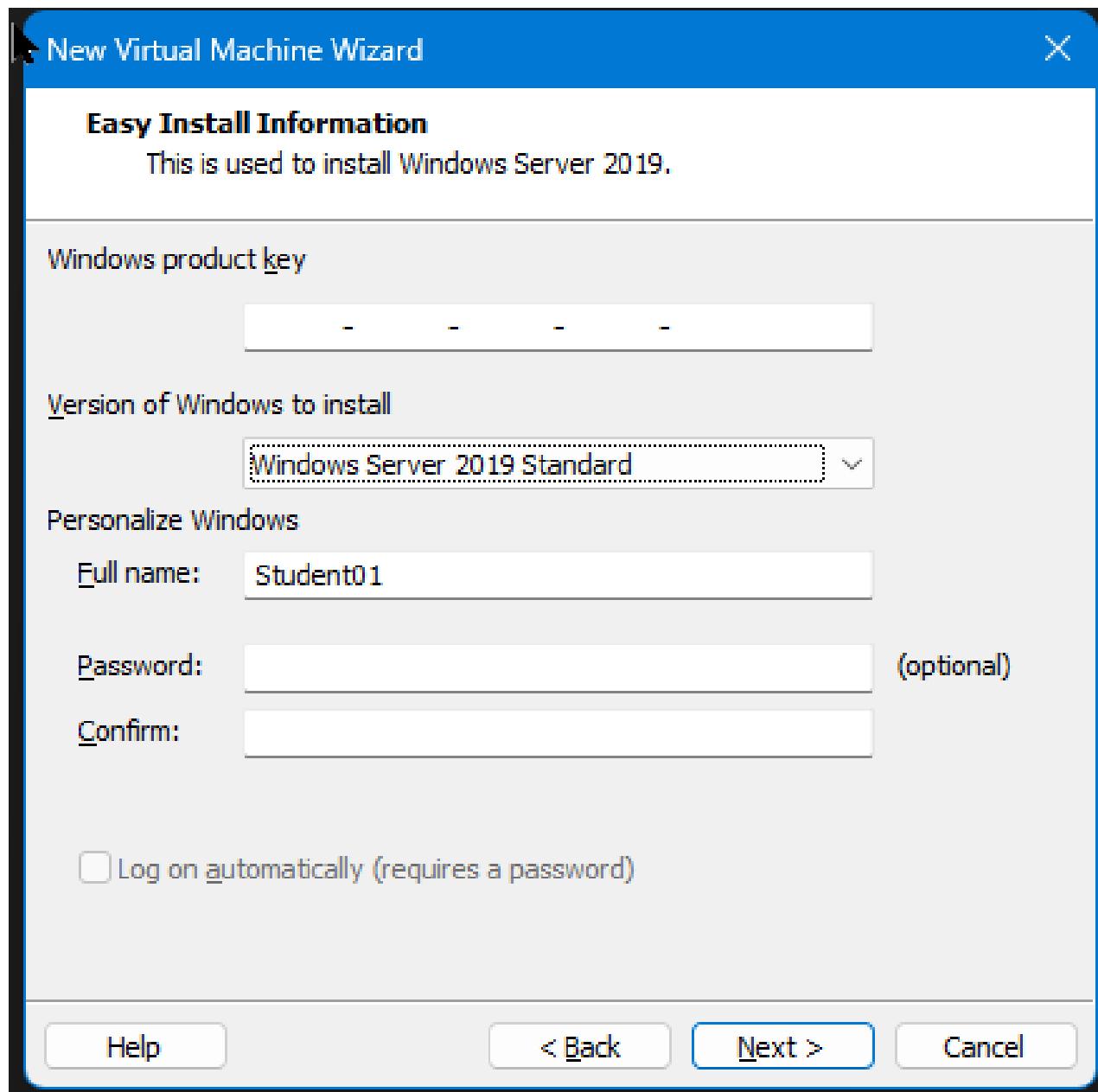


FIGURE 29 - USE THE VERSION OF WS AS STANDARD (GUI)

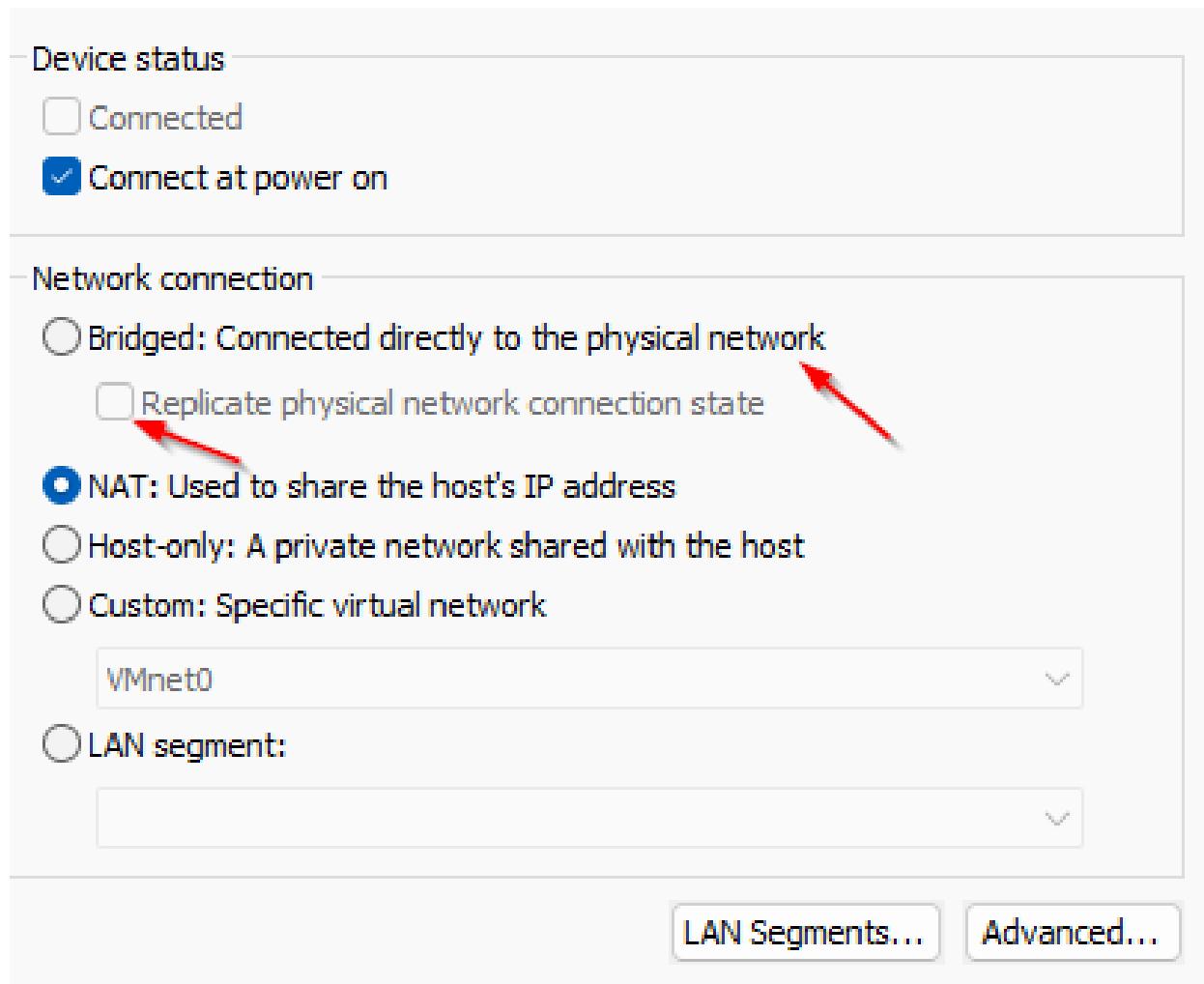


FIGURE 30 - USE THE BRIDGED MODE AND REPLICATE

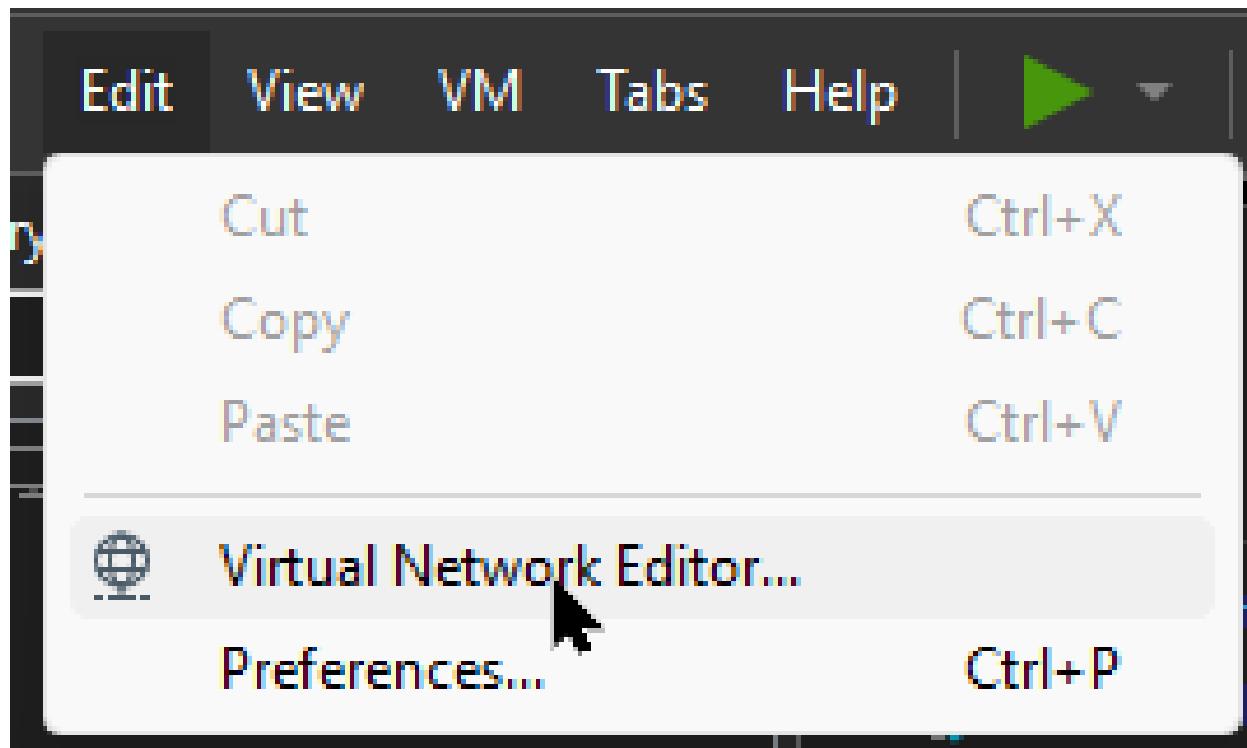


FIGURE 31 - USE EDIT THEN CLICK VME

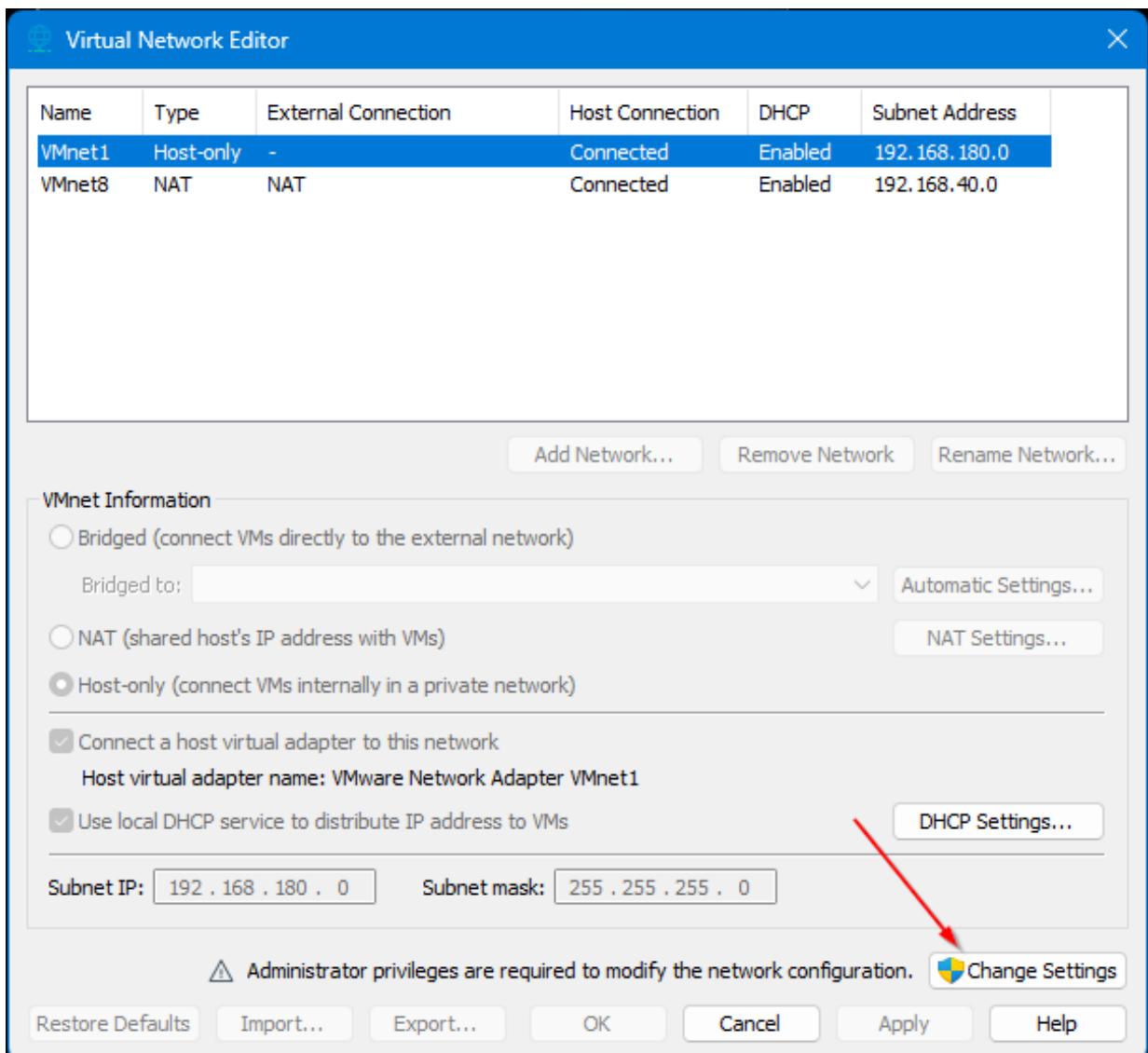


FIGURE 32 - CHANGE THE SETTINGS

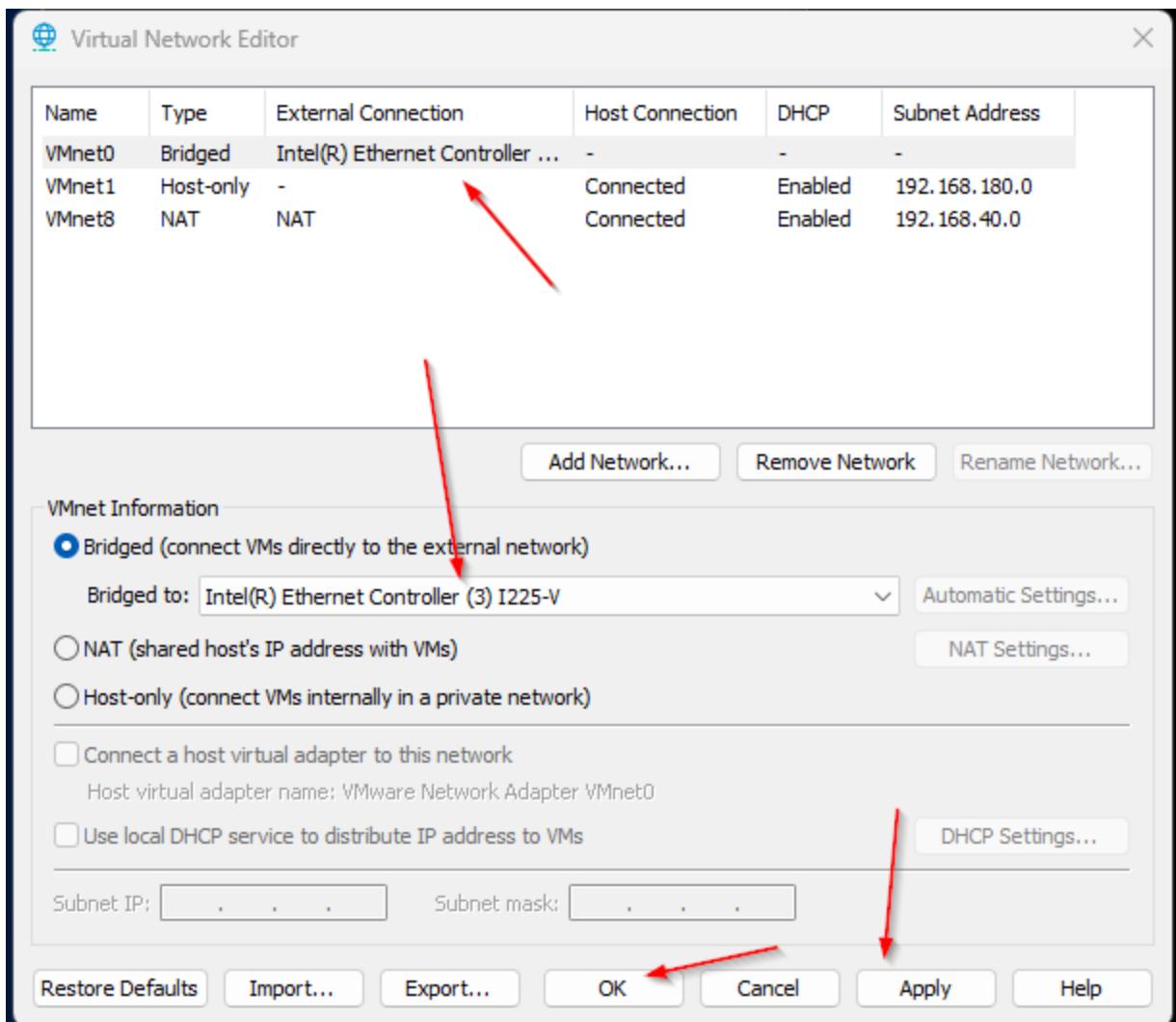


FIGURE 33 - USE THE REQUIRED NETWORK TYPE TO APPLY AND CLICK "OK"

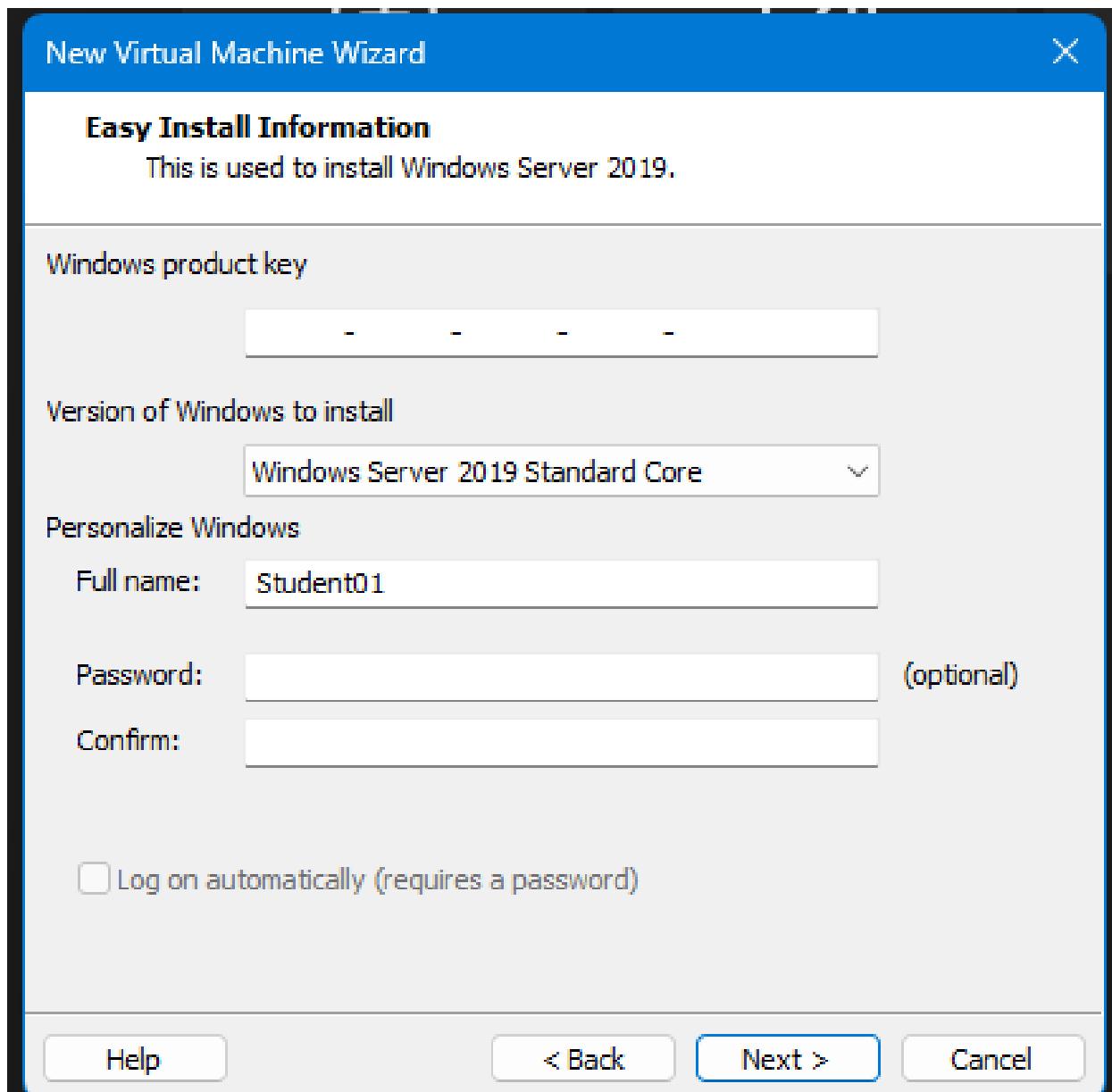


FIGURE 34 - USE THE VERSION OF WS AS CORE

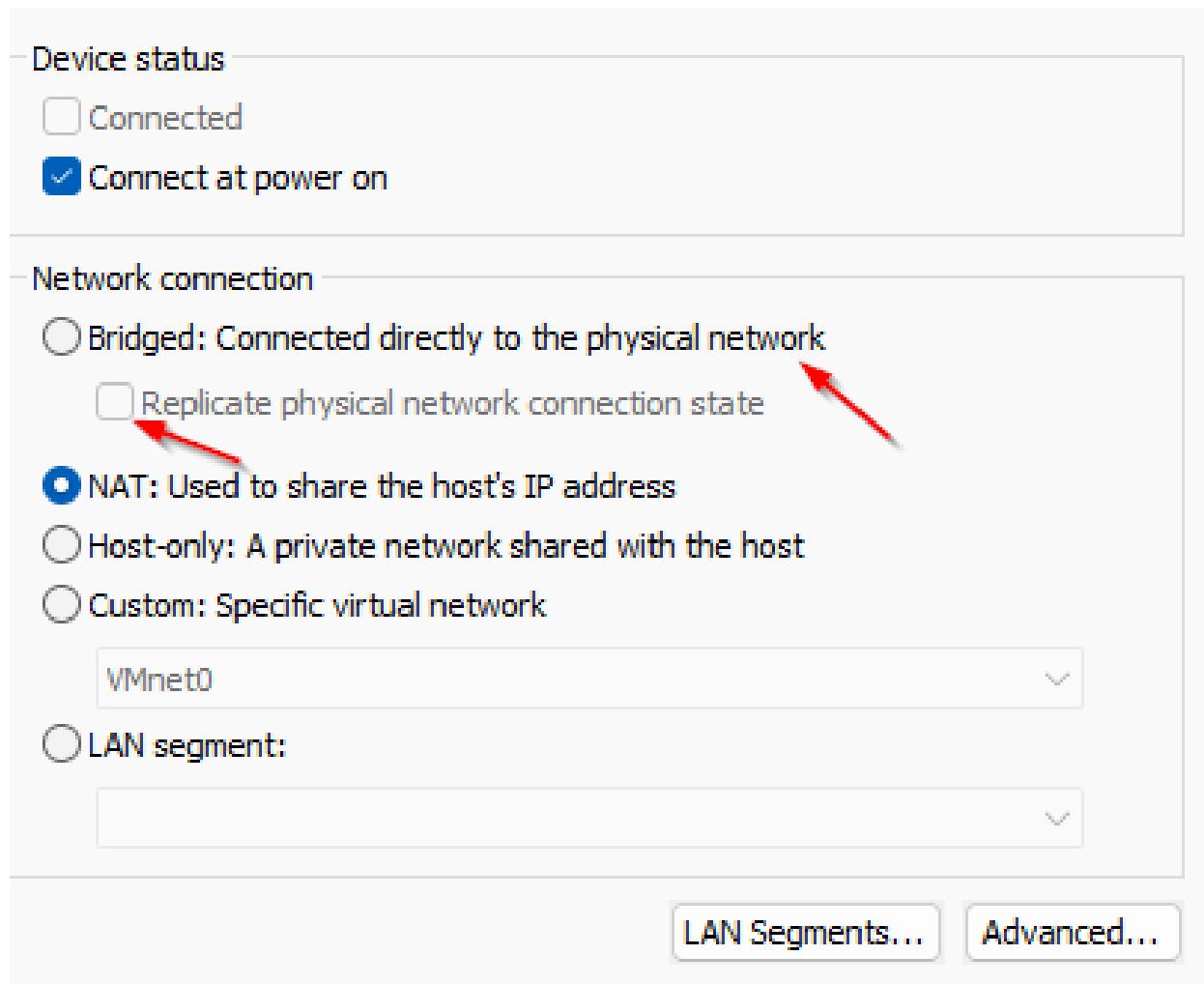


FIGURE 35 - USE THE REQUIRED TYPE OF NETWORK TO APPLY AND CLICK "OK"

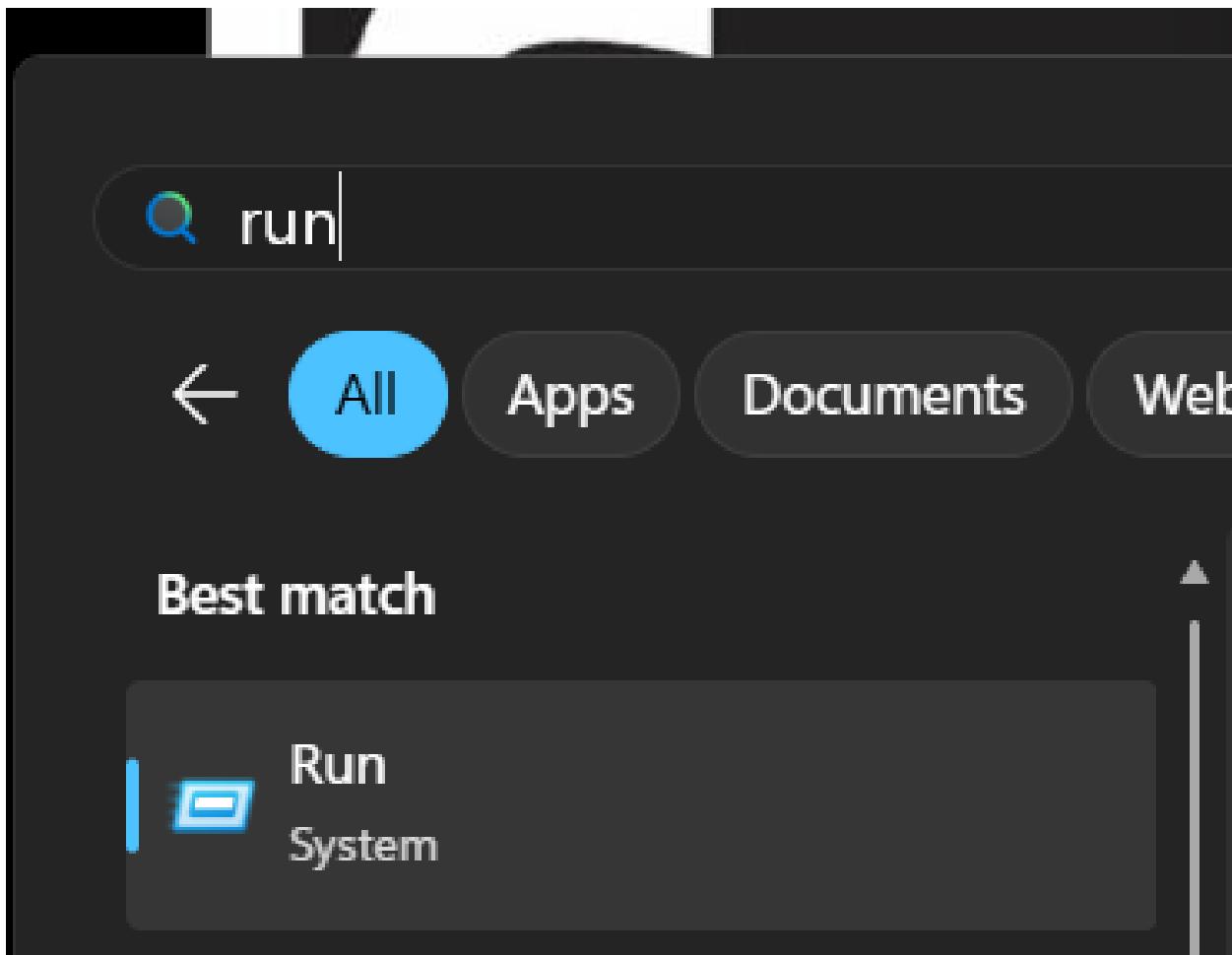
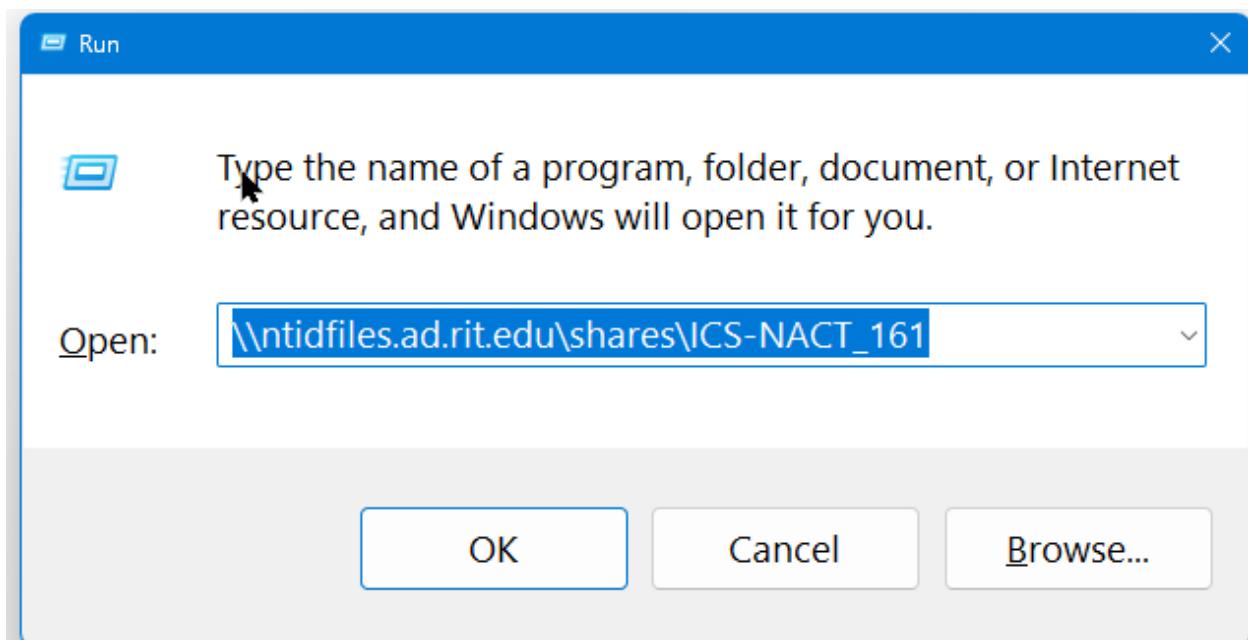


FIGURE 36 - TYPE THE REQUIRED TEXT TO CLICK "RUN"



**FIGURE 37 - TYPE THE REQUIRED TEXT TO OPEN THE NTID FILES FOR OS**

|   |                    |                                |
|---|--------------------|--------------------------------|
| 📁 Lab 9 - Ubuntu VM                     | 3/31/2022 2:51 PM  | File folder                    |
| 📁 Operating Systems                     | 4/11/2025 1:10 PM  | File folder                    |
| .chromeSetup                            | 1/27/2022 1:45 PM  | Application 1,312 KB           |
| Notepad++7_8_9                          | 7/21/2020 2:32 PM  | Windows Installer ... 3,488 KB |
| VMware-workstation-full-17.6.4-24832109 | 8/29/2025 11:55 AM | Application 415,456 KB         |

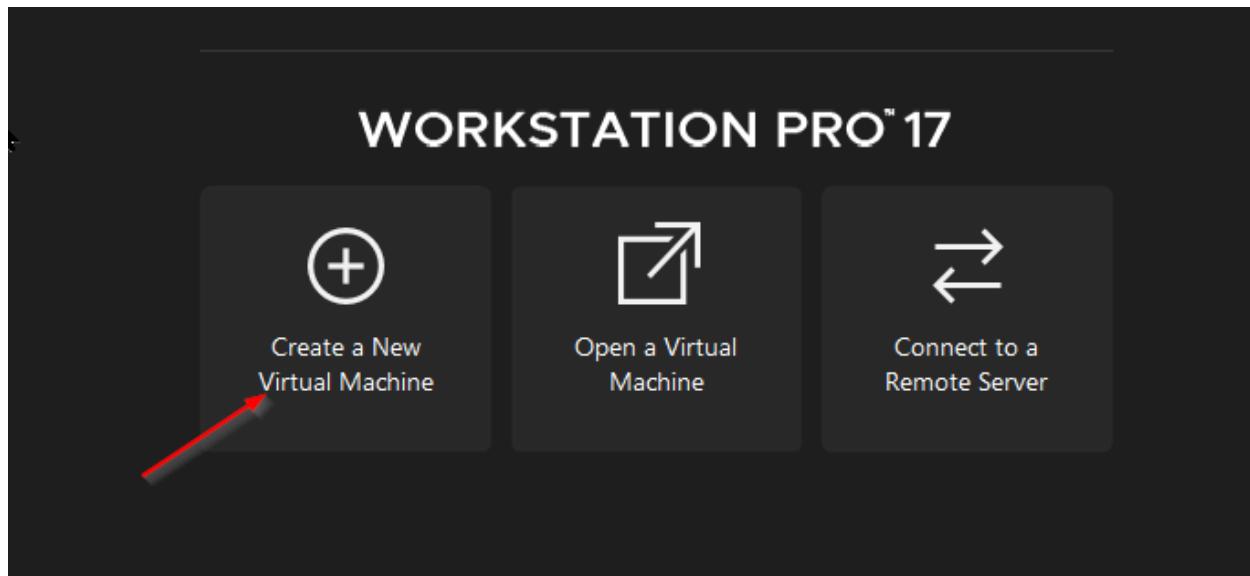
**FIGURE 38 - CLICK OS**

|                          |                    |                        |
|--------------------------|--------------------|------------------------|
| 📁 Windows 10             | 1/14/2022 12:44 PM | File folder            |
| 📁 Windows 11             | 1/14/2022 12:51 PM | File folder            |
| 📁 Windows Server 2012 R2 | 4/26/2021 8:20 PM  | File folder            |
| 📁 Windows Server 2016    | 1/14/2022 12:53 PM | File folder            |
| 📁 Windows Server 2019    | 10/26/2023 4:28 PM | File folder            |
| 📁 Windows Server 2022    | 10/26/2023 4:28 PM | File folder            |
| 📁 Windows Server 2025    | 4/11/2025 1:10 PM  | File folder            |
| 📄 .DS_Store              | 10/26/2023 3:37 PM | DS_STORE File<br>15 KB |

**FIGURE 39 - CLICK WS 10**

|  |                    |               |              |
|--|--------------------|---------------|--------------|
| 📄 en_windows_10_consumer_editions_versi... | 11/18/2020 3:24 PM | 7-Zip.iso     | 6,011,506 KB |
| 📄 Windows 10 Product_Key                   | 11/18/2020 3:24 PM | Text Document | 1 KB         |

**FIGURE 40 - DRAG IT TO THE DESKTOP**



**FIGURE 41 - CREATE A NEW VM**

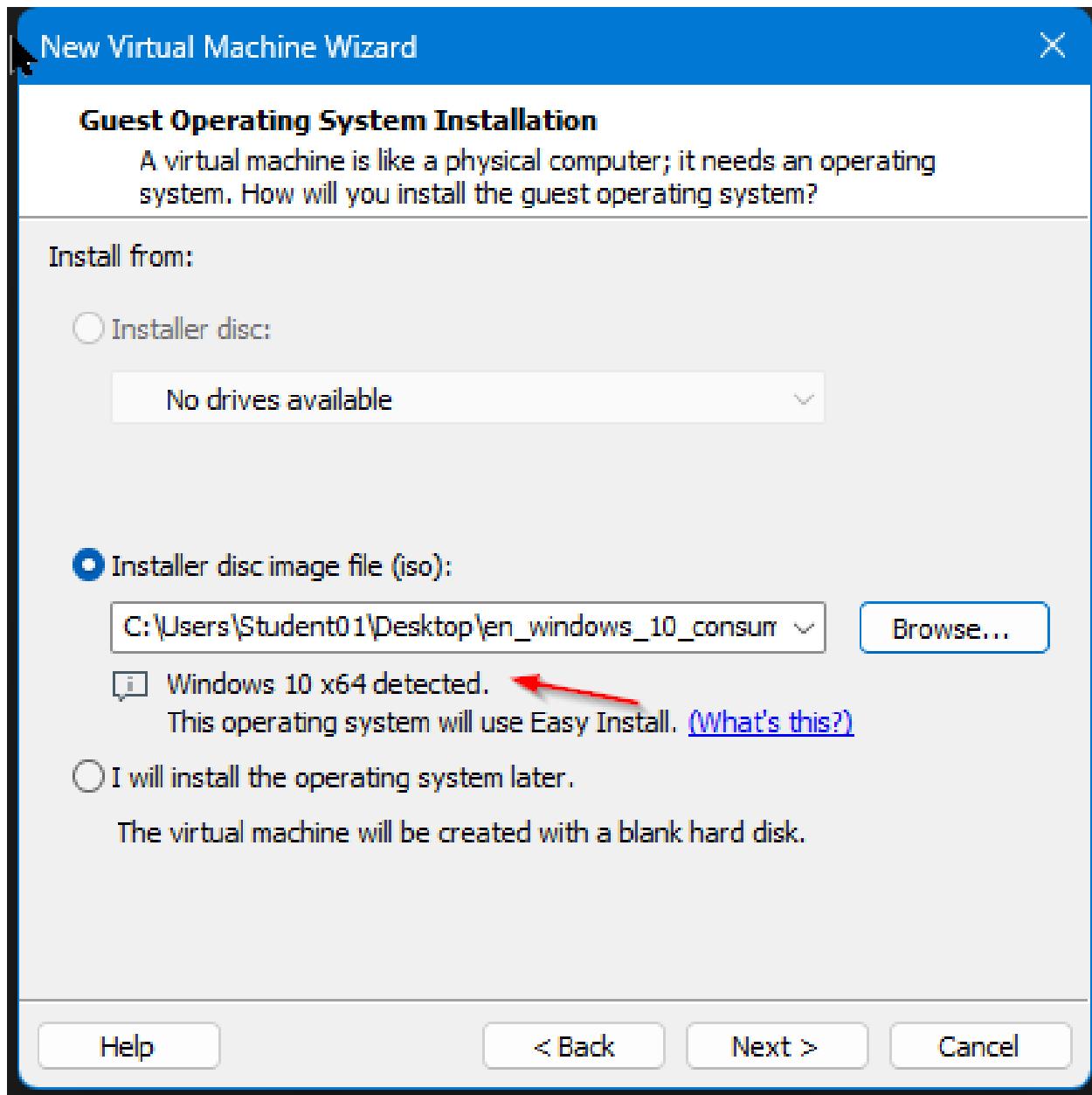


FIGURE 42 - MAKE SURE TO SELECT THE WS 10 AS ISO

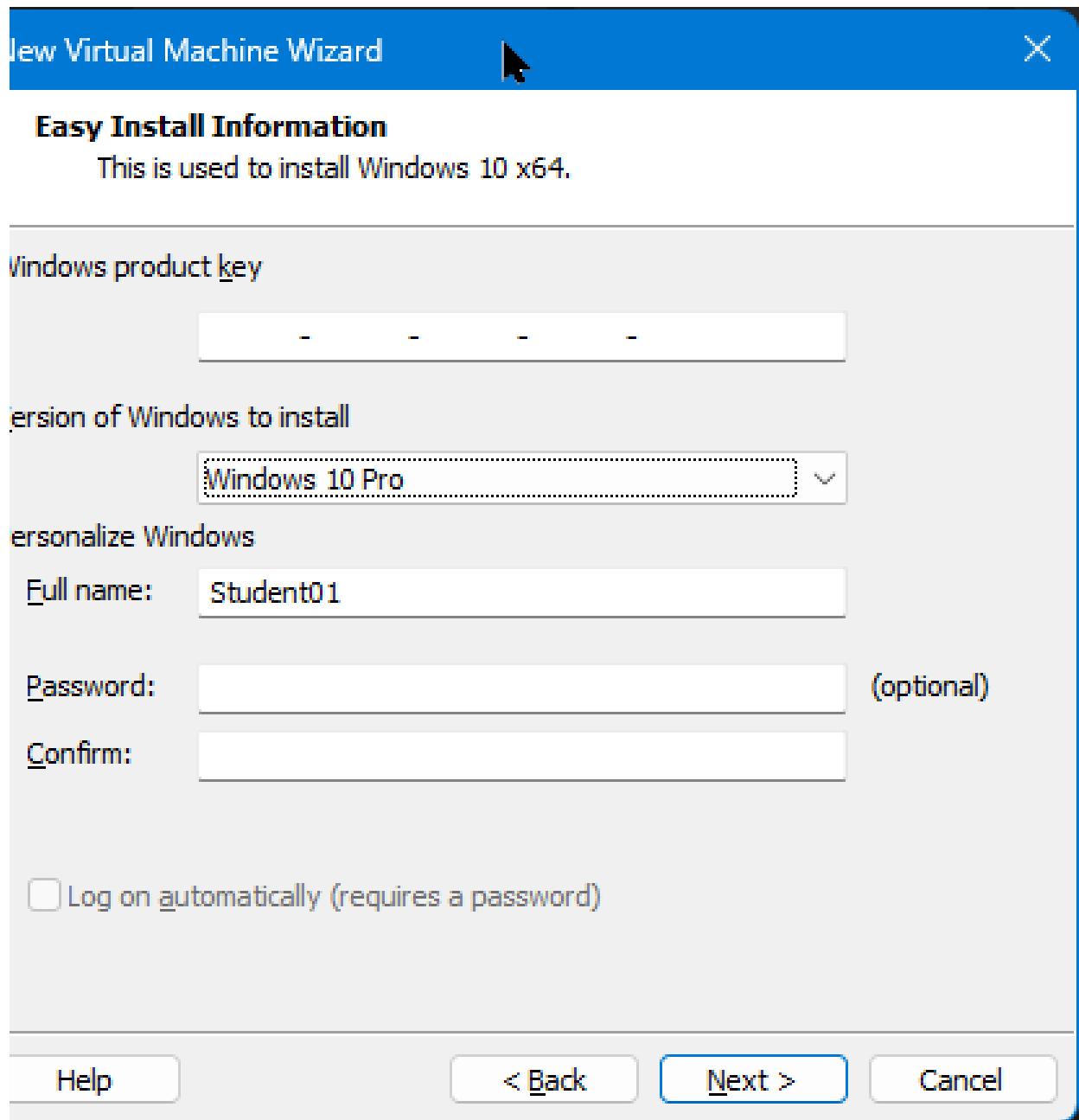


FIGURE 43 - SELECT THE WS 10 PRO AS THE VERSION OF WINDOWS

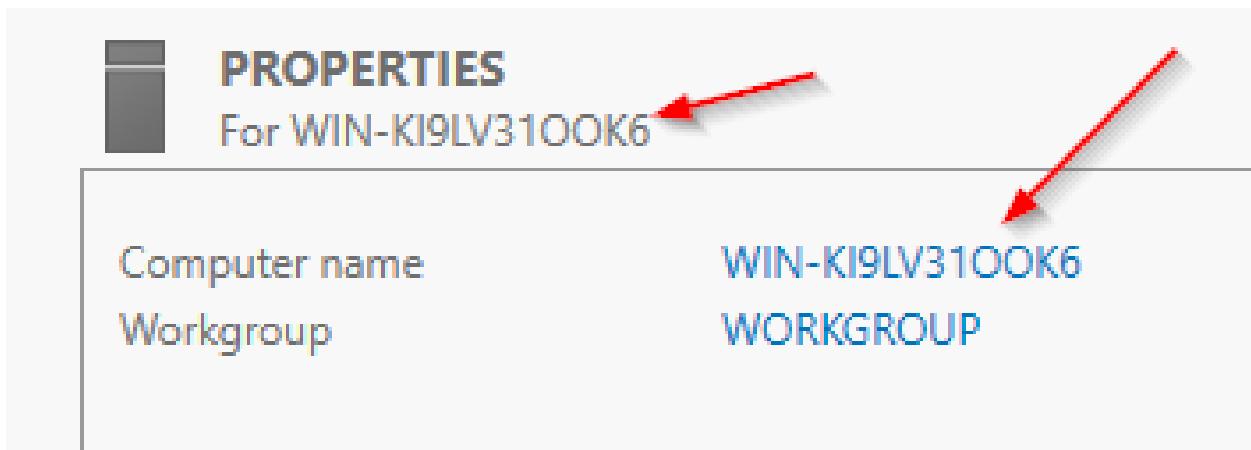


FIGURE 44 - IN THE VM WS 2019 GUI, CHANGE THE COMPUTER NAME

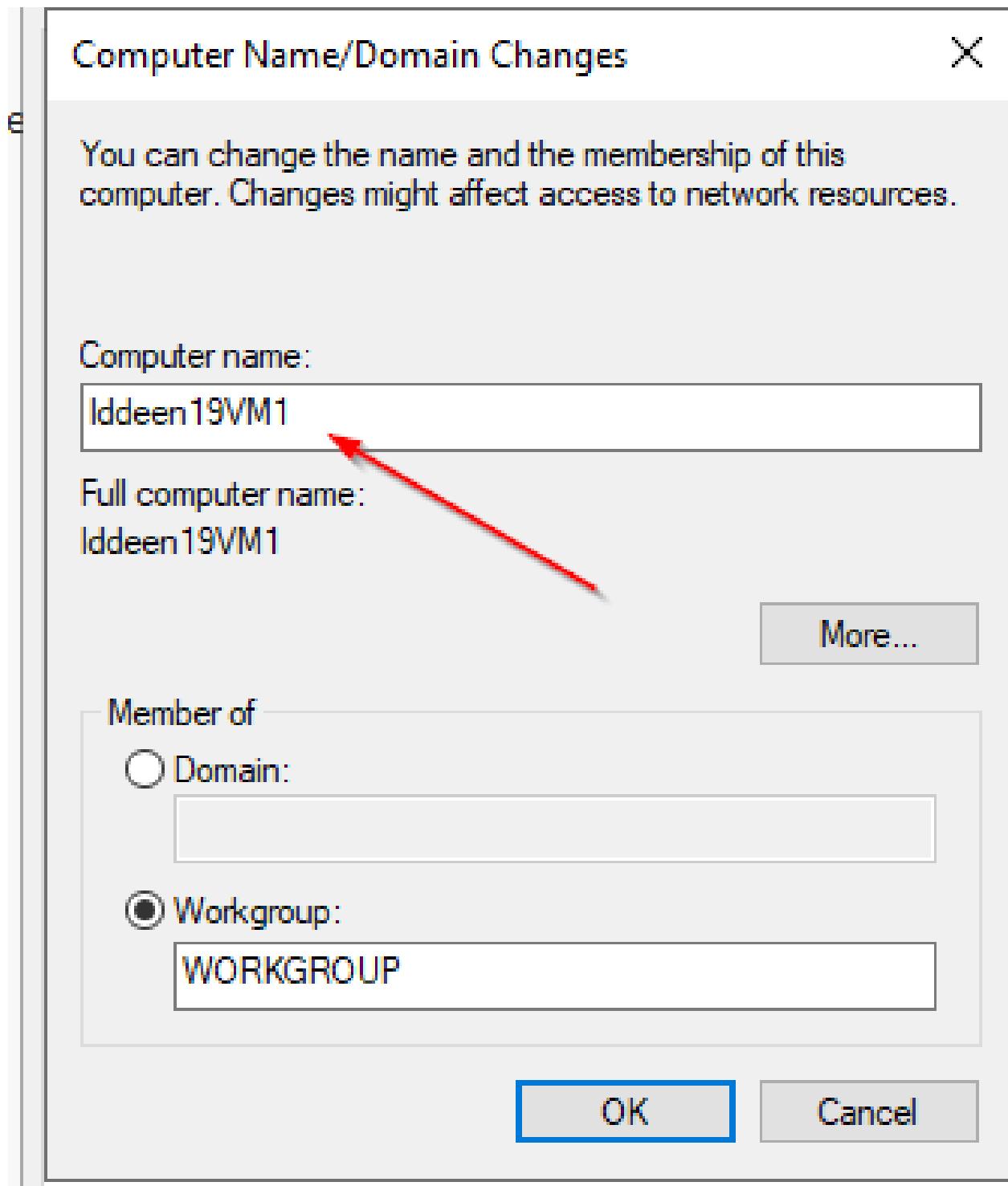


FIGURE 45 - TYPE THE REQUIRED TEXT TO CHANGE THE COMPUTER NAME

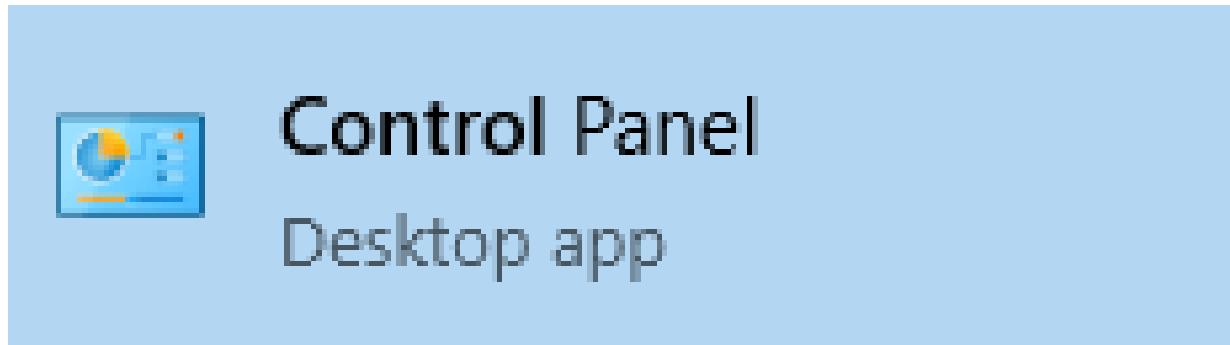


FIGURE 46 - GO TO THE CONTROL PANEL



**Network and Internet**  
[Connect to the Internet](#)  
[View network status and tasks](#)

FIGURE 47 - CLICK NETWORK AND INTERNET



**Network and Sharing Center**  
[View network status and tasks](#) | [Connect to a network](#) |  
[View network computers and devices](#)

FIGURE 48 - CLICK NETWORK AND SHARING CENTER

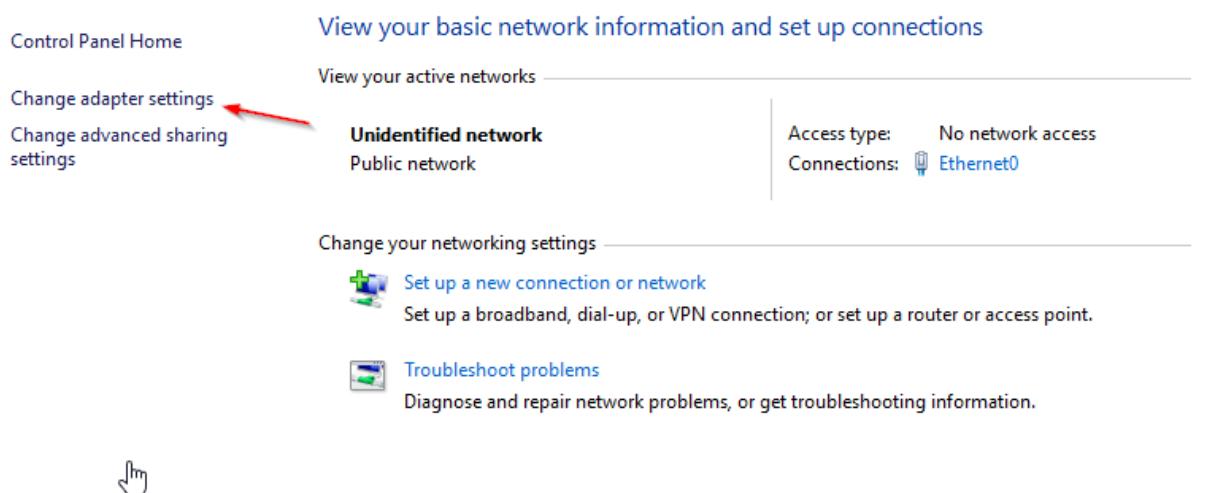


FIGURE 49 - CLICK "CHANGE ADAPTER SETTINGS"

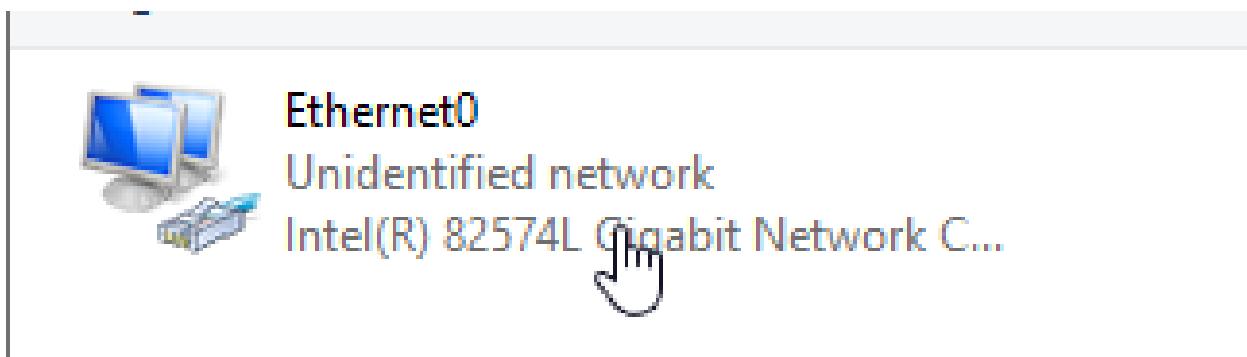


FIGURE 50 - CLICK ETHERNET0

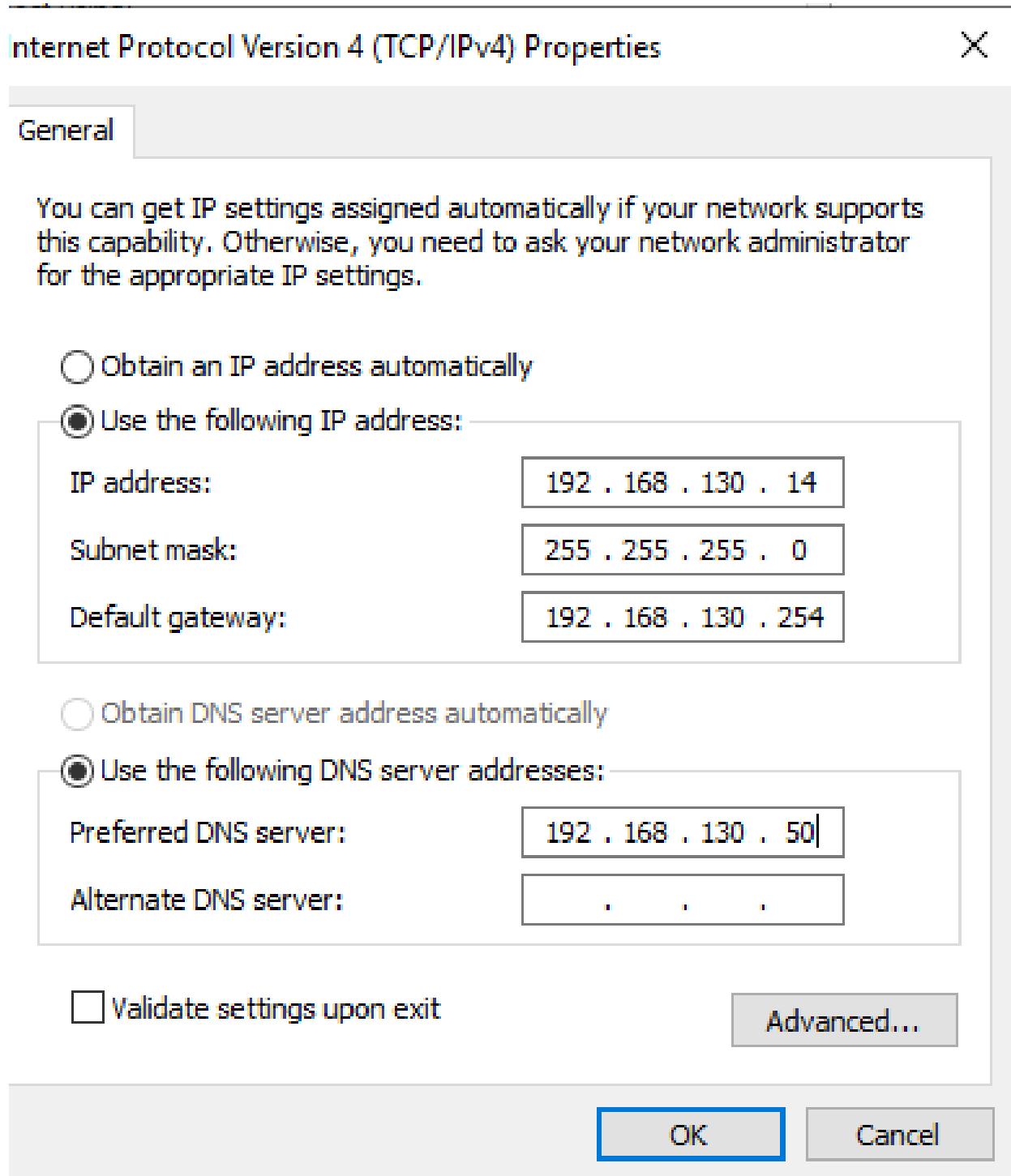


FIGURE 51 - TYPE THE REQUIRED MANUALLY IPv4 PROPERTIES AND CLICK "OK"

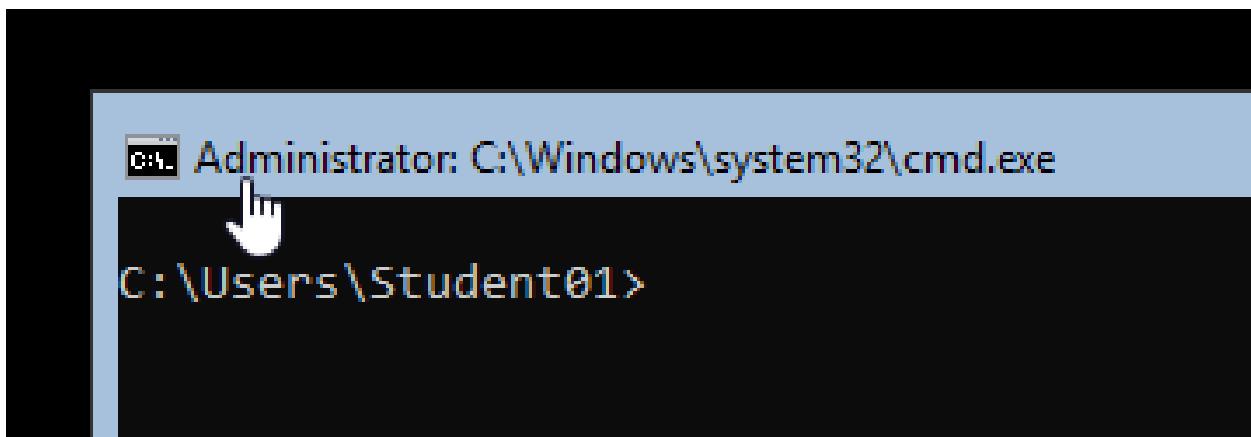


FIGURE 52 - IN VM WS 2019 CORE, TYPE "SCONFIG" TO SEE THE INTERNET INFORMATION

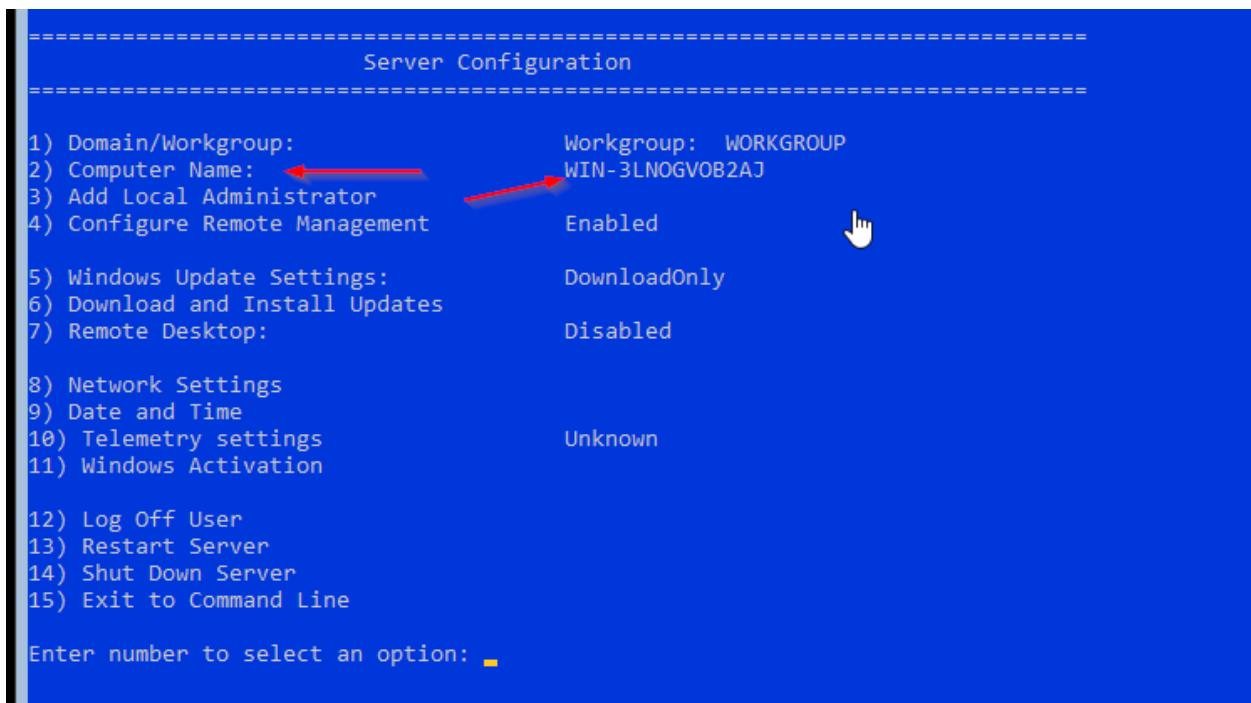


FIGURE 53 - CHANGE THE COMPUTER NAME

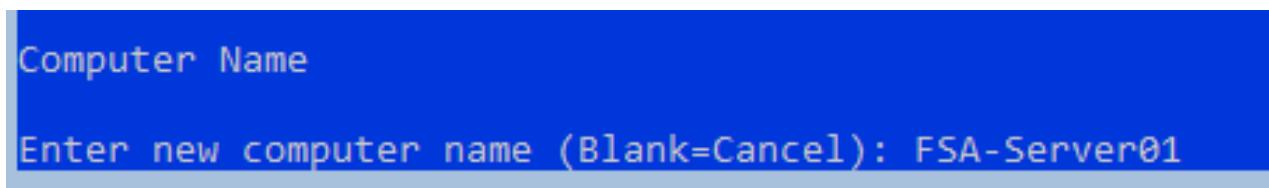


FIGURE 54 - TYPE THE REQUIRED TEXT TO CHANGE THE COMPUTER NAME

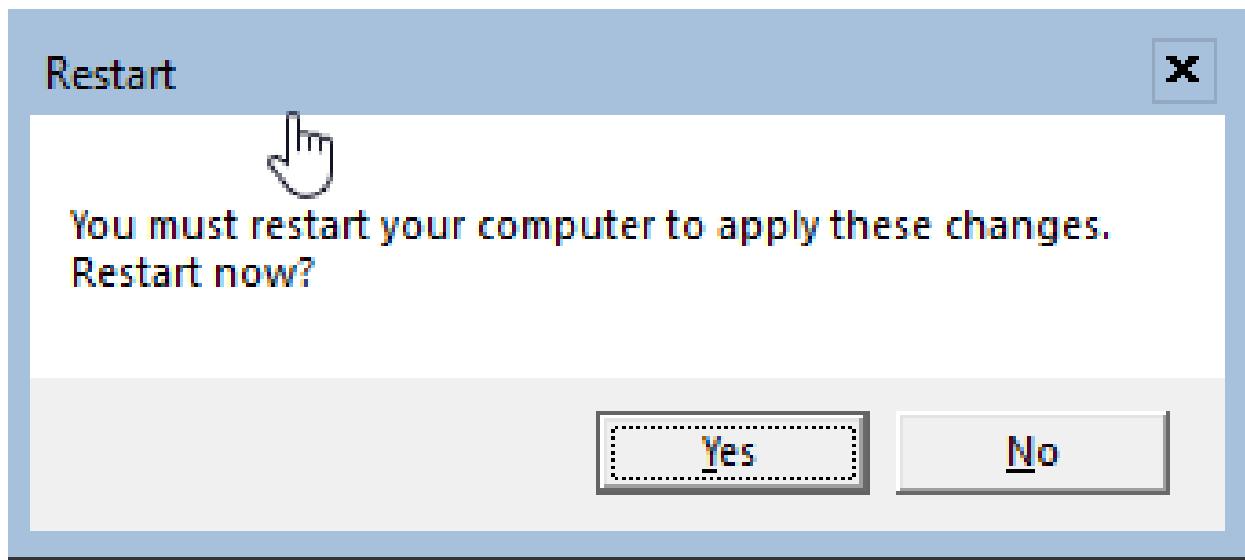


FIGURE 55 - RESTART THE COMPUTER TO APPLY THESE CHANGES

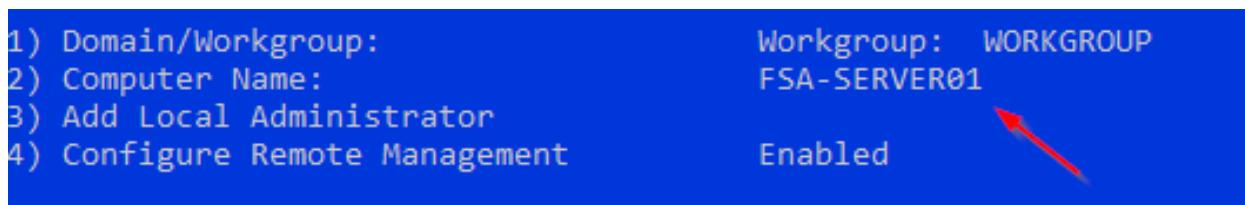


FIGURE 56 - THE SHOWCASE OF THE COMPUTER NAME

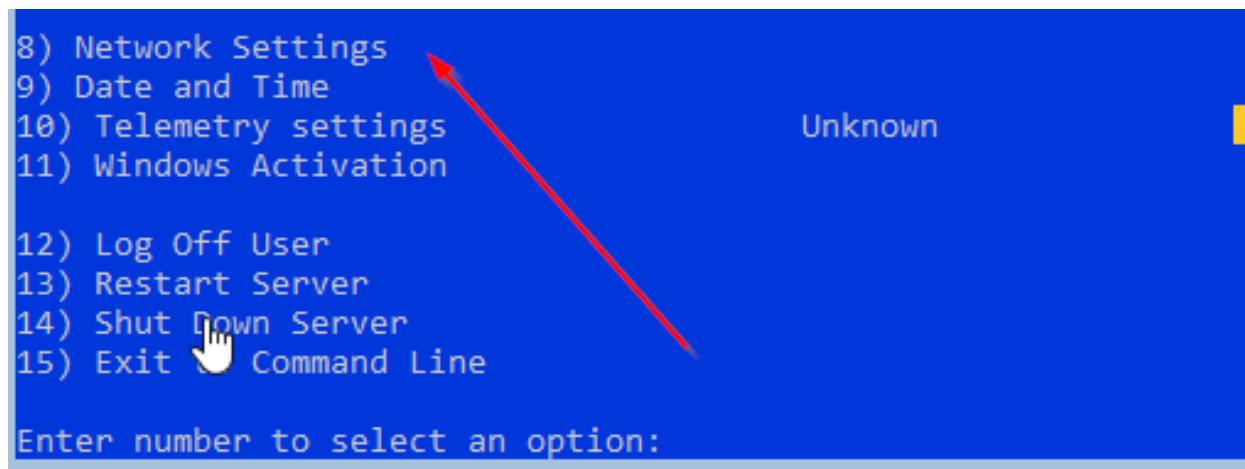


FIGURE 57 - GO TO NETWORK SETTINGS

```
Available Network Adapters  
Index# IP address Description  
1 169.254.172.101 Intel(R) 82574L Gigabit Network Connection  
Select Network Adapter Index# (Blank=Cancel): 1
```

FIGURE 58 - USE THE NUMBER ONE TO CHANGE THE NETWORK IP ADDRESS

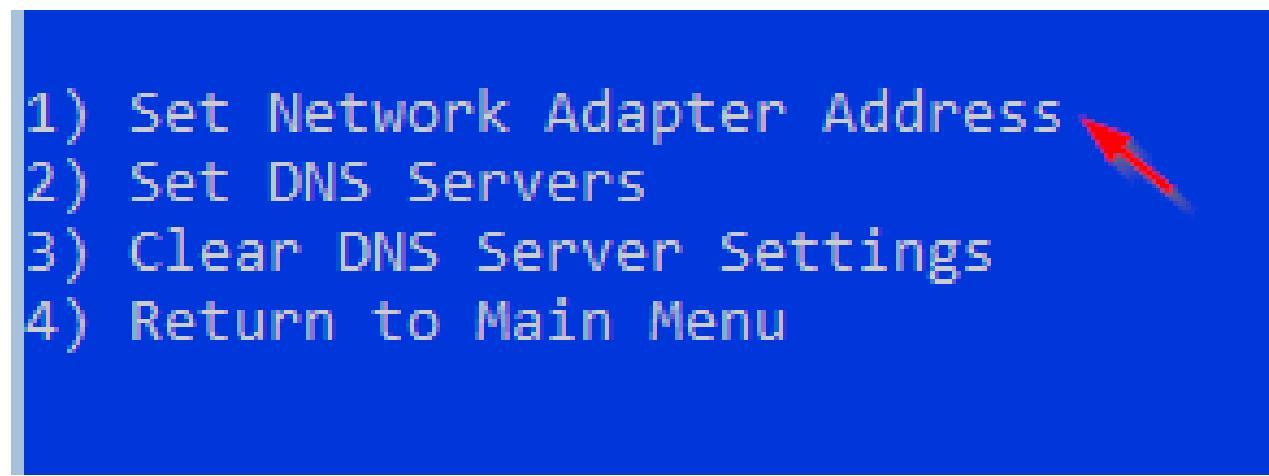


FIGURE 59 - SET THE NETWORK ADAPTER ADDRESS

```
Set Static IP  
Enter static IP address: 192.168.130.15  
Enter subnet mask (Blank = Default 255.255.255.0):  
Enter default gateway: 192.168.130.254  
Setting NIC to static IP...
```

FIGURE 60 - SET THE REQUIRED MANUALLY IP ADDRESS

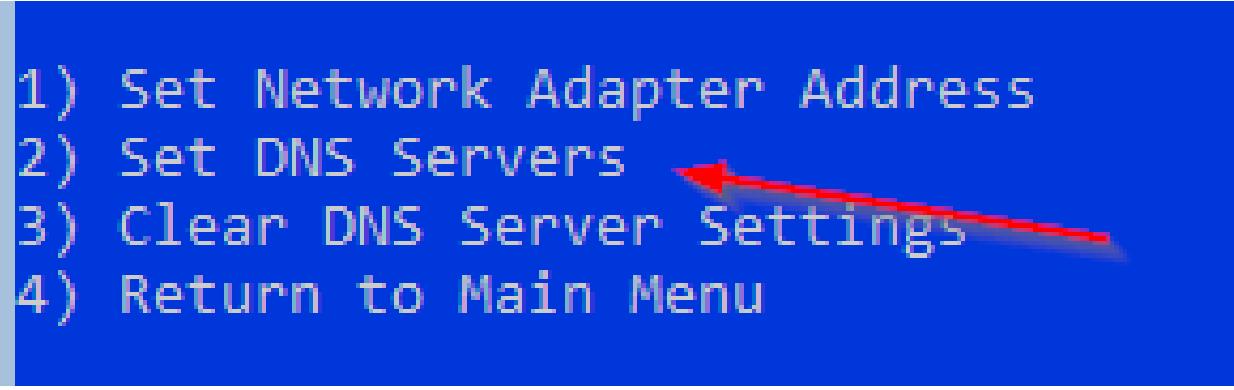
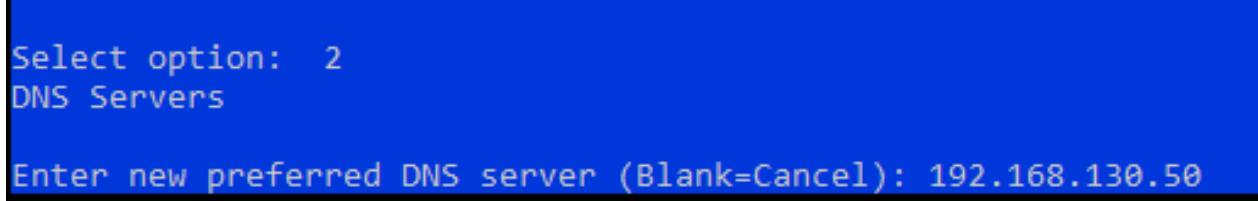
- 
- 1) Set Network Adapter Address
  - 2) Set DNS Servers
  - 3) Clear DNS Server Settings
  - 4) Return to Main Menu

FIGURE 61 - SET DNS SERVERS



```
Select option: 2
DNS Servers

Enter new preferred DNS server (Blank=Cancel): 192.168.130.50
```

FIGURE 62 - SET THE REQUIRED MANUALLY DNS TEXT ON IT

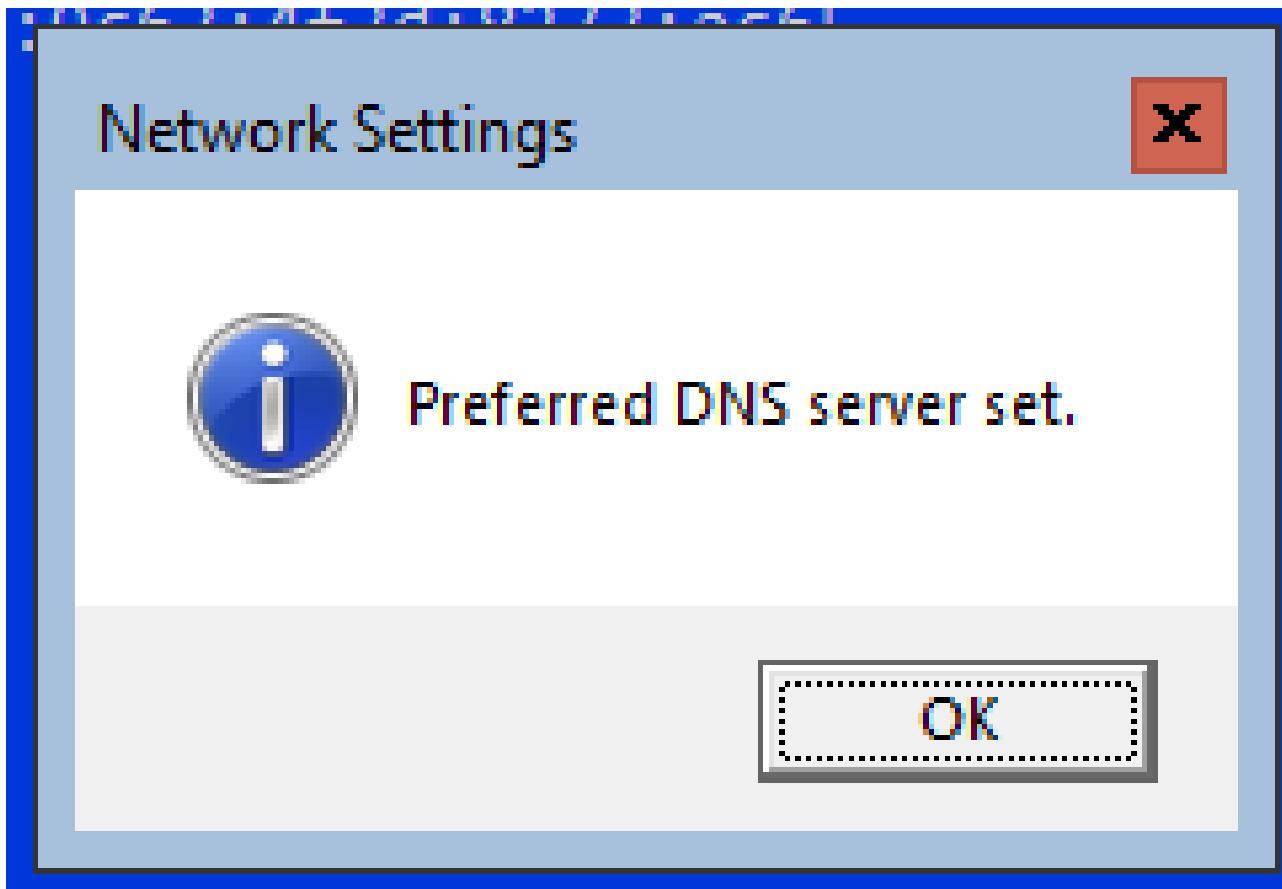
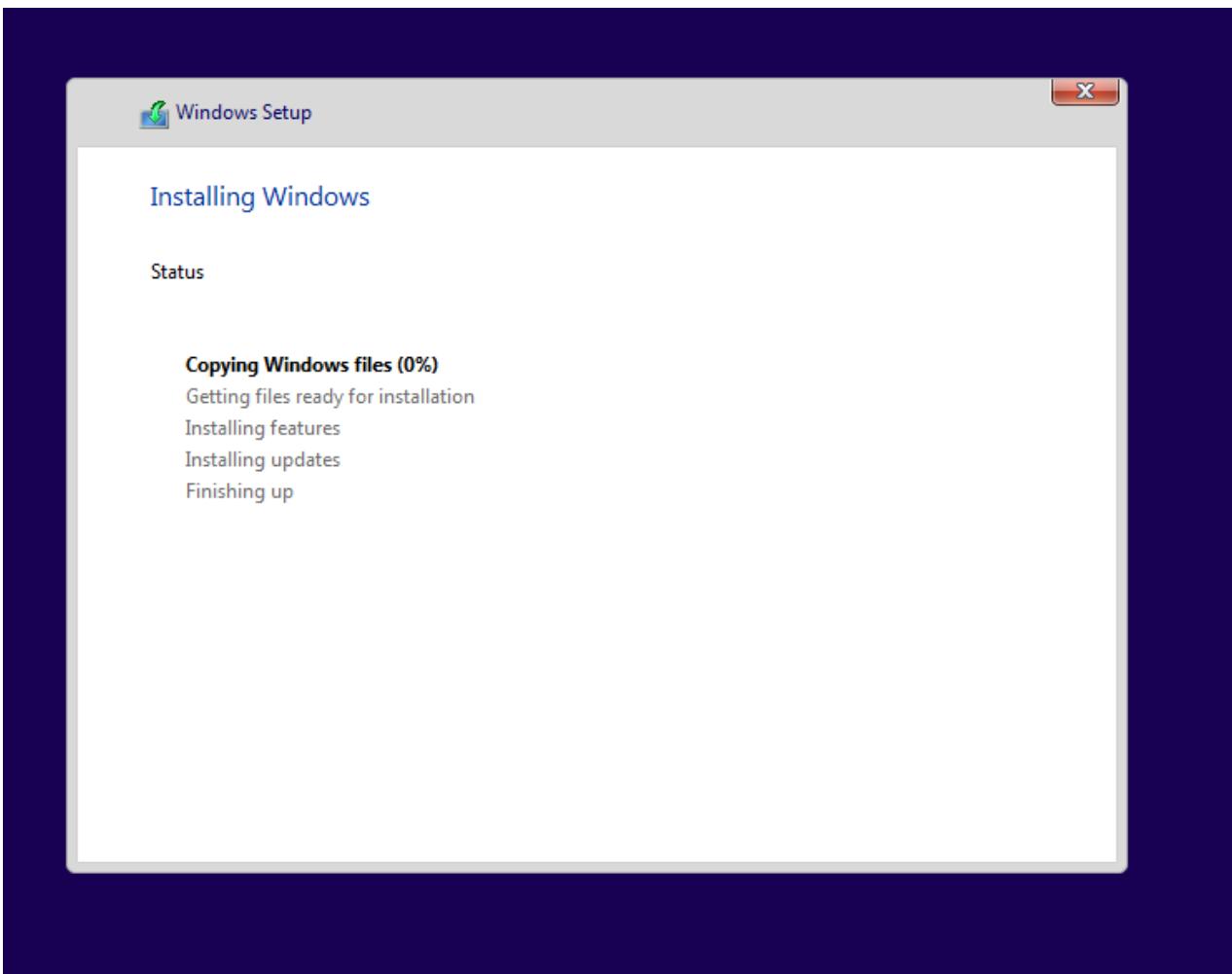


FIGURE 63 - DONE SUCCESSFULLY SET IT

|                      |  |
|----------------------|--|
| NIC Index            | 1  |
| Description          | Intel(R) 82574L Gigabit Network Connection |
| IP Address           | 192.168.130.15 fe80::9c63:4f3d:8273:ac65   |
| Subnet Mask          | 255.255.255.0                              |
| DHCP enabled         | False                                      |
| Default Gateway      | 192.168.130.254                            |
| Preferred DNS Server | 192.168.130.50                             |
| Alternate DNS Server |  |

FIGURE 64 - THE SHOWCASE OF THE NETWORK SETTING

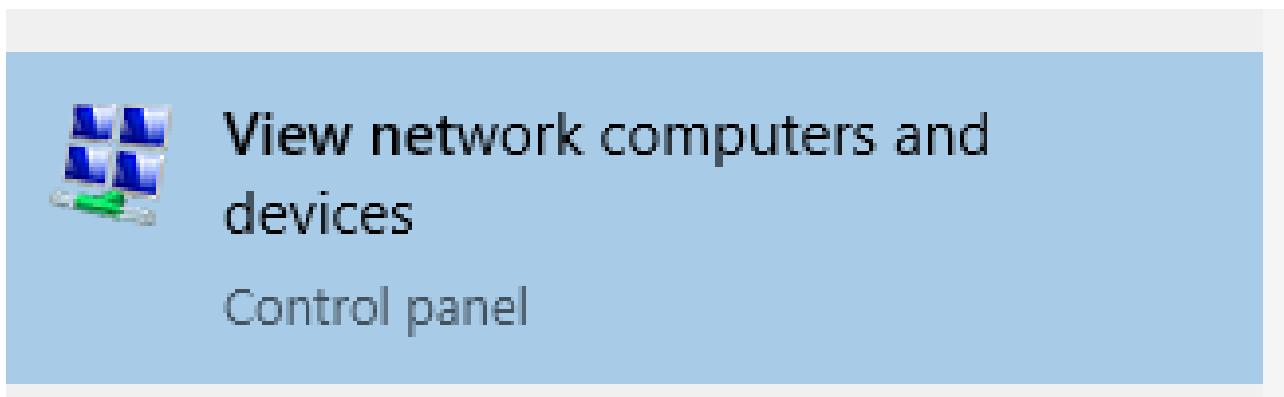


**FIGURE 65 - IN VM WINDOW 10, INSTALLING**

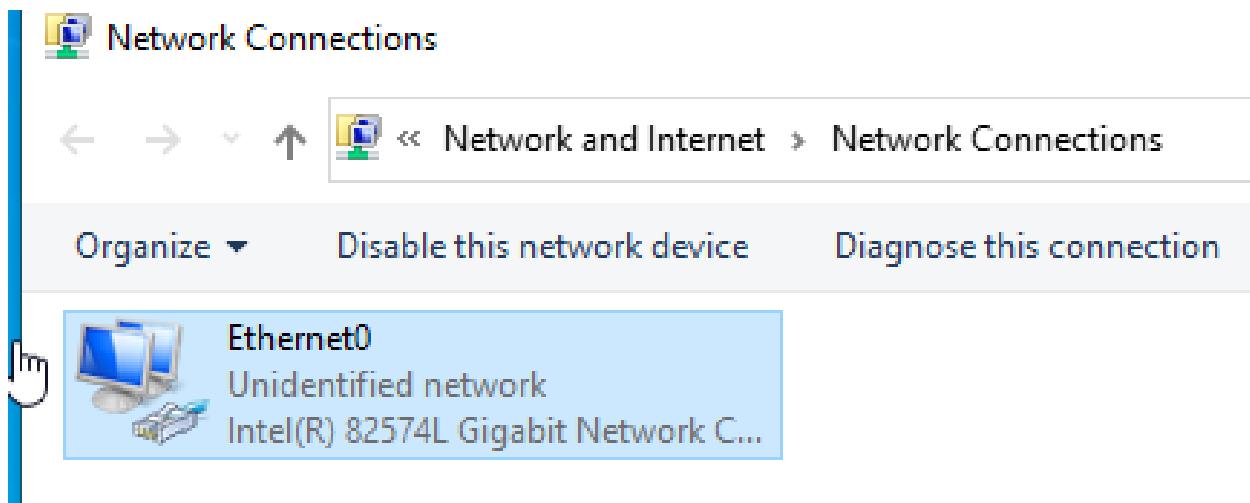
# Leave everything to us

Don't turn off your PC

**FIGURE 66 - BOOT THE WINDOW 10 UP**



**FIGURE 67 - ON WS 10 SEARCH, TYPE THE REQUIRED TEXT TO CHECK ON THE NETWORK LISTS**



**FIGURE 68 - CLICK ETHERNET0**

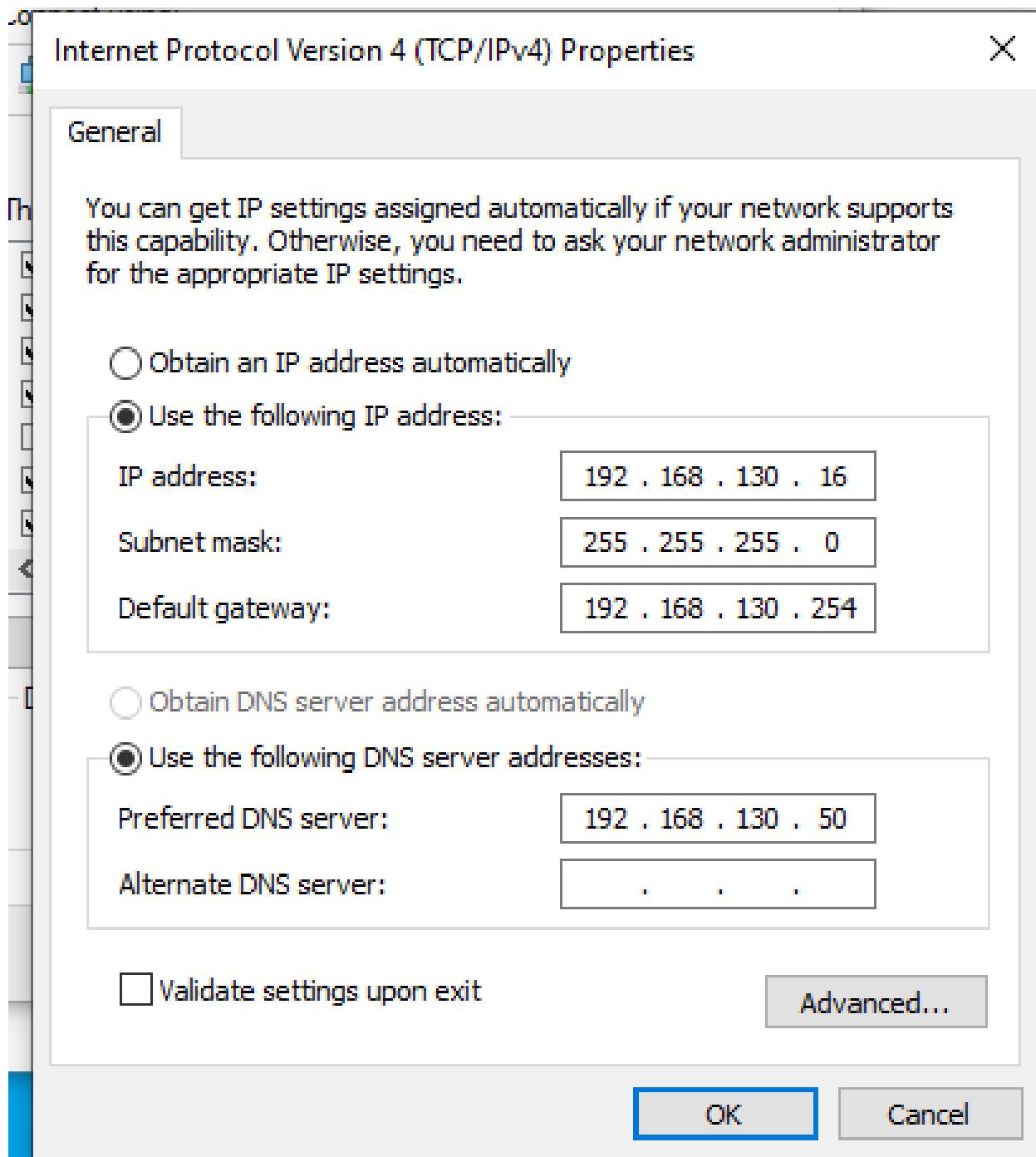
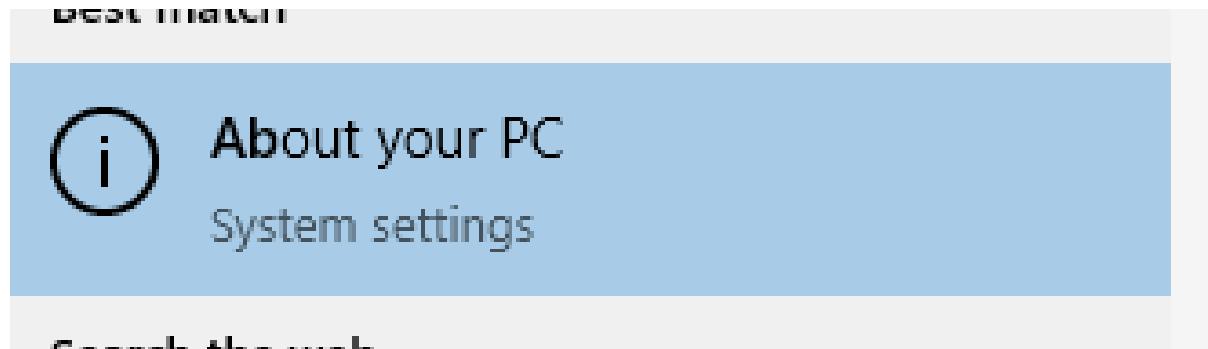


FIGURE 69 - PUT THE REQUIRED MANUALLY IPv4 ON IT AND CLICK "OK"



**FIGURE 70 - IN SEARCH, TYPE "ABOUT YOUR PC" TO CLICK**

# Related settings

[BitLocker settings](#)

[Device Manager](#)

[Remote desktop](#)

[System protection](#)

[Advanced system settings](#)

[Rename this PC \(advanced\)](#)

**FIGURE 71 - CLICK "RENAME THIS PC"**

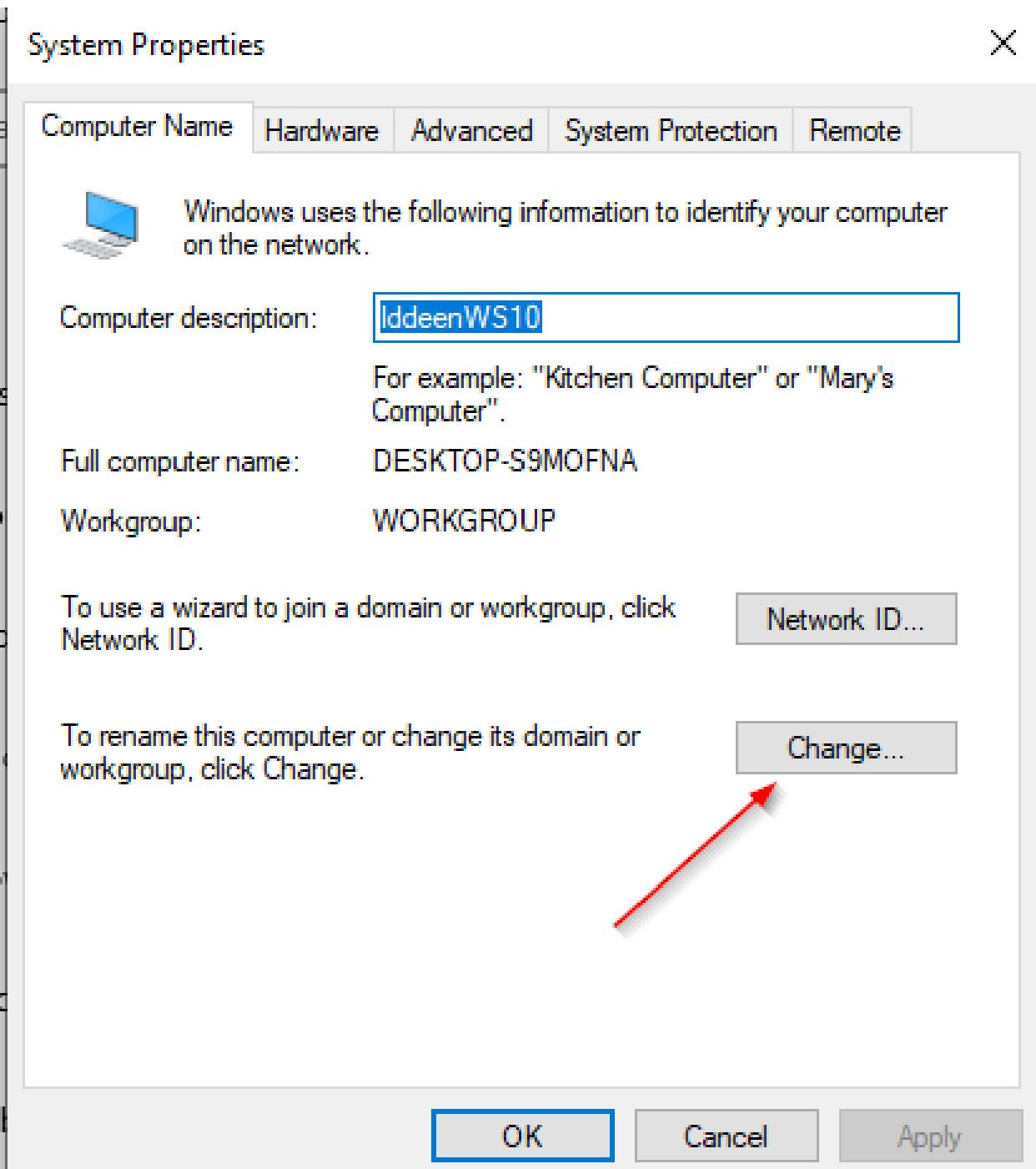


FIGURE 72 - CLICK "CHANGE"

## Computer Name/Domain Changes

X

You can change the name and the membership of this computer. Changes might affect access to network resources.

Computer name:

IddeenWS10

Full computer name:

IddeenWS10

More...

Member of

Domain:

Workgroup:

WORKGROUP

OK

Cancel

FIGURE 73 - CHANGE THE COMPUTER NAME

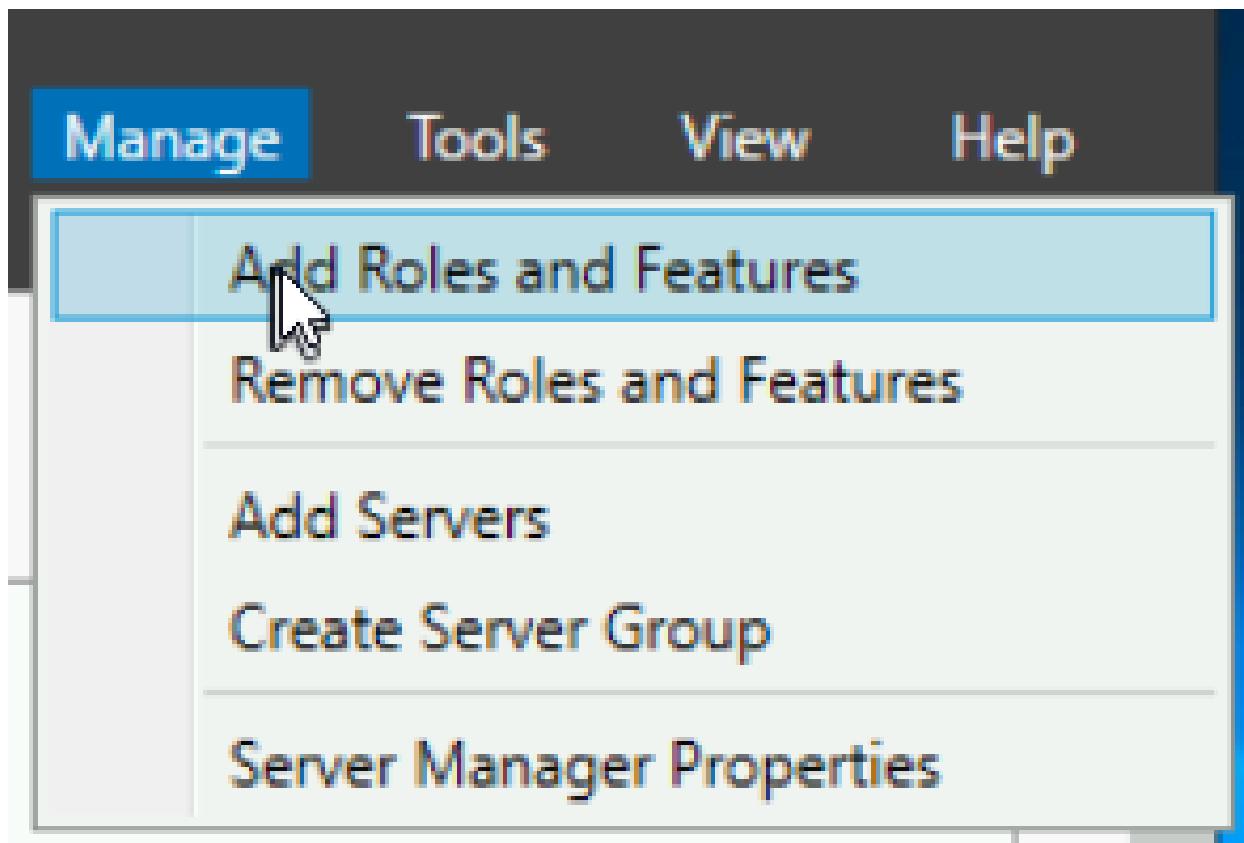


FIGURE 74 - ADD ROLES AND FEATURES

Select one or more roles to install on the selected server.

### Roles

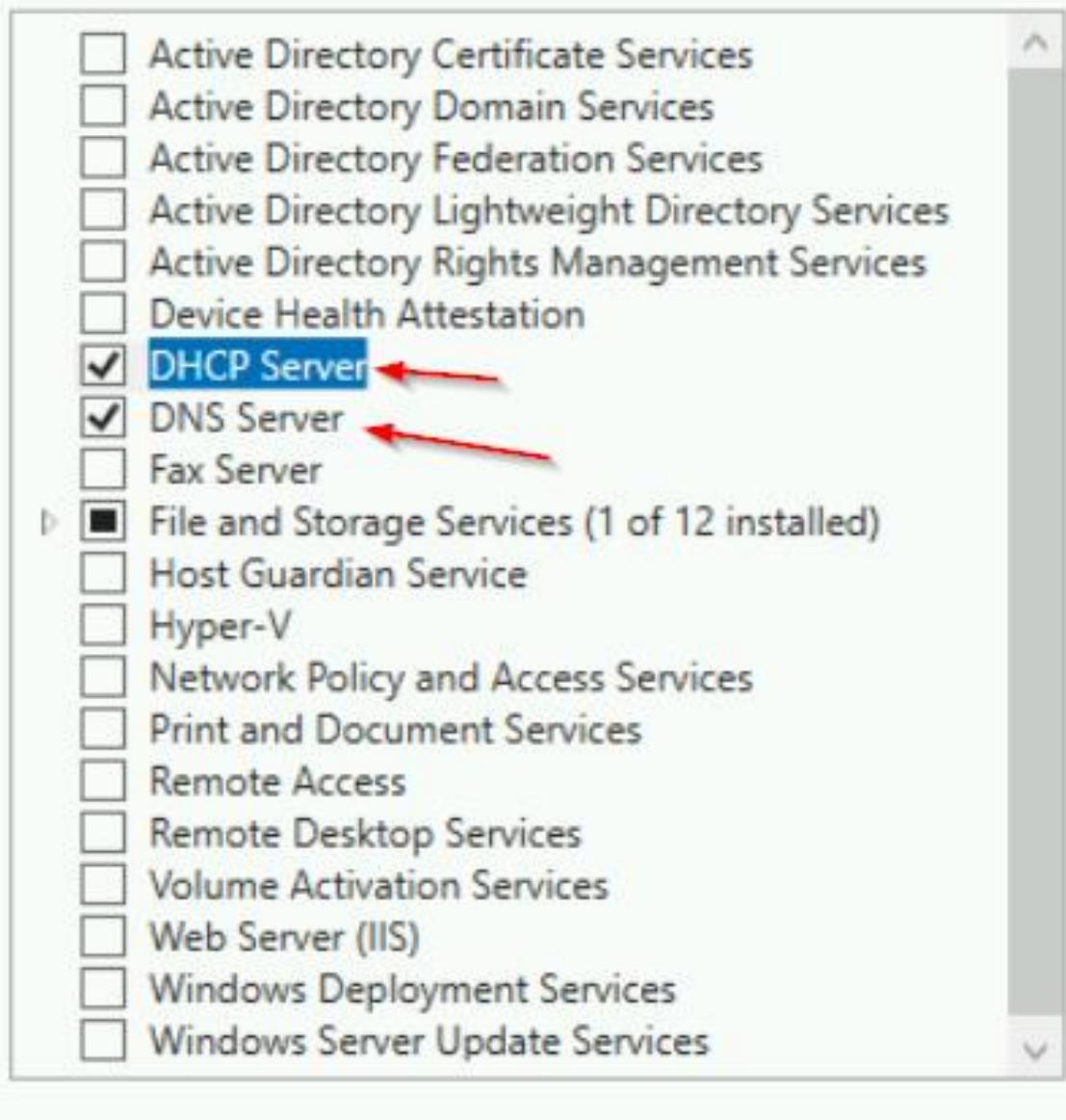


FIGURE 75 - SELECT DHCP AND DNS SERVER



FIGURE 76 - STARTING INSTALLATION

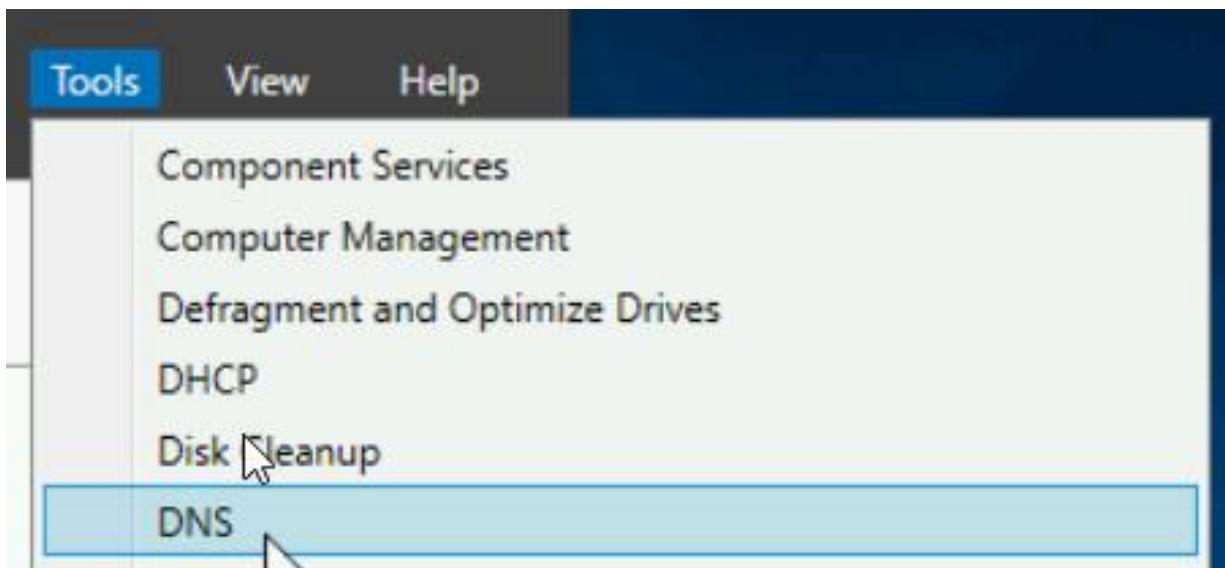


FIGURE 77 - CLICK "DNS"

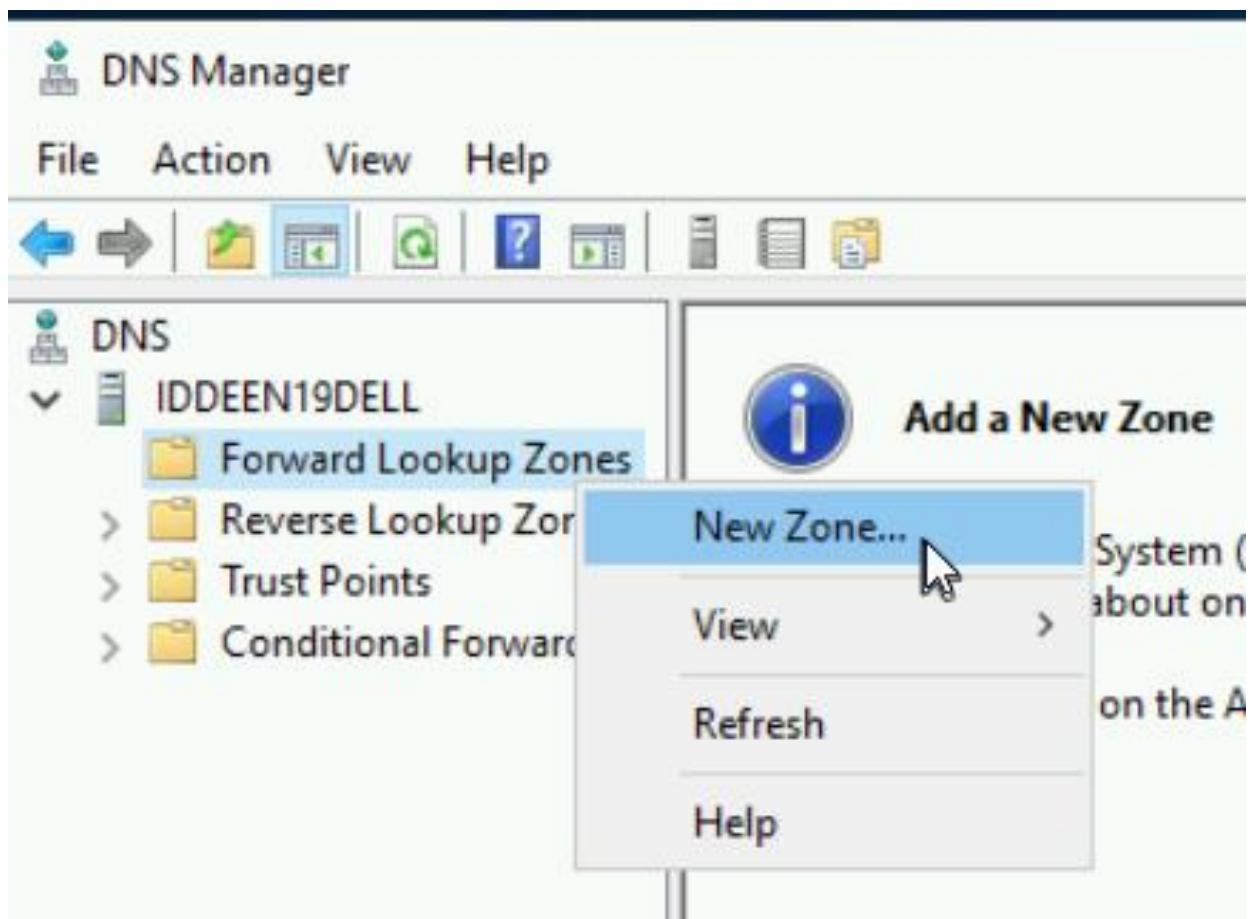


FIGURE 78 - CLICK "NEW ZONE"



**FIGURE 79 - PROCEED TO THE NEW ZONE**

## New Zone Wizard

X



### Zone Type

The DNS server supports various types of zones and storage.

Select the type of zone you want to create:

Primary zone

Creates a copy of a zone that can be updated directly on this server.

Secondary zone

Creates a copy of a zone that exists on another server. This option helps balance the processing load of primary servers and provides fault tolerance.

Stub zone

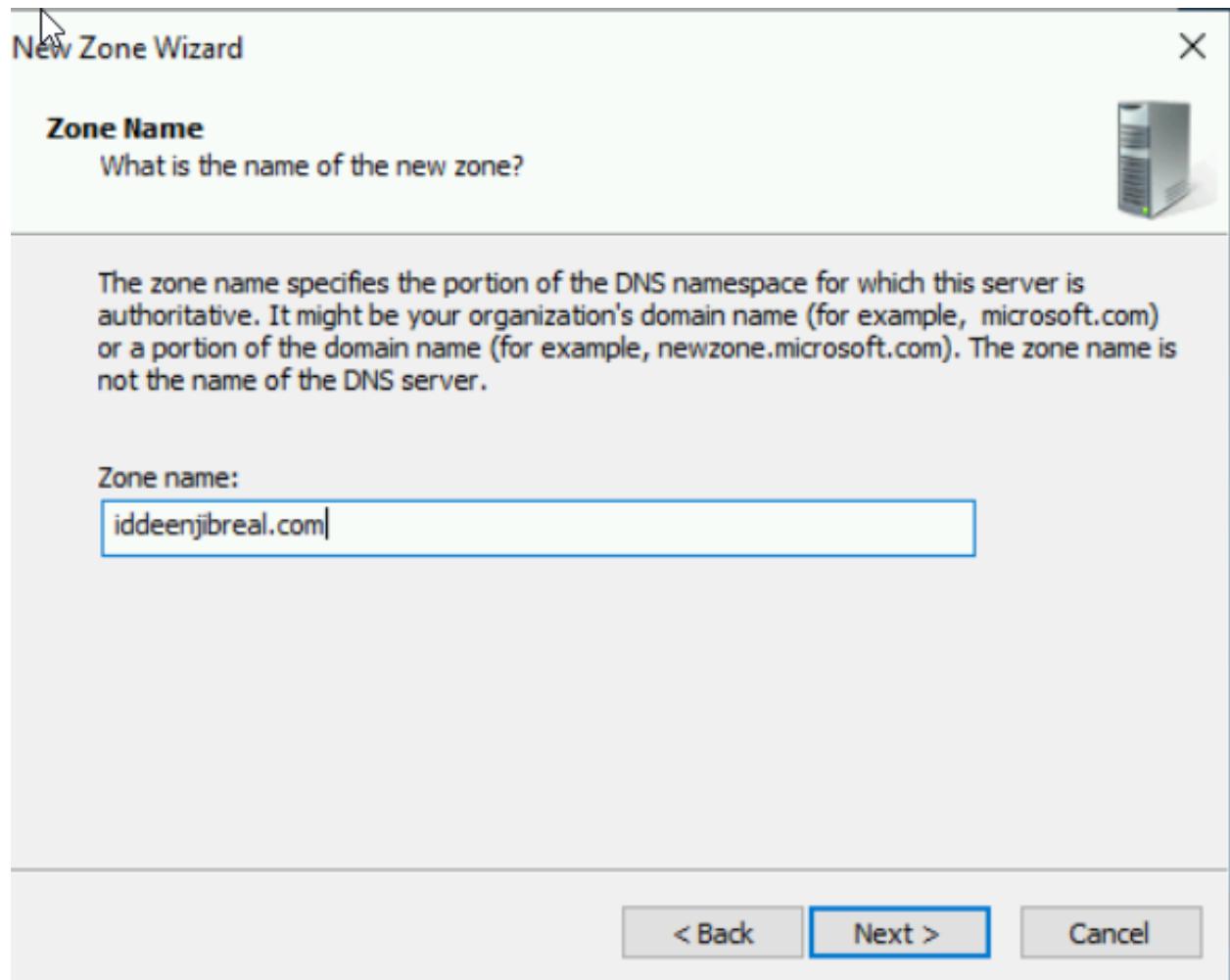
Creates a copy of a zone containing only Name Server (NS), Start of Authority (SOA), and possibly glue Host (A) records. A server containing a stub zone is not authoritative for that zone.

Store the zone in Active Directory (available only if DNS server is a writeable domain controller)

< Back

Next >

Cancel



New Zone Wizard

X

**Dynamic Update**

You can specify that this DNS zone accepts secure, nonsecure, or no dynamic updates.



Dynamic updates enable DNS client computers to register and dynamically update their resource records with a DNS server whenever changes occur.

Select the type of dynamic updates you want to allow:

Allow only secure dynamic updates (recommended for Active Directory)  
This option is available only for Active Directory-integrated zones.

Allow both nonsecure and secure dynamic updates  
Dynamic updates of resource records are accepted from any client.  
 This option is a significant security vulnerability because updates can be accepted from untrusted sources.

Do not allow dynamic updates  
Dynamic updates of resource records are not accepted by this zone. You must update these records manually.

< Back      Next >      Cancel



**FIGURE 80 - SUCCESSFULLY COMPLETED THE NEW ZONE WIZARD**

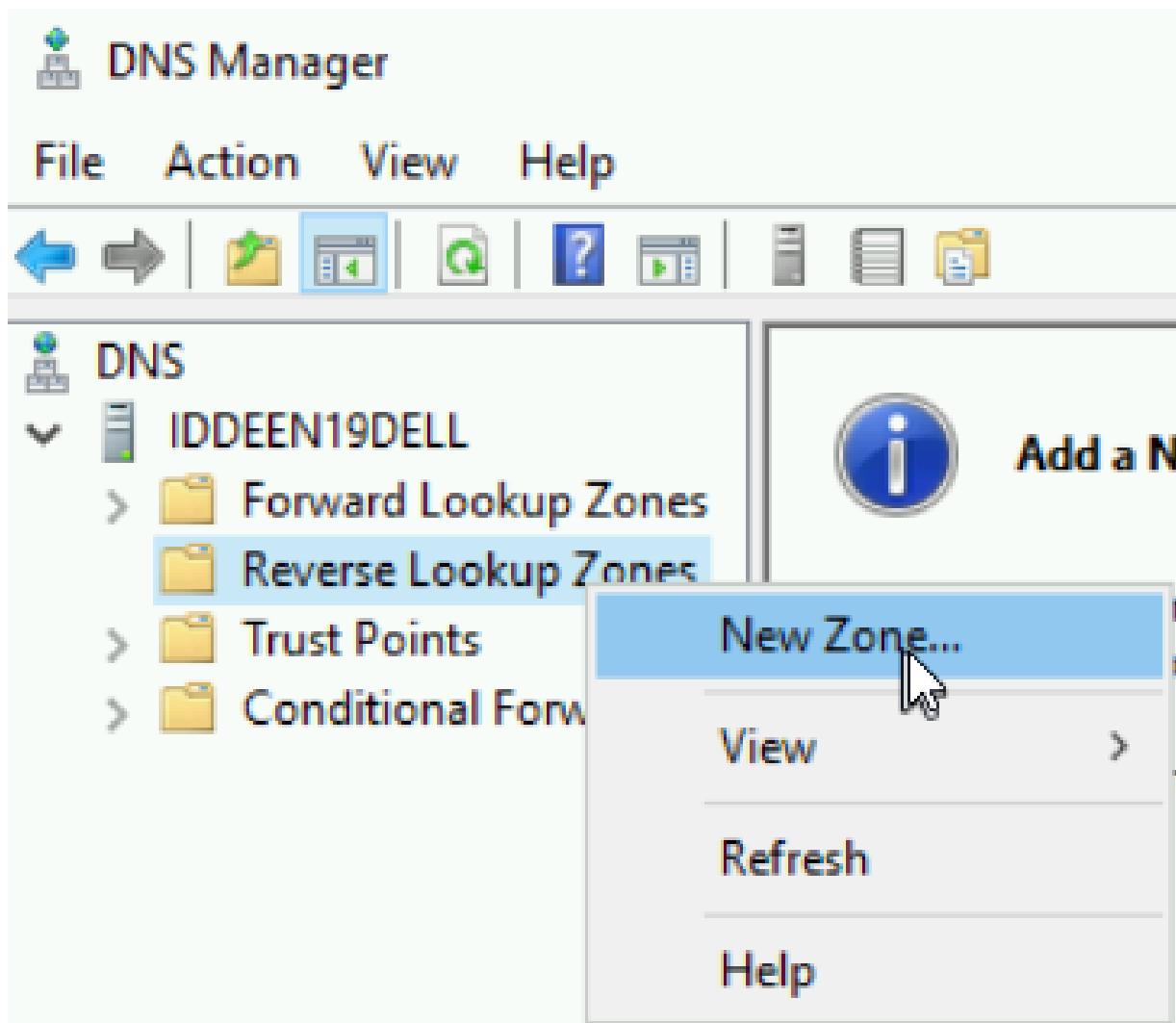


FIGURE 81 - PROCEED TO THE NEW ZONE FOR REVERSE



## Welcome to the New Zone Wizard

This wizard helps you create a new zone for your DNS server.

A zone translates DNS names to related data, such as IP addresses or network services.

To continue, click Next.

< Back

Next >

Cancel

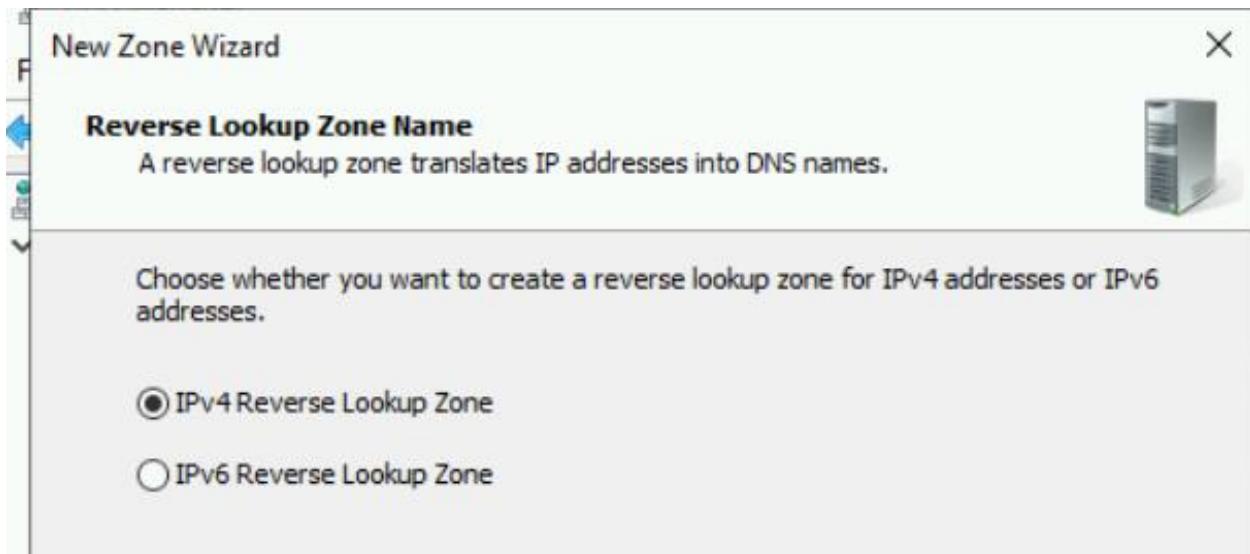


FIGURE 82 - MAKE SURE TO SELECT IPV4 REVERSE LOOKUP ZONE

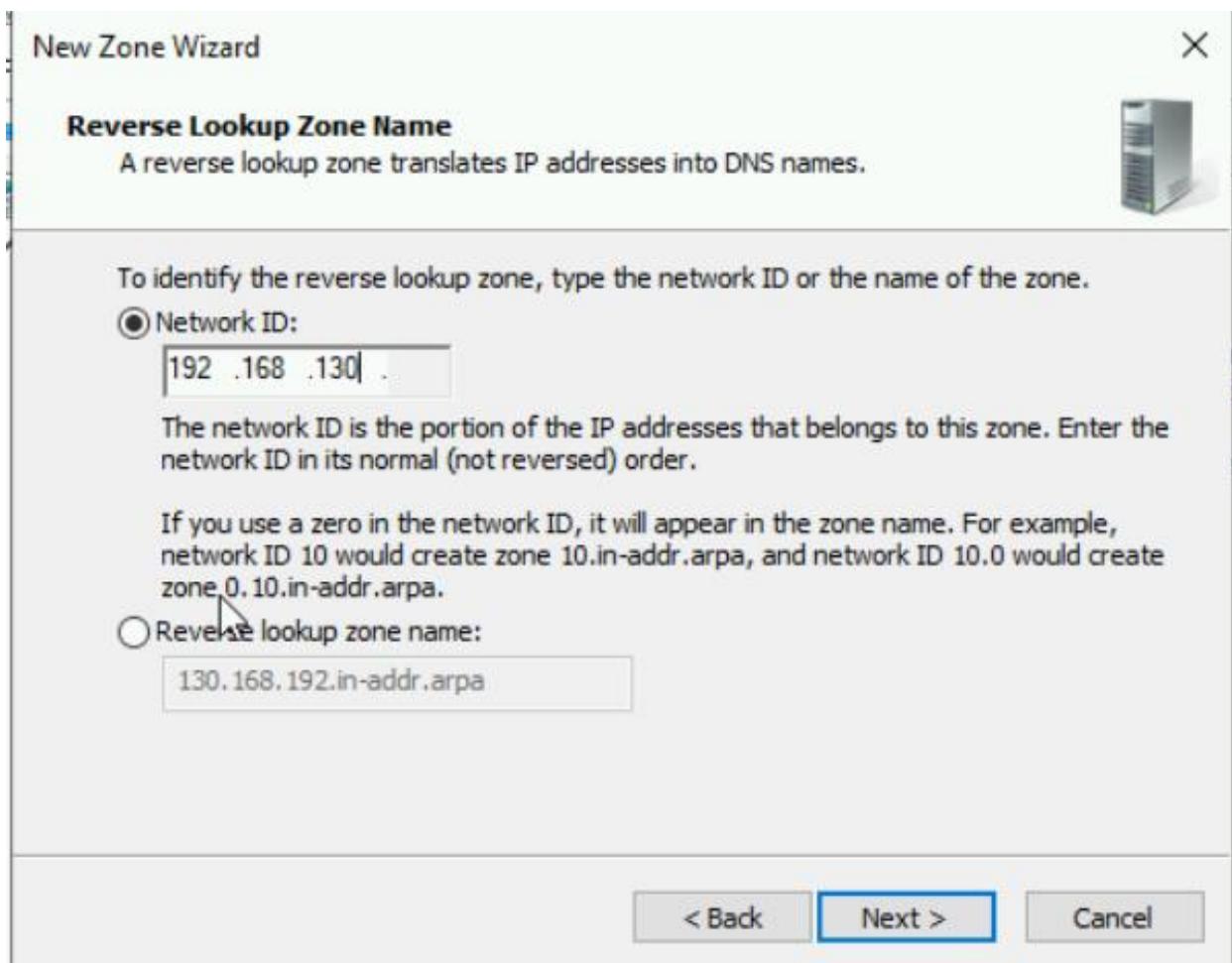
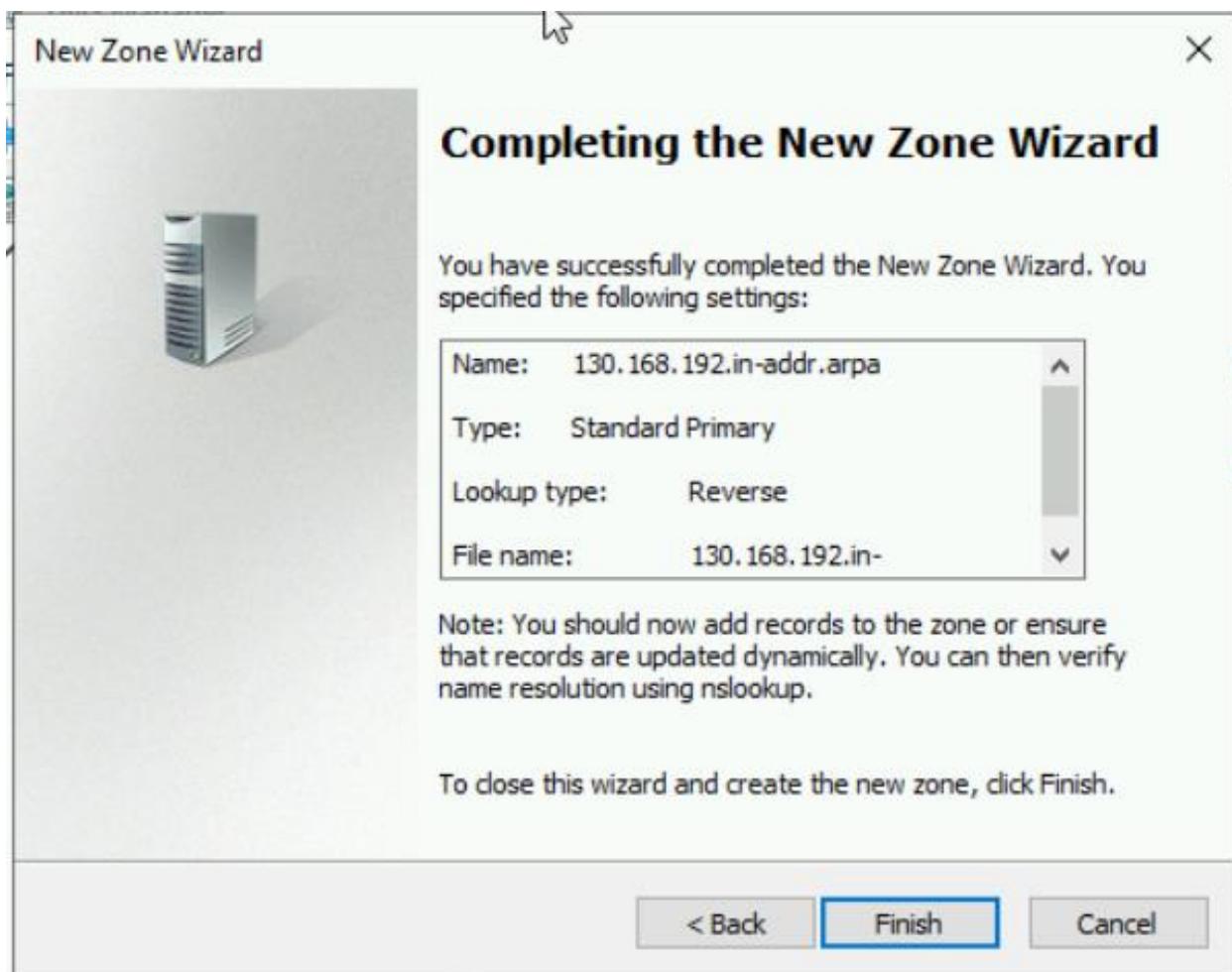


FIGURE 83 - PUT THE REQUIRED IPV4 MANUALLY ON THE NETWORK ID



**FIGURE 84 - COMPLETED THE NEW ZONE WIZARD**

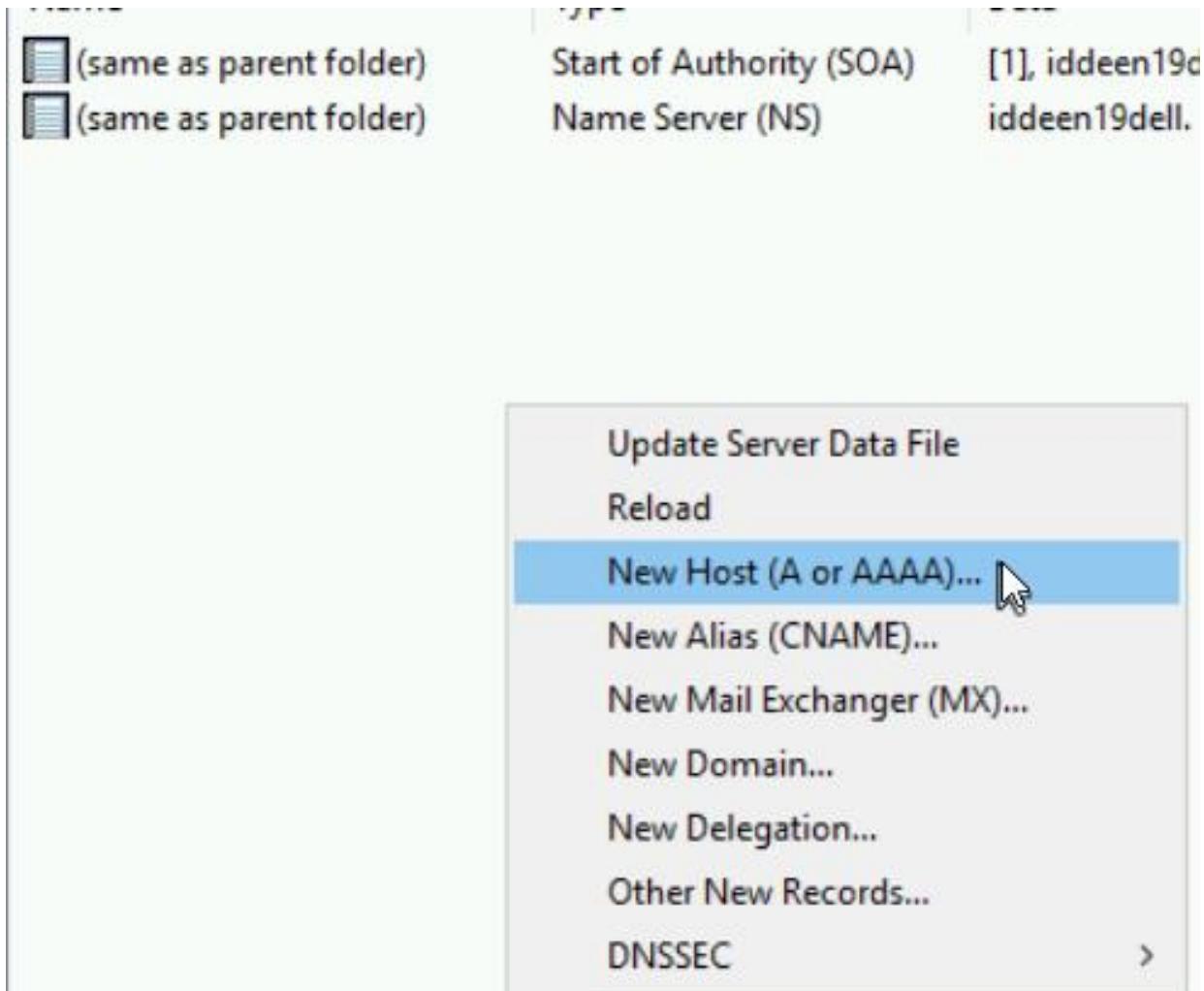


FIGURE 85 - CLICK NEW HOST FOR A TO ASSIGN THE DEVICES

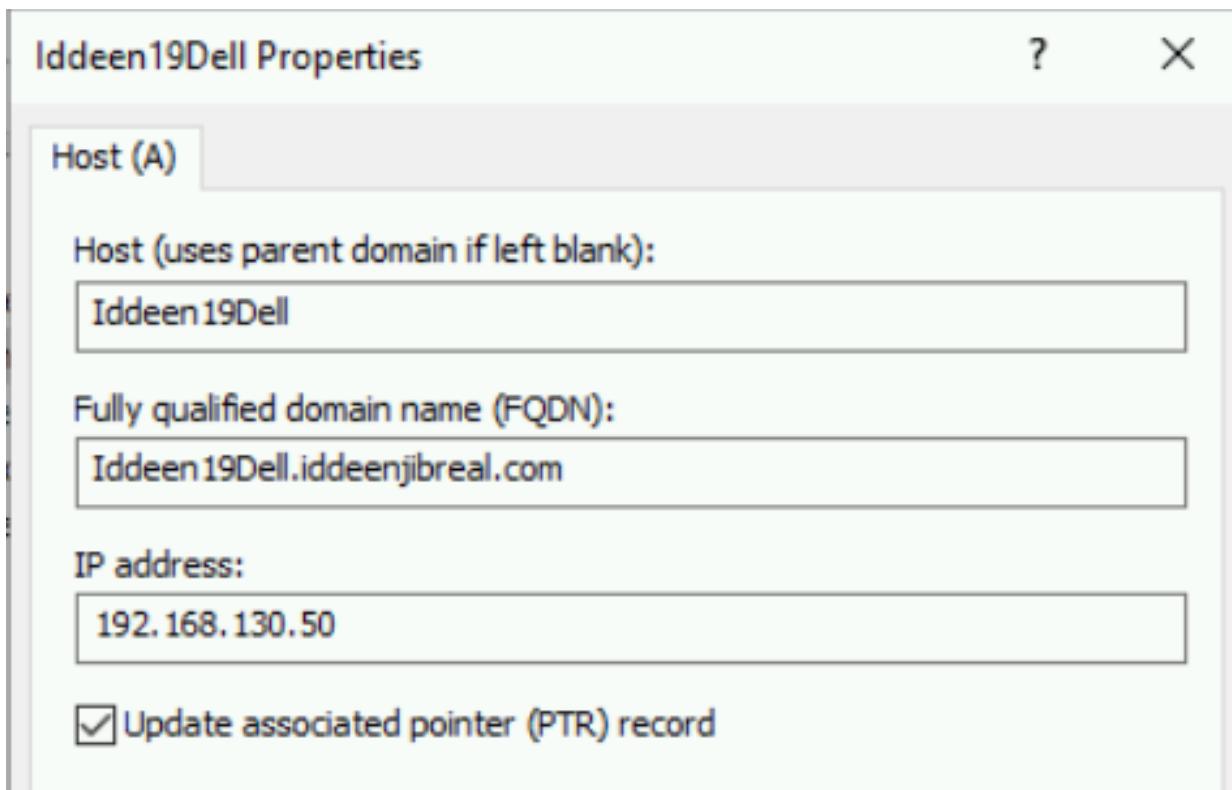
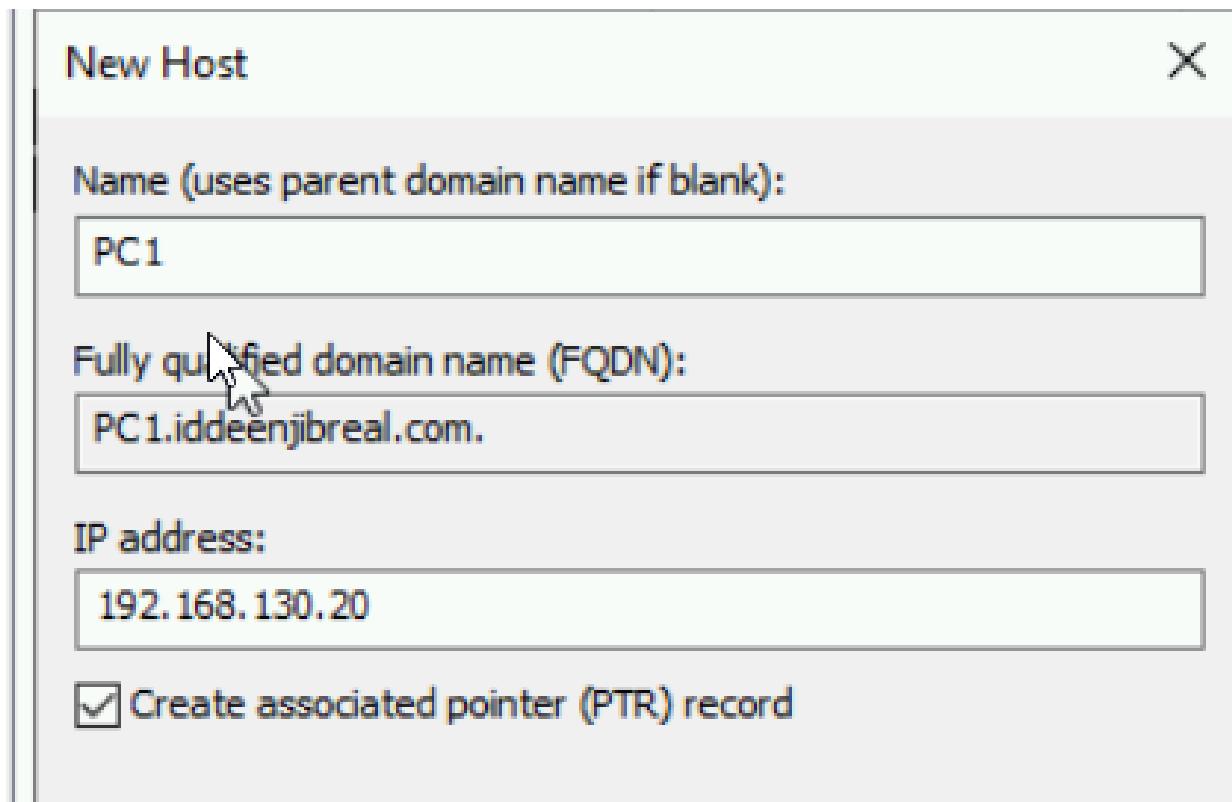


FIGURE 86 - ASSIGN THE DEVICES BY USING THEIR STATIC IPV4 ADDRESS



## New Host



Name (uses parent domain name if blank):

Router1

Fully qualified domain name (FQDN):

Router1.iddeenjibreal.com.

IP address:

192.168.130.254

Create associated pointer (PTR) record



Add Host

Done

## New Host



Name (uses parent domain name if blank):

iDRAC

Fully qualified domain name (FQDN):

iDRAC.iddeenjibreal.com.

IP address:

192.168.130.12

Create associated pointer (PTR) record



Add Host

Done

**New Host**

Name (uses parent domain name if blank):  
Iddeen19VM1

Fully qualified domain name (FQDN):  
Iddeen19VM1.iddeejibreal.com.

IP address:  
192.168.130.14

Create associated pointer (PTR) record

**Add Host**      **Done**

## New Host



Name (uses parent domain name if blank):

FSA-Server01

Fully qualified domain name (FQDN):

FSA-Server01.iddeenjibreal.com.

IP address:

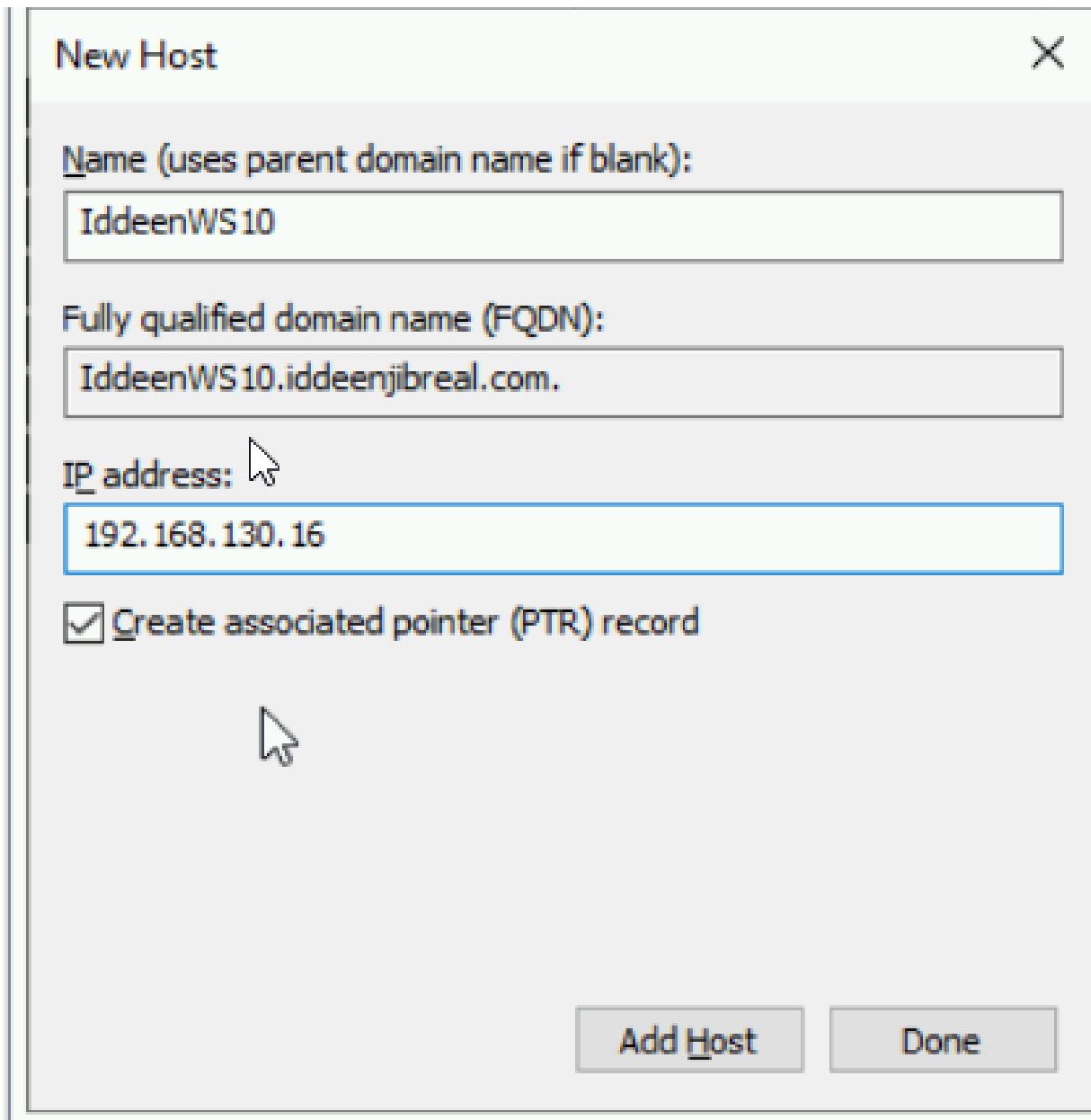
192.168.130.15

Create associated pointer (PTR) record



Add Host

Done



**FIGURE 87 - DONE ASSIGNING ALL OF THE DEVICES**

```
C:\Users\Administrator>nslookup 192.168.130.50
Server:  Iddeen19Dell.iddeenjibreal.com
Address: 192.168.130.50

Name:      Iddeen19Dell.iddeenjibreal.com
Address:   192.168.130.50

C:\Users\Administrator>
```

**FIGURE 88 - USE THE NSLOOKUP COMMAND ON THE DNS SERVER**

## Roles

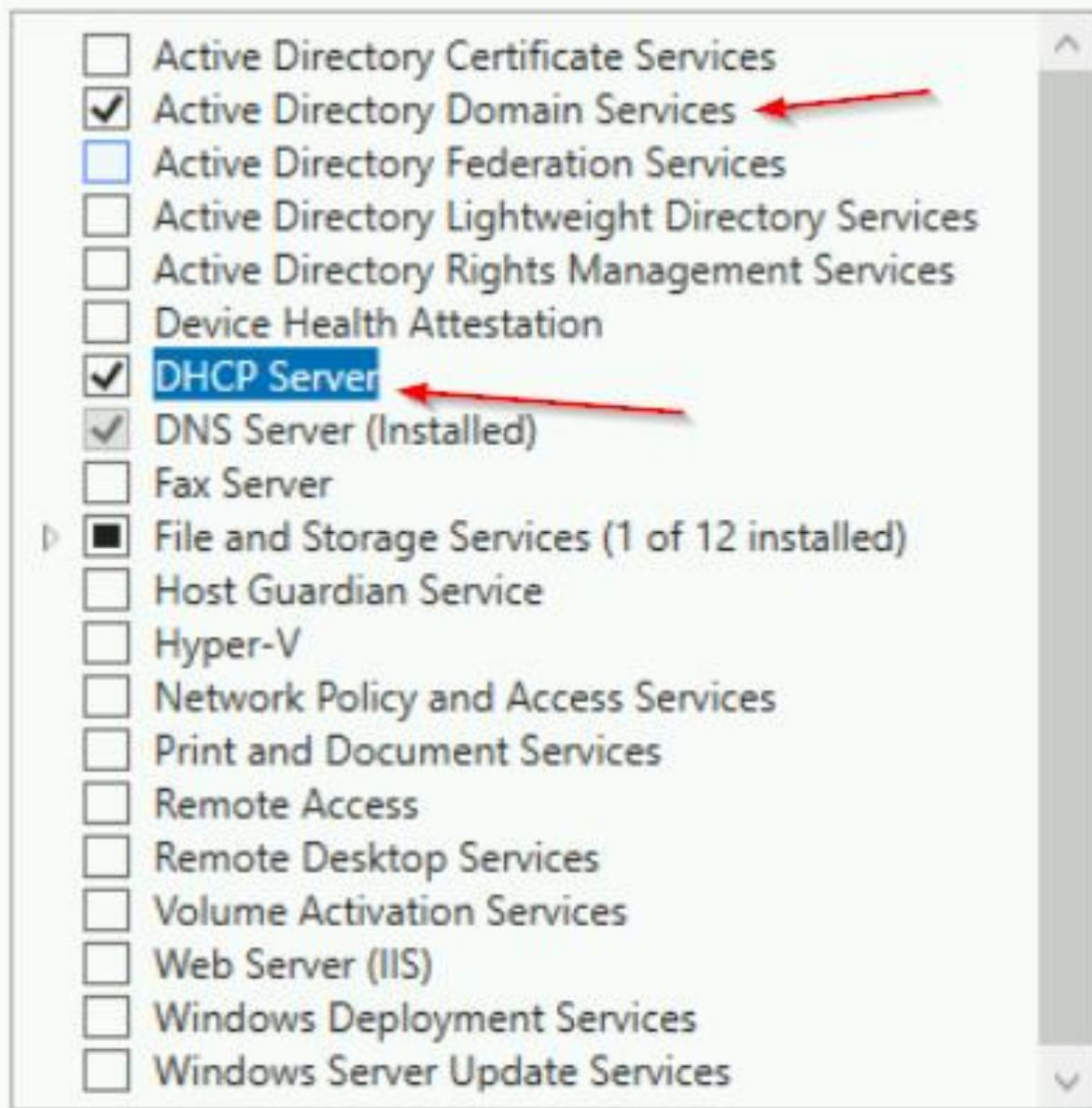


FIGURE 89 - ON THE DELL SERVER, SELECT DHCP AND AD SERVER



FIGURE 90 - STARTING INSTALLATION

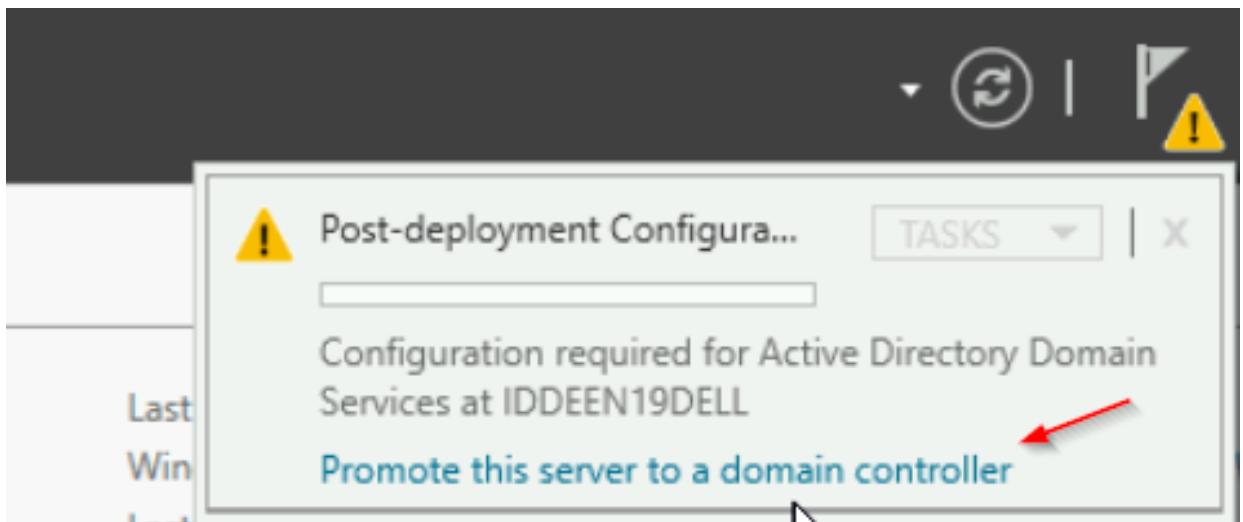


FIGURE 91 - PROMOTE THE SERVER TO A DOMAIN CONTROLLER

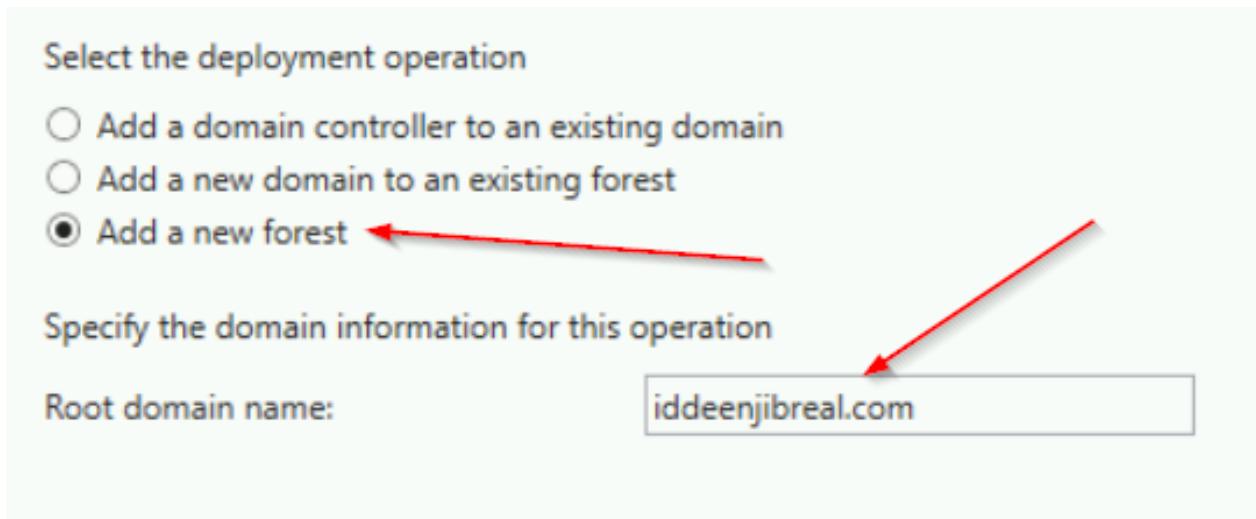


FIGURE 92 - ADD A NEW FOREST AND TYPE THE ROOT DOMAIN NAME

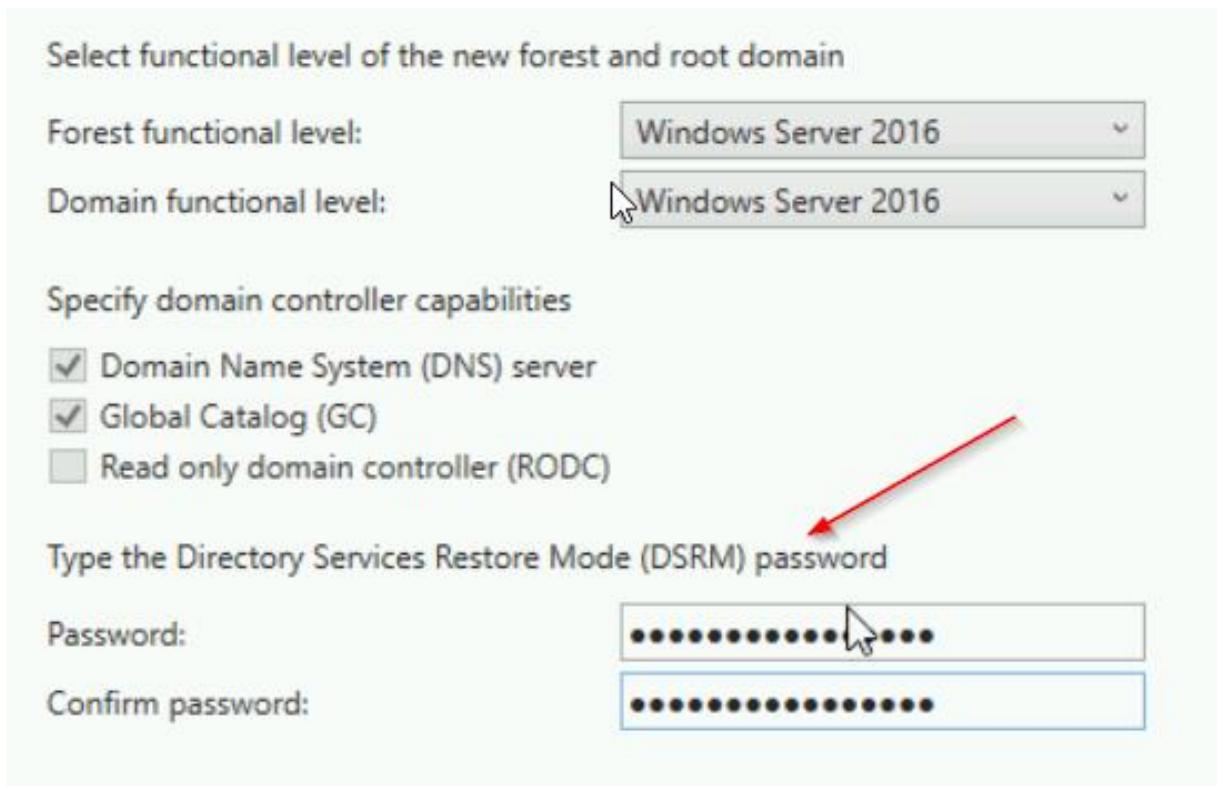


FIGURE 93 - TYPE THE DSRM PASSWORD



FIGURE 94 - CREATE DNS DELEGATION

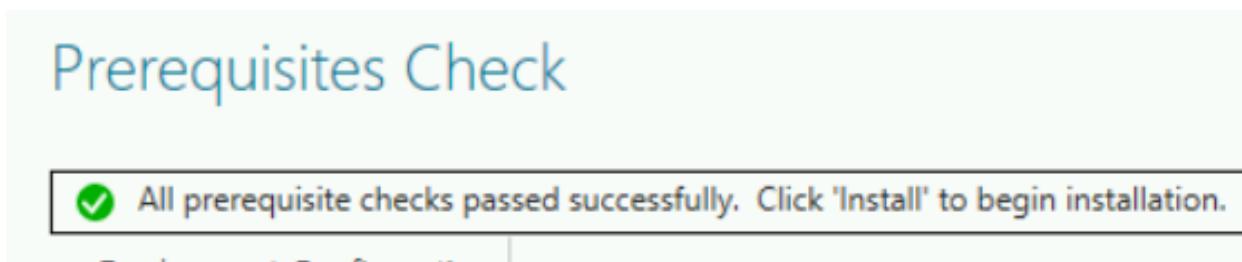
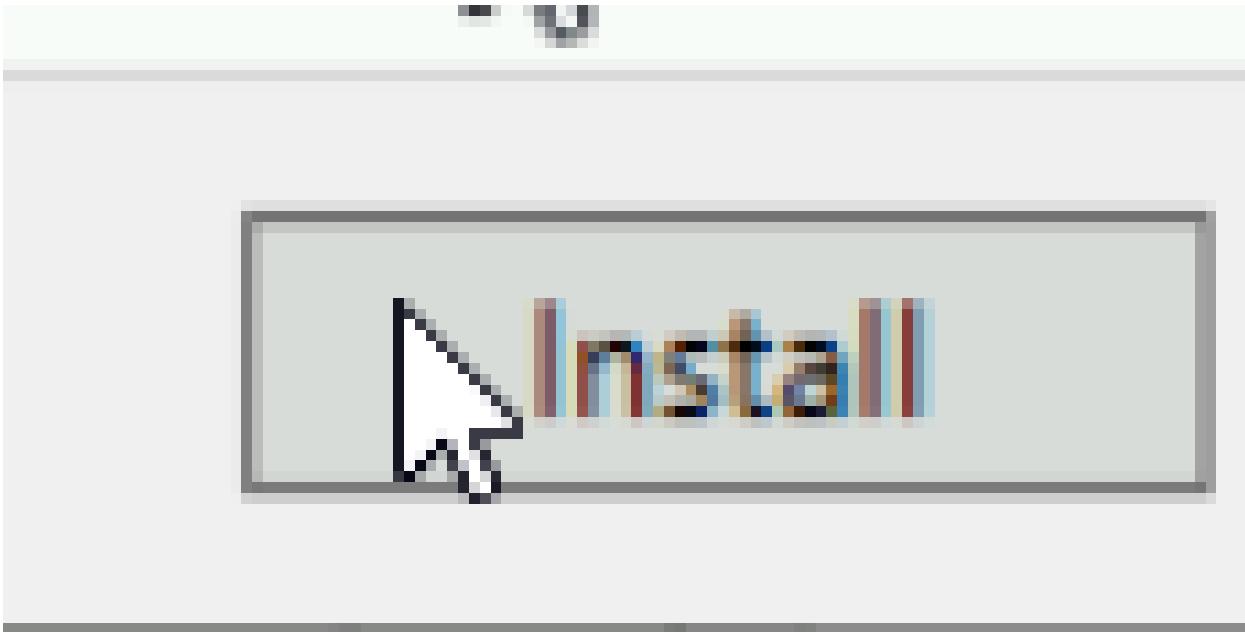
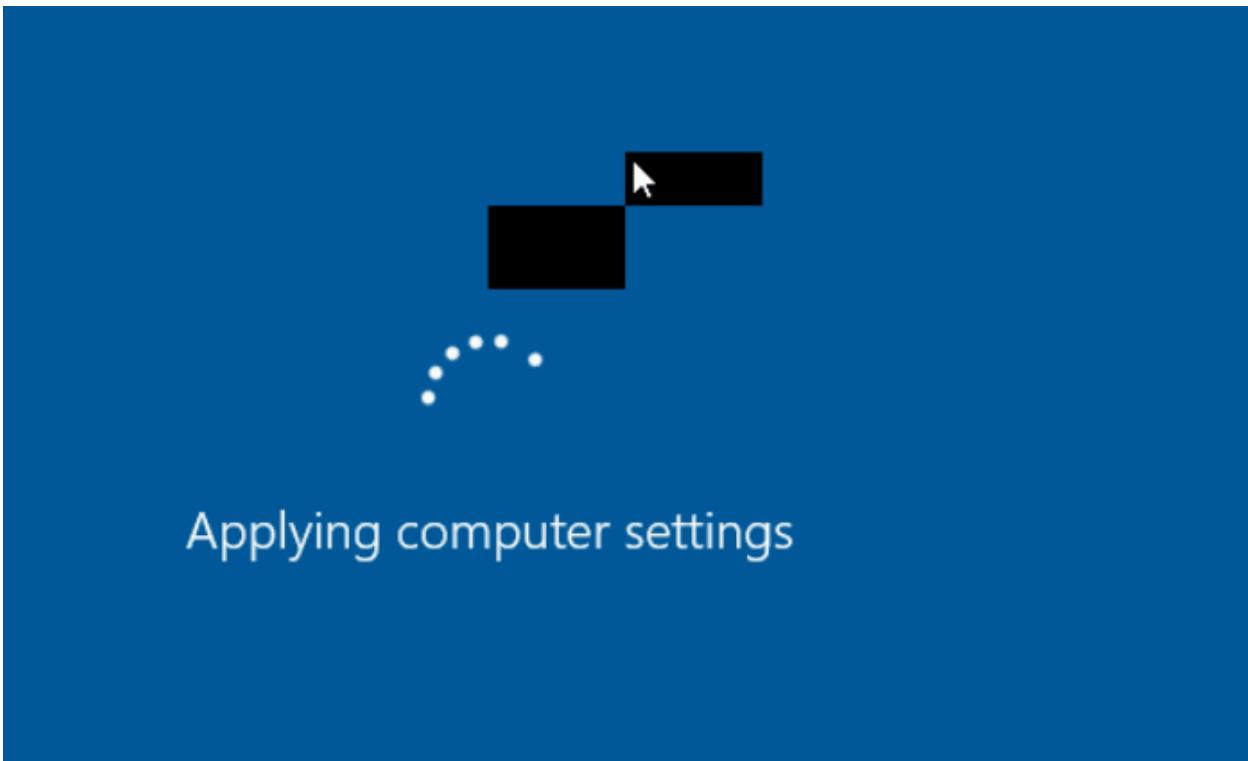


FIGURE 95 - MAKE SURE TO CHECK THE PREREQUISITES PASSED



**FIGURE 96 – INSTALL**



**FIGURE 97 - THE AD SERVICE IS STARTING IN EFFECT**

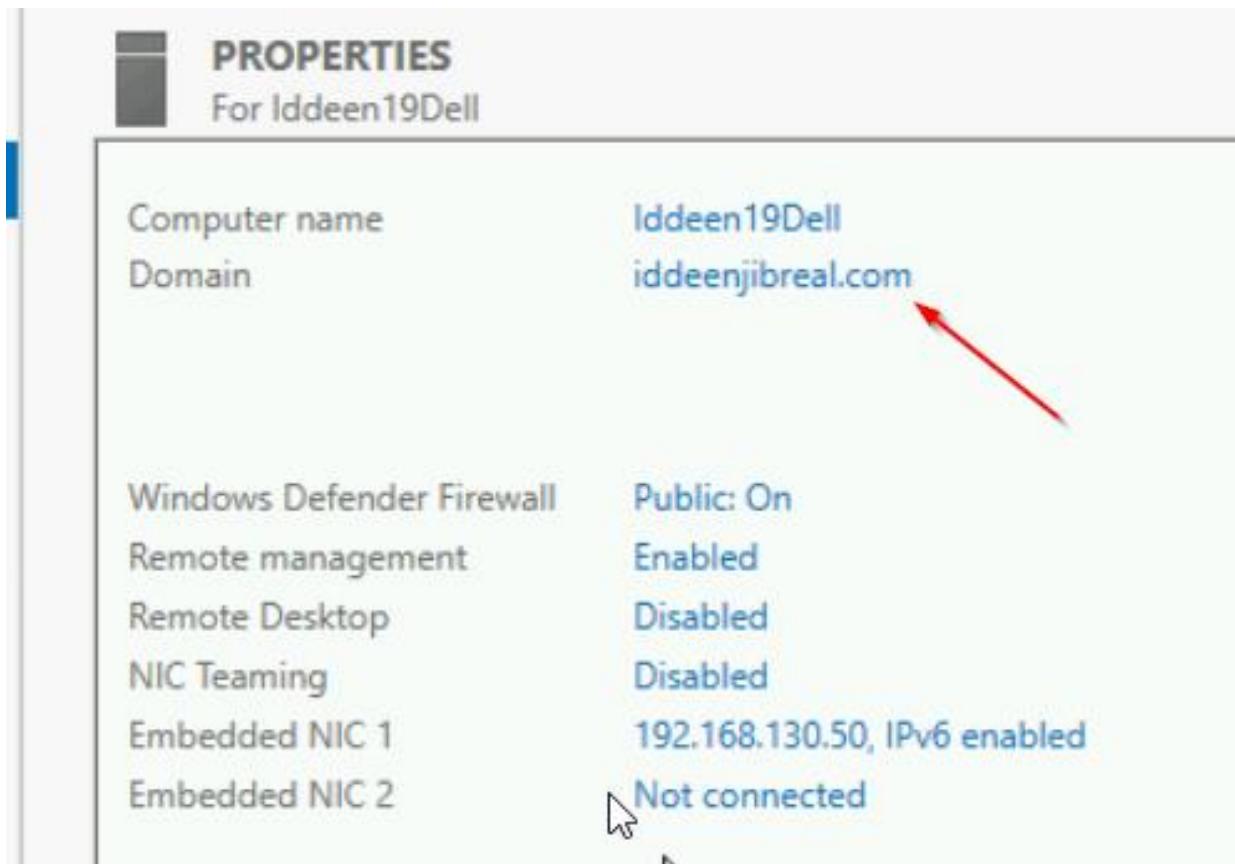


FIGURE 98 - MAKE SURE TO CHECK IF YOU ARE IN THE RIGHT DOMAIN GROUP

## Best match

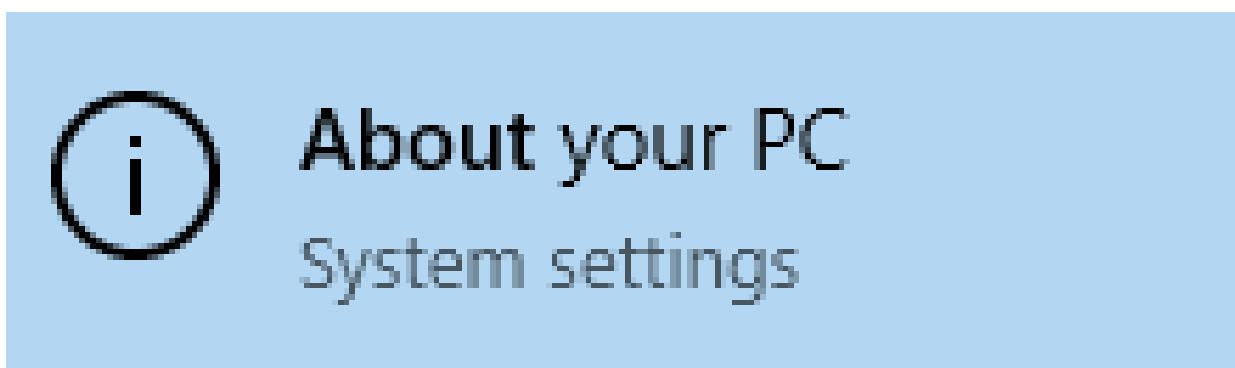


FIGURE 99 - ON VM ONE, CLICK "ABOUT YOUR PC"



FIGURE 100 - CLICK "SYSTEM INFO"

---

Computer name, domain, and workgroup settings

|                       |             |
|-----------------------|-------------|
| Computer name:        | Iddeen19VM1 |
| Full computer name:   | Iddeen19VM1 |
| Computer description: |             |
| Workgroup:            | WORKGROUP   |

 Change settings

---

Windows activation

FIGURE 101 – CLICK CHANGE SETTINGS ON THAT

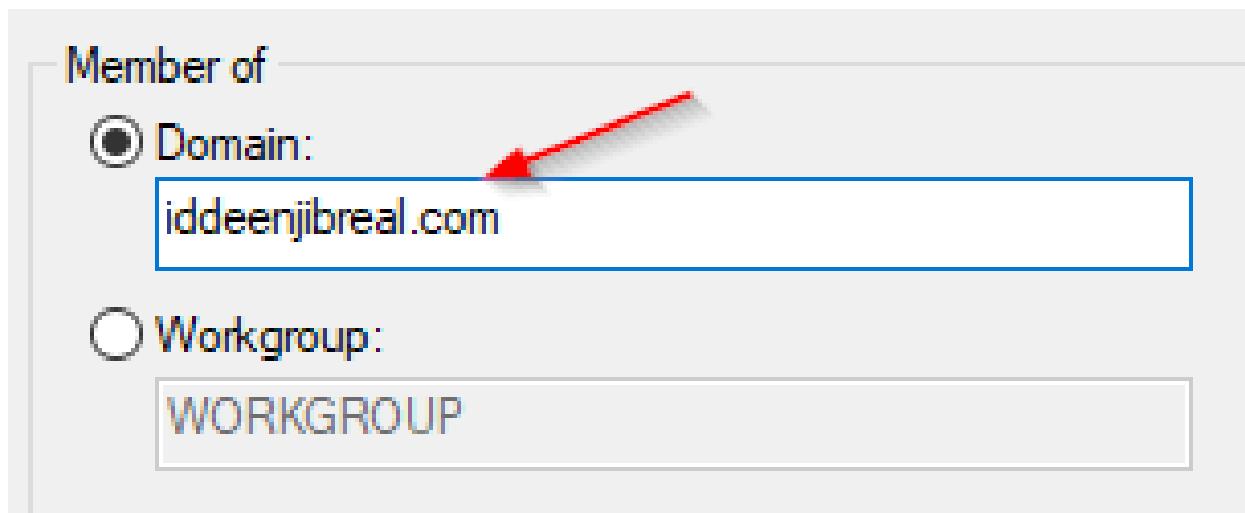


FIGURE 102 - TYPE THE REQUIRED TEXT WITH .COM ON THE MEMBER OF THE DOMAIN

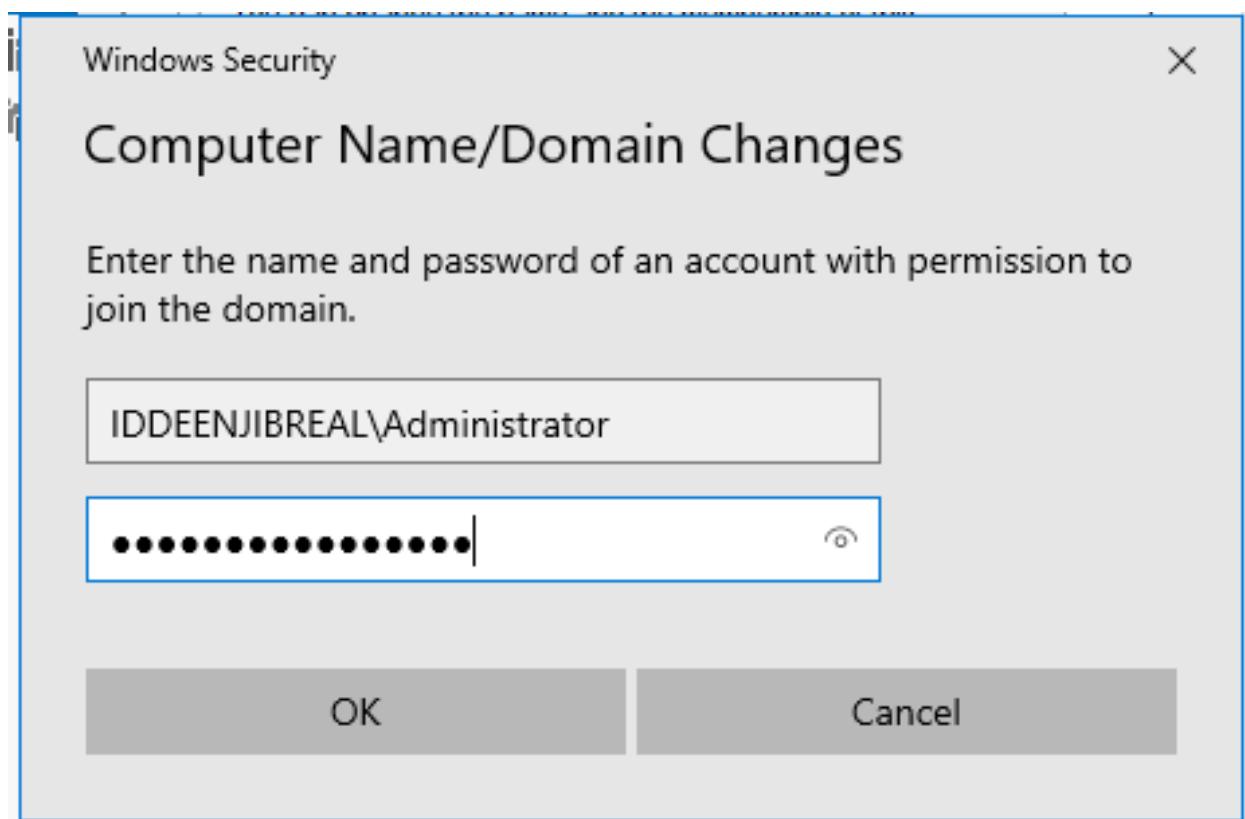


FIGURE 103 - LOG IN TO THE DOMAIN ACCOUNT WITH ADMINISTRATOR

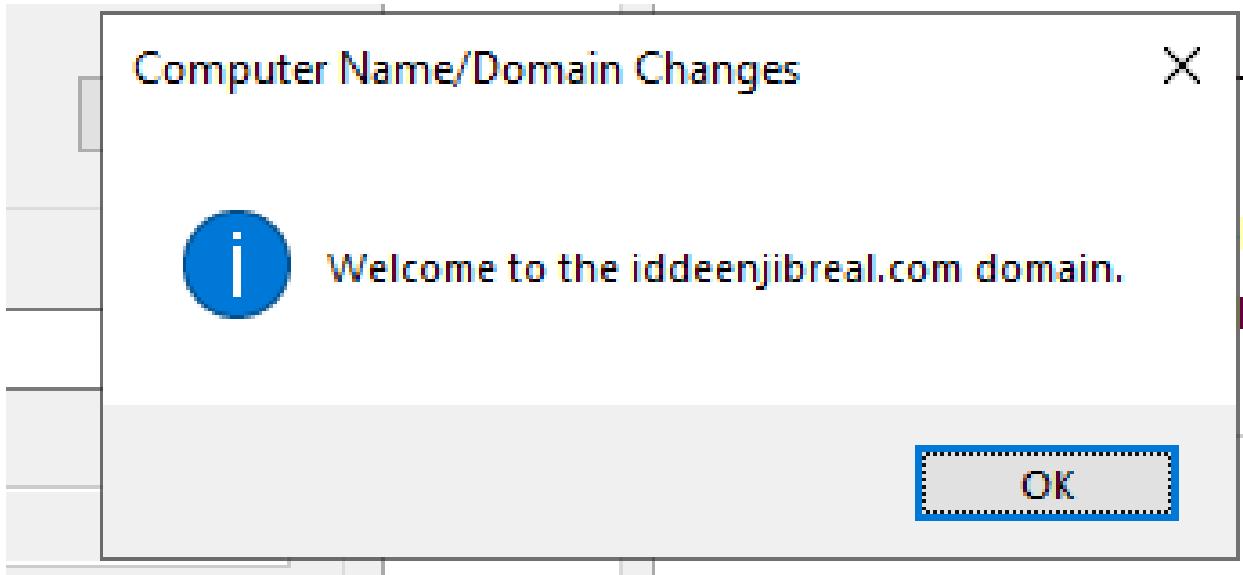


FIGURE 104 - SUCCESSFULLY JOINED THE DOMAIN

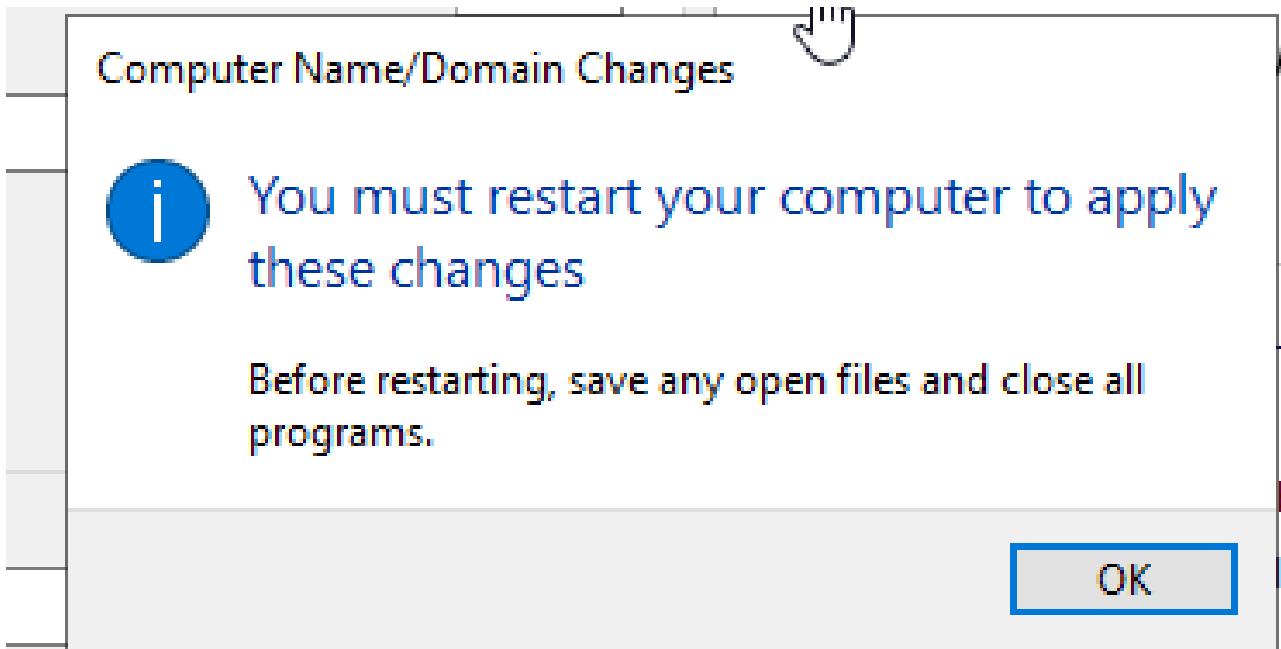


FIGURE 105 - RESTART THE COMPUTER TO APPLY THESE CHANGES

```
1) Domain/Workgroup:  
2) Computer Name:  
3) Add Local Administrator  
4) Configure Remote Management  
  
5) Windows Update Settings:  
6) Download and Install Updates  
7) Remote Desktop:  
  
8) Network Settings  
9) Date and Time  
10) Telemetry settings  
11) Windows Activation  
  
12) Log Off User  
13) Restart Server  
14) Shut Down Server  
15) Exit to Command Line  
  
Enter number to select an option:
```

FIGURE 106 - TYPE THE ONE NUMBER TO PRESS THE DOMAIN/WORKGROUP

```
Enter number to select an option: 1  
  
Change Domain/Workgroup Membership  
  
Join (D)omain or (W)orkgroup? (Blank=Cancel) D  
Join Domain  
Name of domain to join: iddeenjibreal.com
```

FIGURE 107 - PRESS "D" TO JOIN THE DOMAIN AND TYPE THE REQUIRED TEXT

```
Join Domain  
Name of domain to join: iddeenjibreal.com  
Specify an authorized domain\user: IDDEENJIBREAL\Administrator  
  
Joining iddeenjibreal.com...
```

FIGURE 108 - LOG IN TO THE DOMAIN GROUP WITH ADMINISTRATOR STATUS

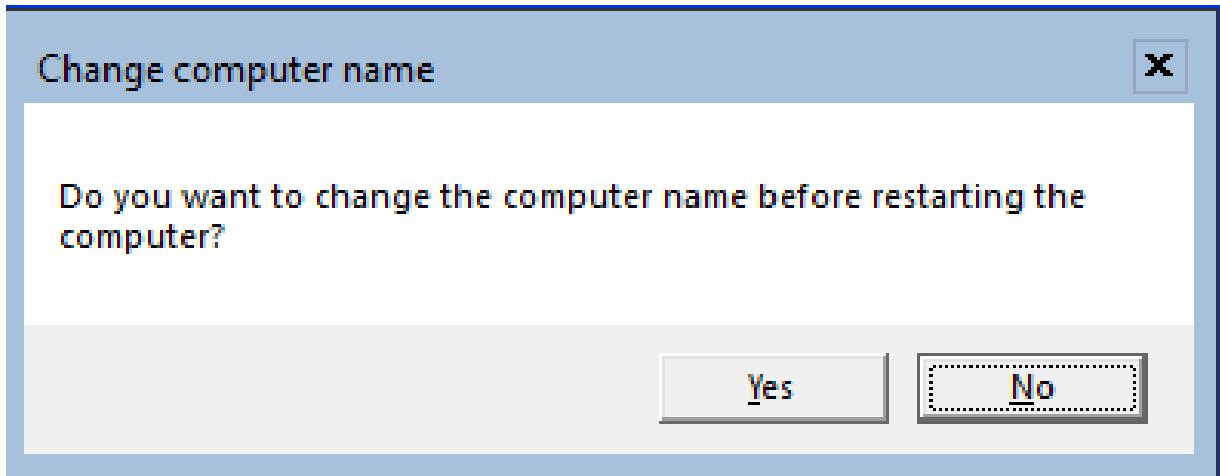


FIGURE 109 - RESTART THE COMPUTER

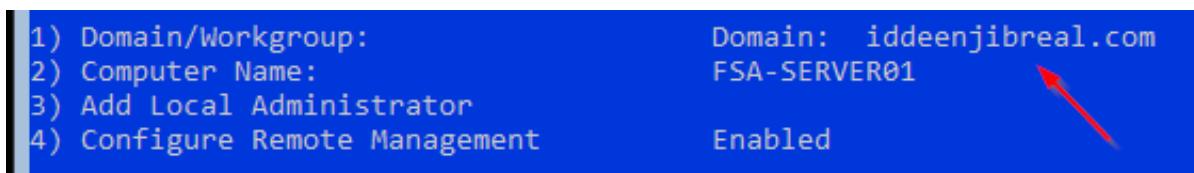


FIGURE 110 - THE SHOWCASE OF THE DOMAIN GROUP

## Advanced system settings

FIGURE 111 - ON VM WINDOWS 10, CLICK ADVANCED SYSTEM SETTINGS

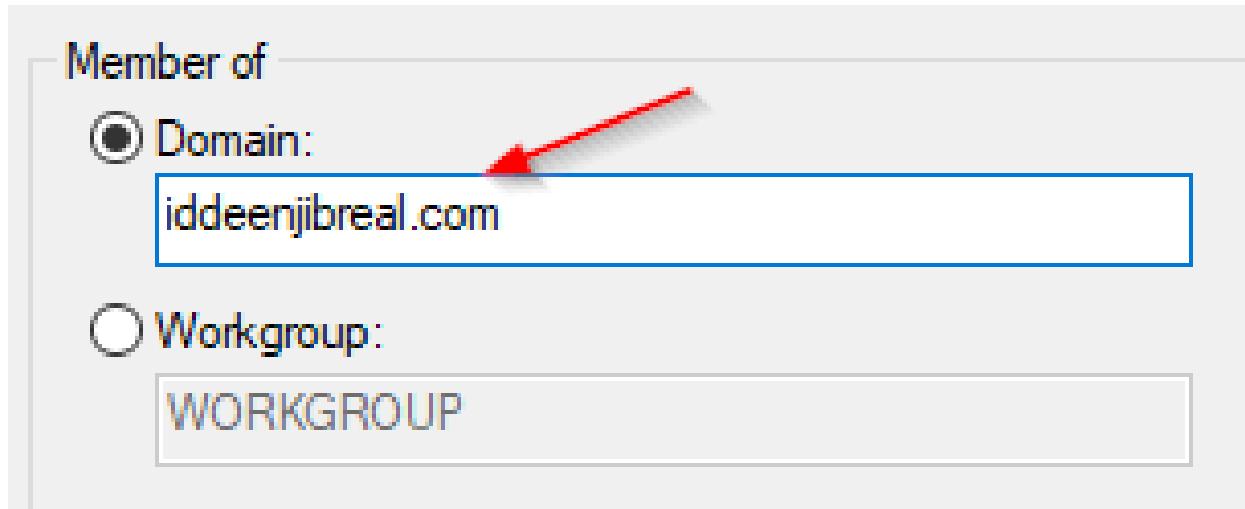


FIGURE 112 - DO THE SAME THING AS WHAT I DID ON VM 1

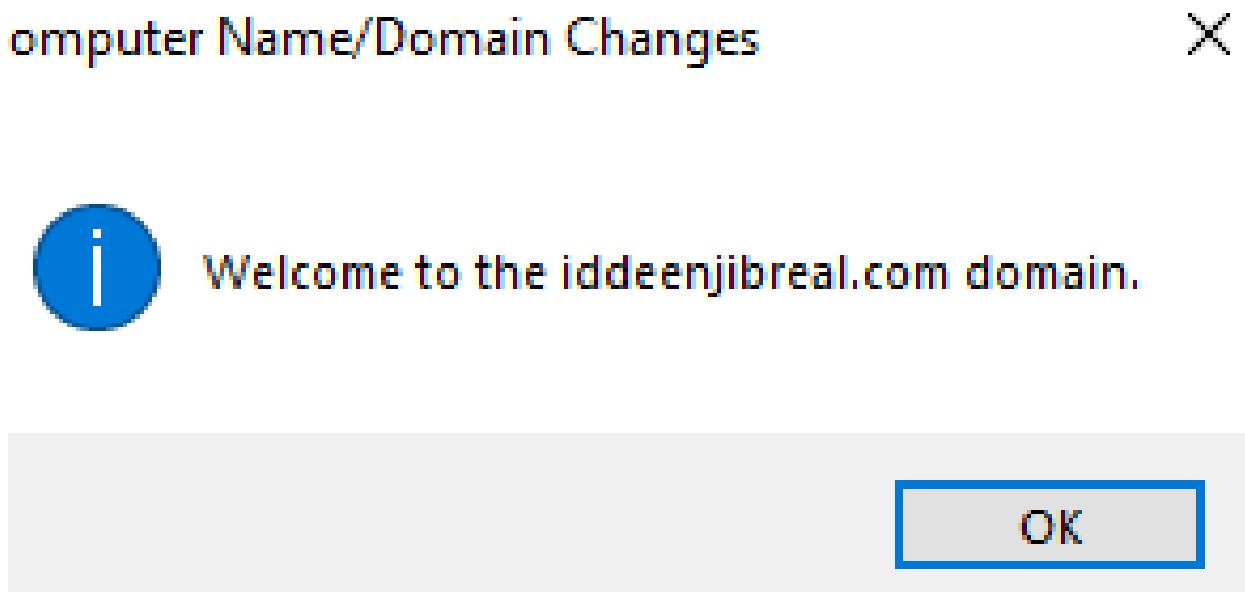
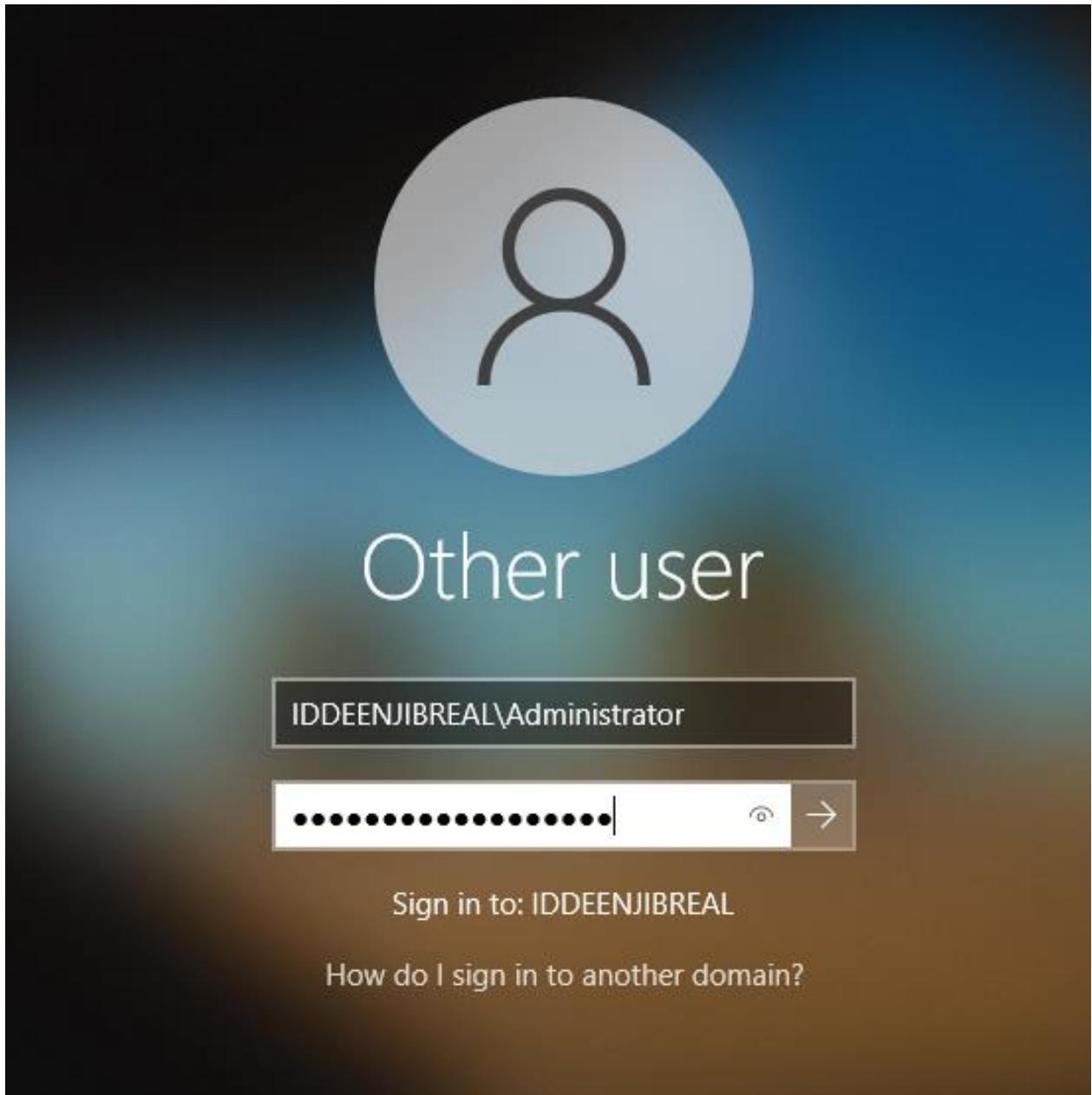


FIGURE 113 - SUCCESSFULLY JOINED THE DOMAIN



**FIGURE 114 - LOG OUT FROM THE WS 10 ACCOUNT**



**FIGURE 115 - LOG IN WITH ADMINISTRATOR STATUS**

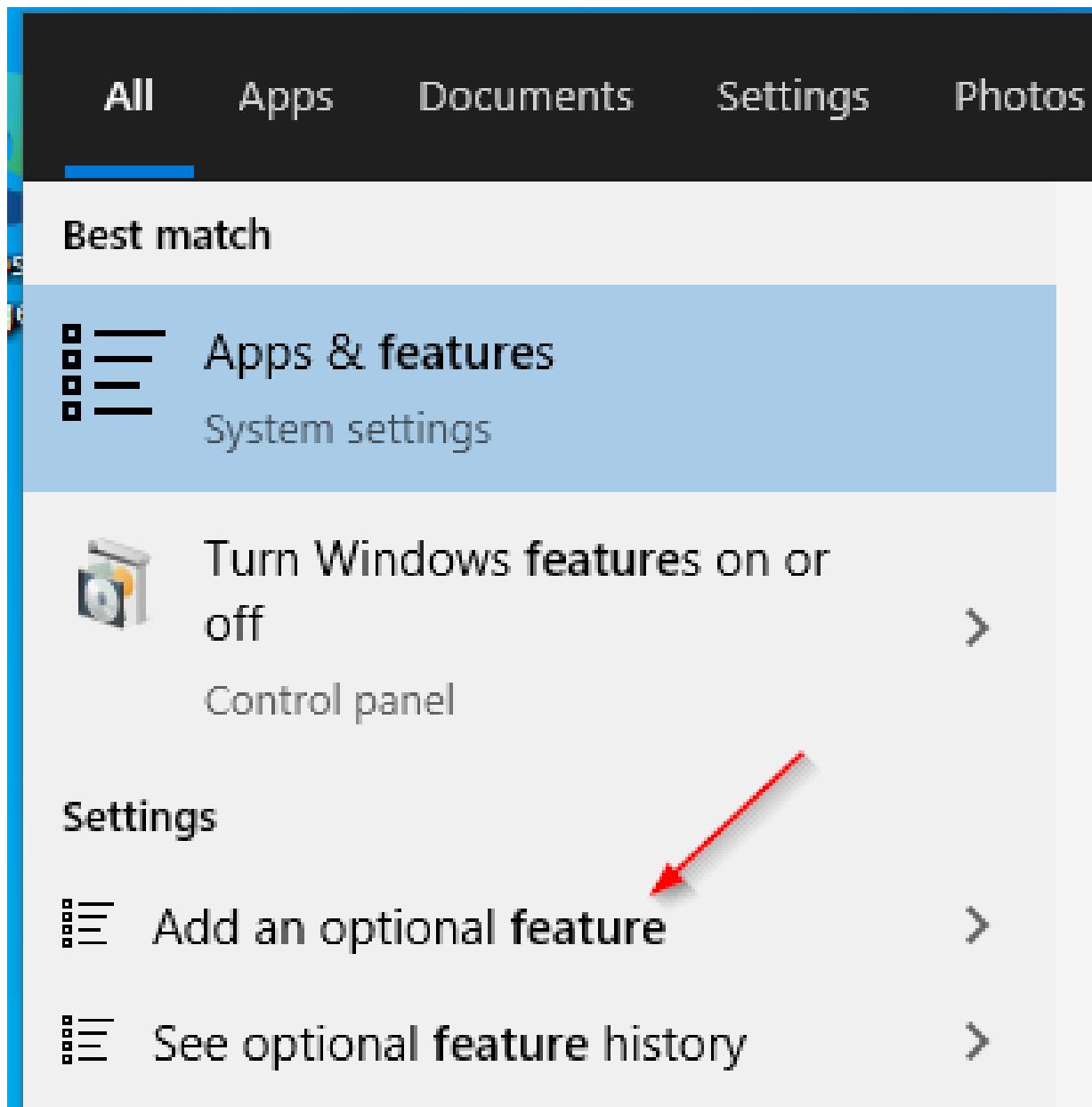


FIGURE 116 - ON WS 10 SEARCH, CLICK "ADD AN OPTIONAL FEATURE"

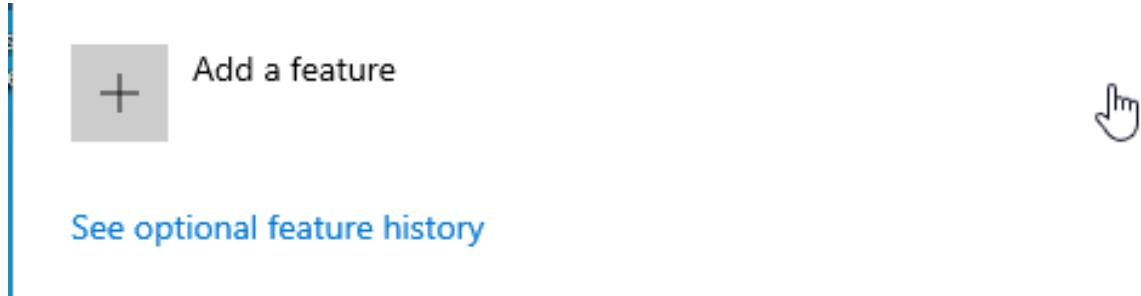


FIGURE 117 - ADD A FEATURE

# Add an optional feature

RSAT

FIGURE 118 - TYPE "RSAT" TO ADD AN OPTIONAL FEATURE

|  |   |   |         |
|--|---|---|---------|
| <input type="checkbox"/>   |    | RSAT: Active Directory Certificate Services Tools                               | 1.49 MB |
| <input checked="" type="checkbox"/>  |    | RSAT: Active Directory Domain Services and Lightweight Directory Services Tools | 4.98 MB |
| <input type="checkbox"/>   |  | RSAT: BitLocker Drive Encryption Administration Utilities                       | 41.9 KB |
| <input checked="" type="checkbox"/>  |  | RSAT: DHCP Server Tools   | 1.57 MB |
| DHCP Server Tools include the DHCP MMC snap-in, DHCP server netsh context and Windows PowerShell module for DHCP Server. |   |   |         |
| <input checked="" type="checkbox"/>  |  | RSAT: DNS Server Tools  | 1.27 MB |

FIGURE 119 - SELECT ALL OF THE REQUIRED RSAT SERVICES

## Latest actions

|   |   |            |
|---|---|------------|
|  | RSAT: DNS Server Tools  | Installing |
|  | RSAT: Active Directory Domain Services and Lightweight Directory Services Tools | Installing |
|  | RSAT: DHCP Server Tools   | Installing |

**FIGURE 120 – INSTALLING**



**FIGURE 121 - SELECT ANOTHER RSAT SERVICE**

## Latest actions

|   |  |           |
|---|--|-----------|
|  | RSAT: Server Manager   | Installed |
|  | RSAT: DNS Server Tools   | Installed |
|  | RSAT: Active Directory Domain Services and<br>Lightweight Directory Services Tools | Installed |
|  | RSAT: DHCP Server Tools  | Installed |

**FIGURE 122 - INSTALLATION SUCCESSFULLY**

## WELCOME TO SERVER MANAGER

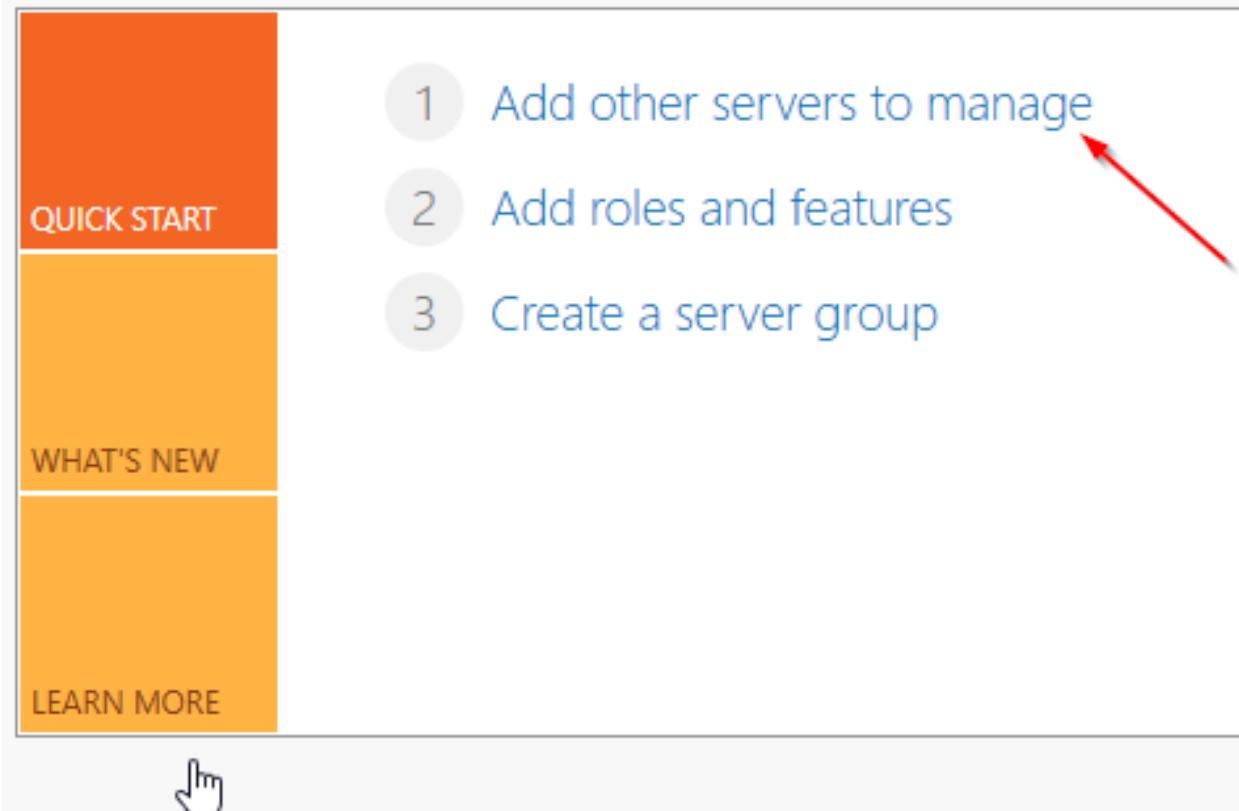


FIGURE 123 - CLICK "ADD OTHER SERVERS TO MANAGE"

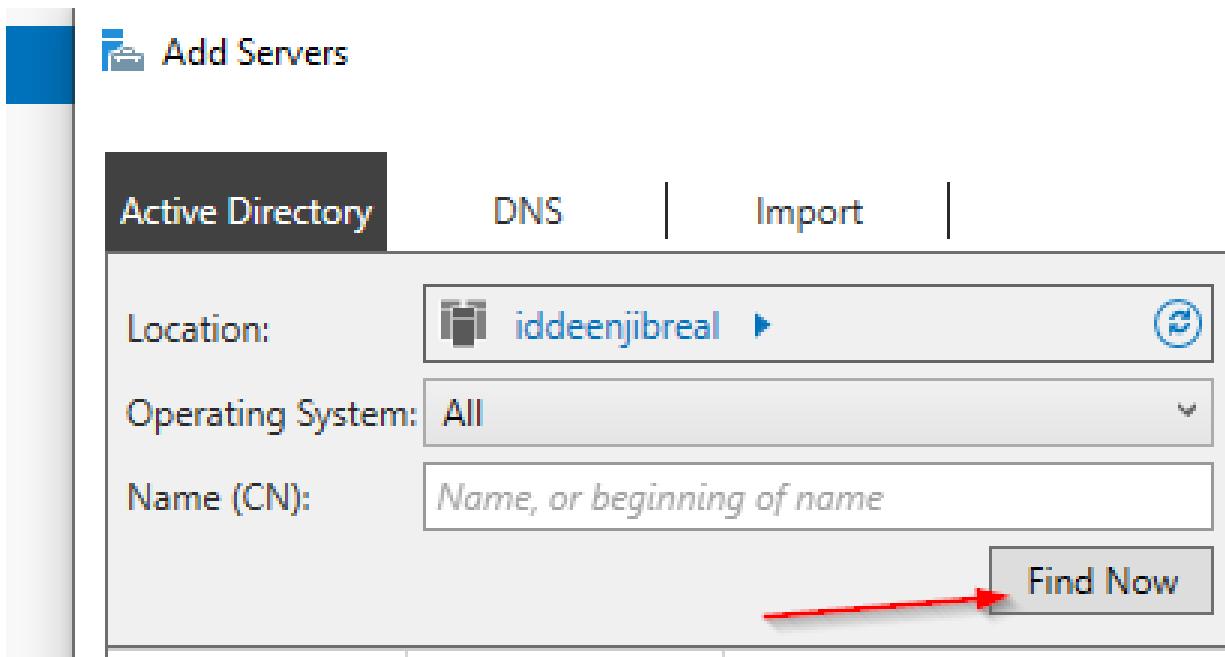


FIGURE 124 - CLICK "FIND NOW"

| Name         | Operating System             |
|--------------|------------------------------|
| Iddeen19Dell | Windows Server 2019 Standard |
| Iddeen19VM1  | Windows Server 2019 Standard |
| FSA-Server01 | Windows Server 2019 Standard |
| IddeenWS10   | Windows 10 Pro               |

FIGURE 125 - INVITE THOSE OS TO JOIN THE SERVER

## Selected

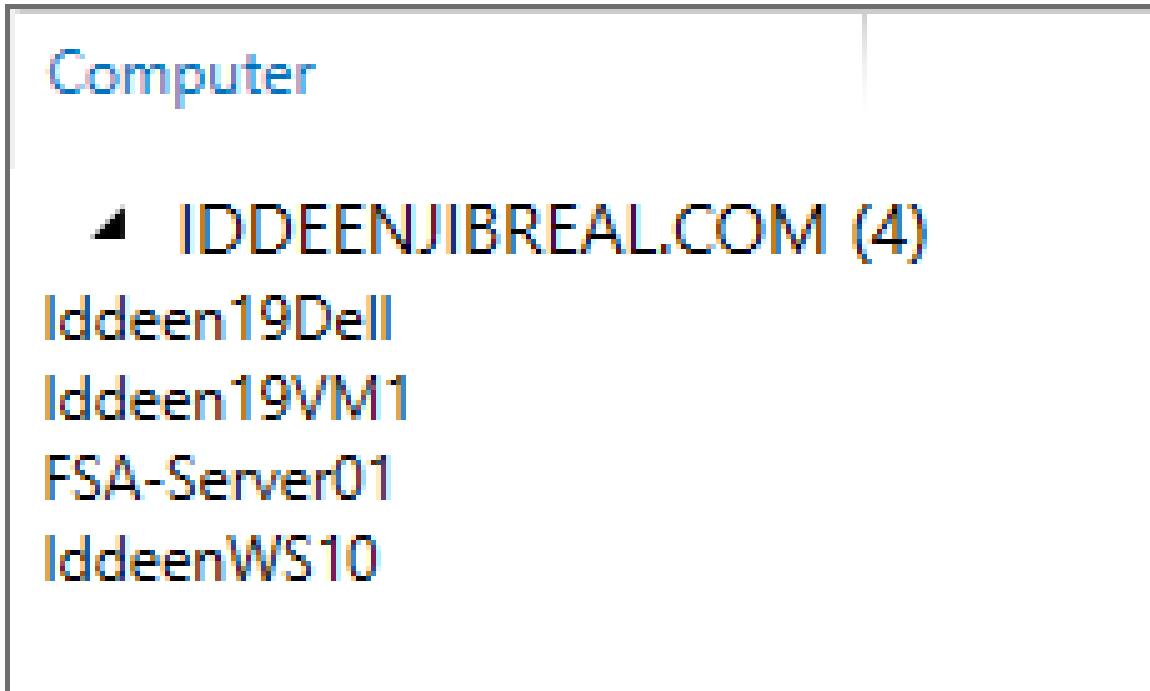


FIGURE 126 - INVITE SUCCESSFULLY

| Servers               |                              |   |                       |                    | TASKS |
|-----------------------|------------------------------|---|-----------------------|--------------------|-------|
| All servers   3 total |                              |   |                       |                    | ▼     |
| Server Name           | IPv4 Address                 | Manageability                             | Last Update           | Windows Activation | ▼     |
| FSA-SERVER01          | 192.168.130.15               | Online - Performance counters not started | 10/23/2025 5:34:57 PM | Not activated      |       |
| IDDEEN19DELL          | 169.254.207.9,192.168.130.50 | Online - Performance counters not started | 10/23/2025 5:34:30 PM | Not activated      |       |
| IDDEEN19VM1           | 192.168.130.14               | Online - Performance counters not started | 10/23/2025 5:34:30 PM | Not activated      |       |

FIGURE 127 - ALL OF THE SERVERS ARE ONLINE SUCCESSFULLY

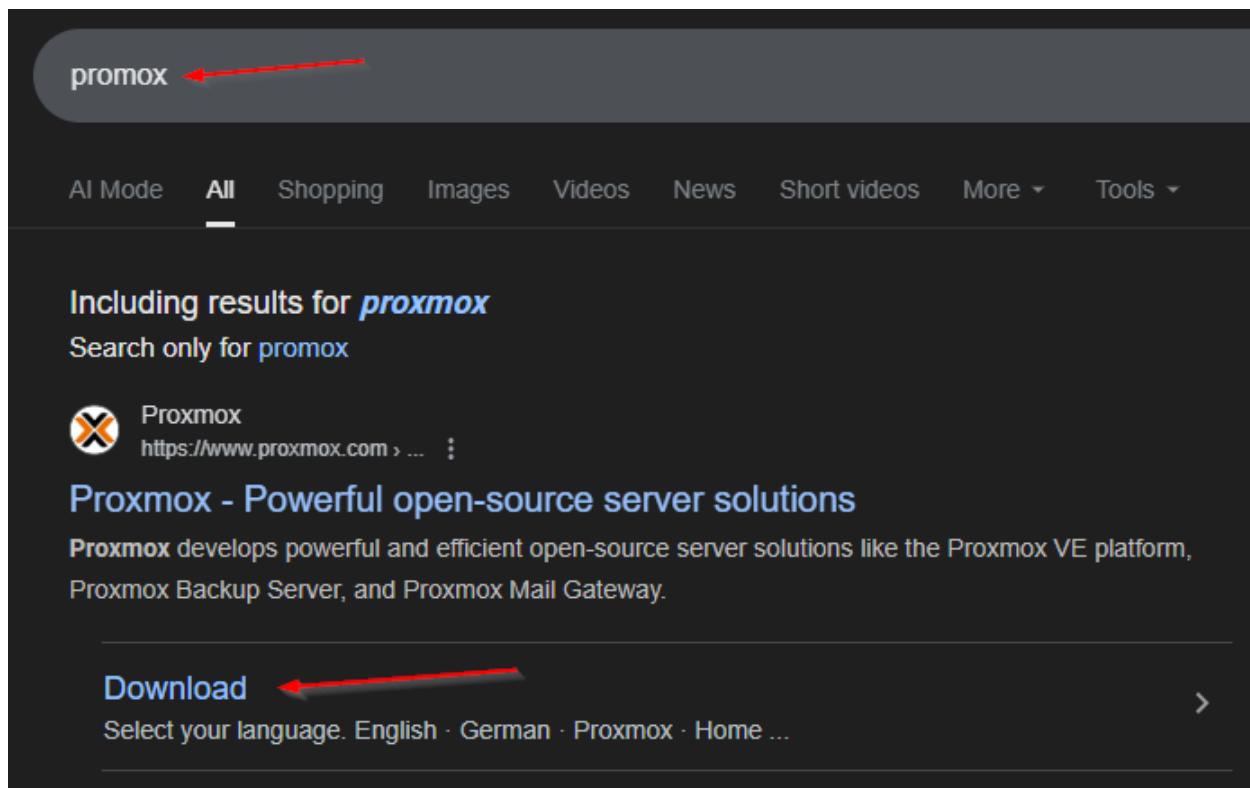


FIGURE 128 - TYPE "PROXMOX" ON THE GOOGLE

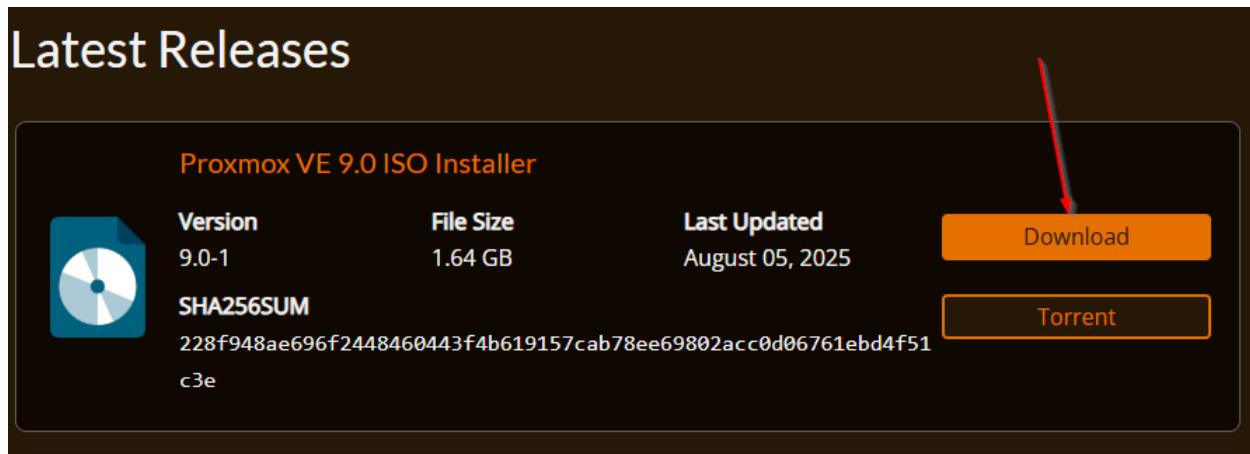


FIGURE 129 - DOWNLOAD IT

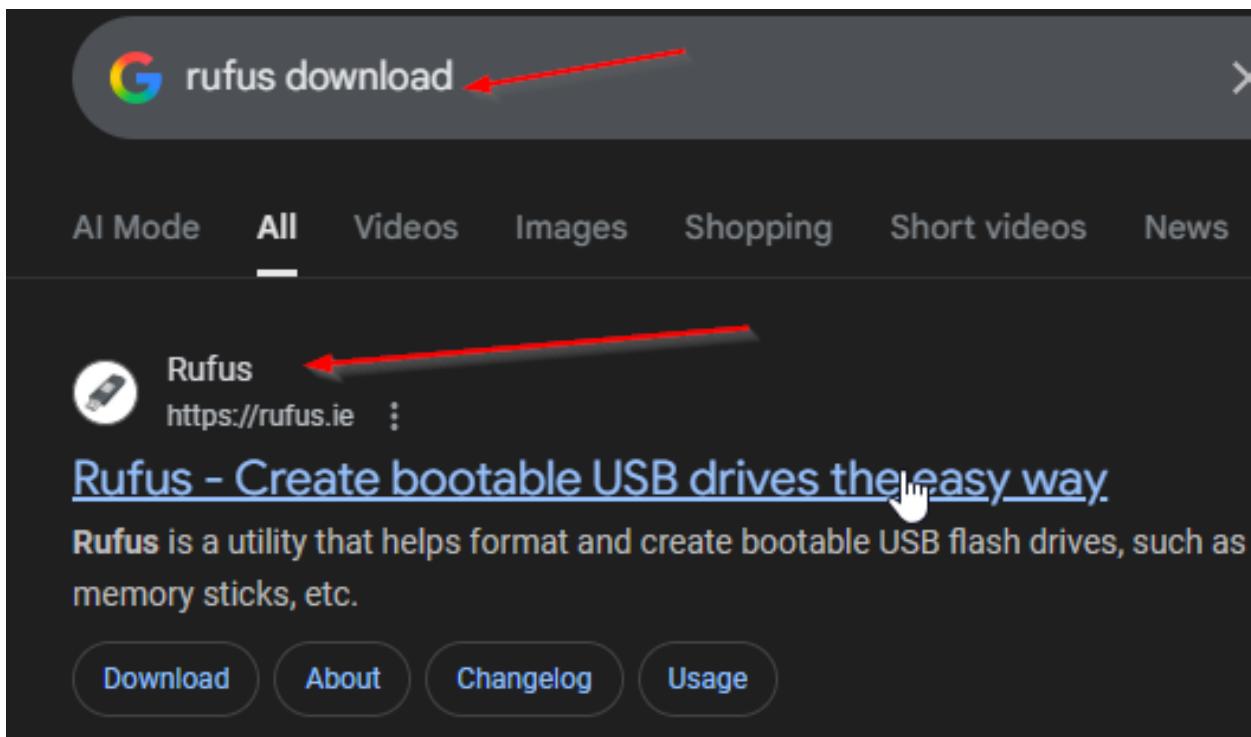


FIGURE 130 - TYPE "RUFUS" ON THE GOOGLE

| Latest releases:                     |          |               |        |            |
|--------------------------------------|----------|---------------|--------|------------|
| Link                                 | Type     | Platform      | Size   | Date       |
| <a href="#">rufus-4.11.exe</a>       | Standard | Windows x64   | 1.8 MB | 2025.10.02 |
| <a href="#">rufus-4.11p.exe</a>      | Portable | Windows x64   | 1.8 MB | 2025.10.02 |
| <a href="#">rufus-4.11_x86.exe</a>   | Standard | Windows x86   | 1.8 MB | 2025.10.02 |
| <a href="#">rufus-4.11_arm64.exe</a> | Standard | Windows ARM64 | 4.9 MB | 2025.10.02 |

FIGURE 131 - DOWNLOAD IT

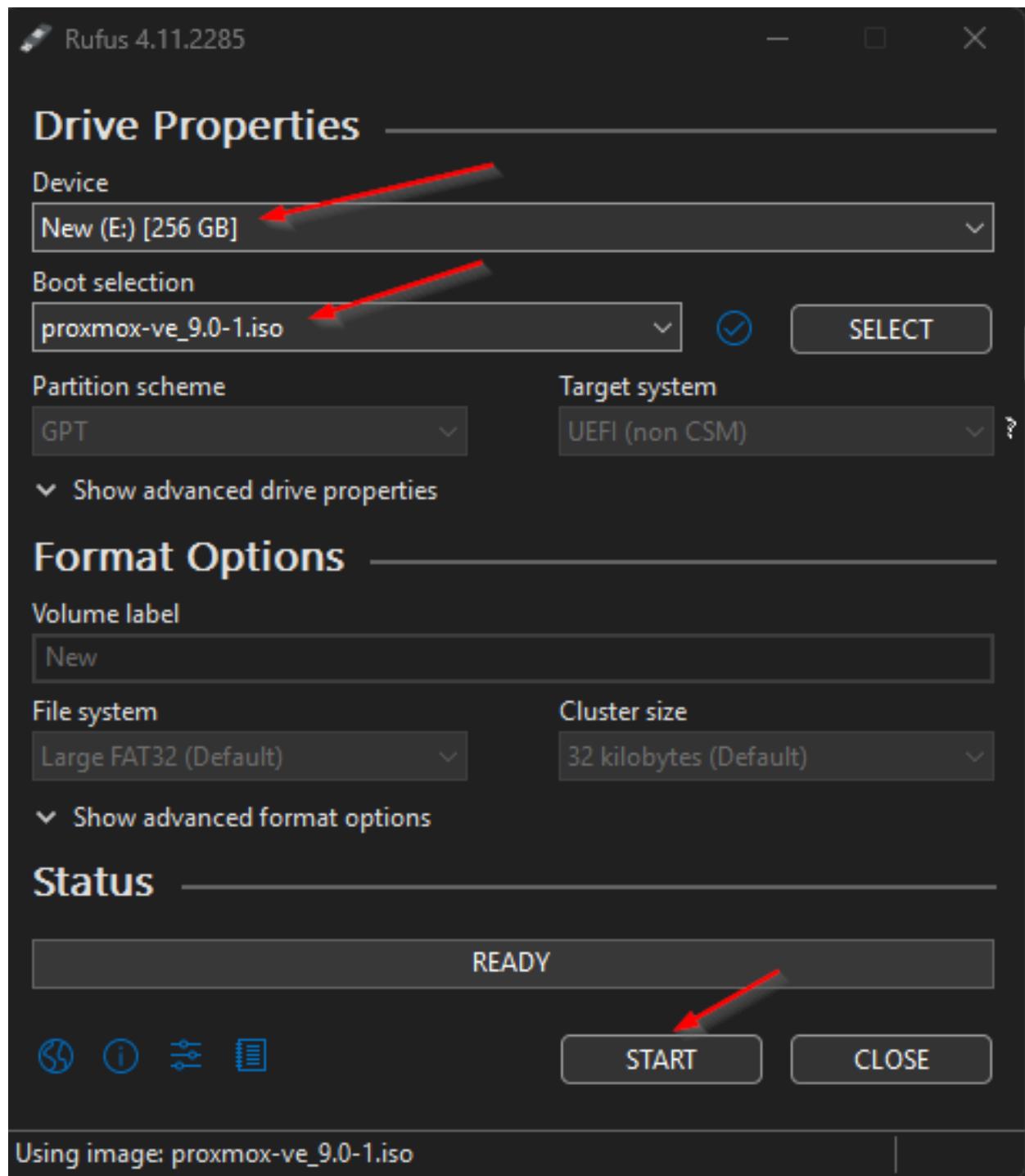


FIGURE 132 - USE USB TO BOOT PROXMOX AND CLICK "START"

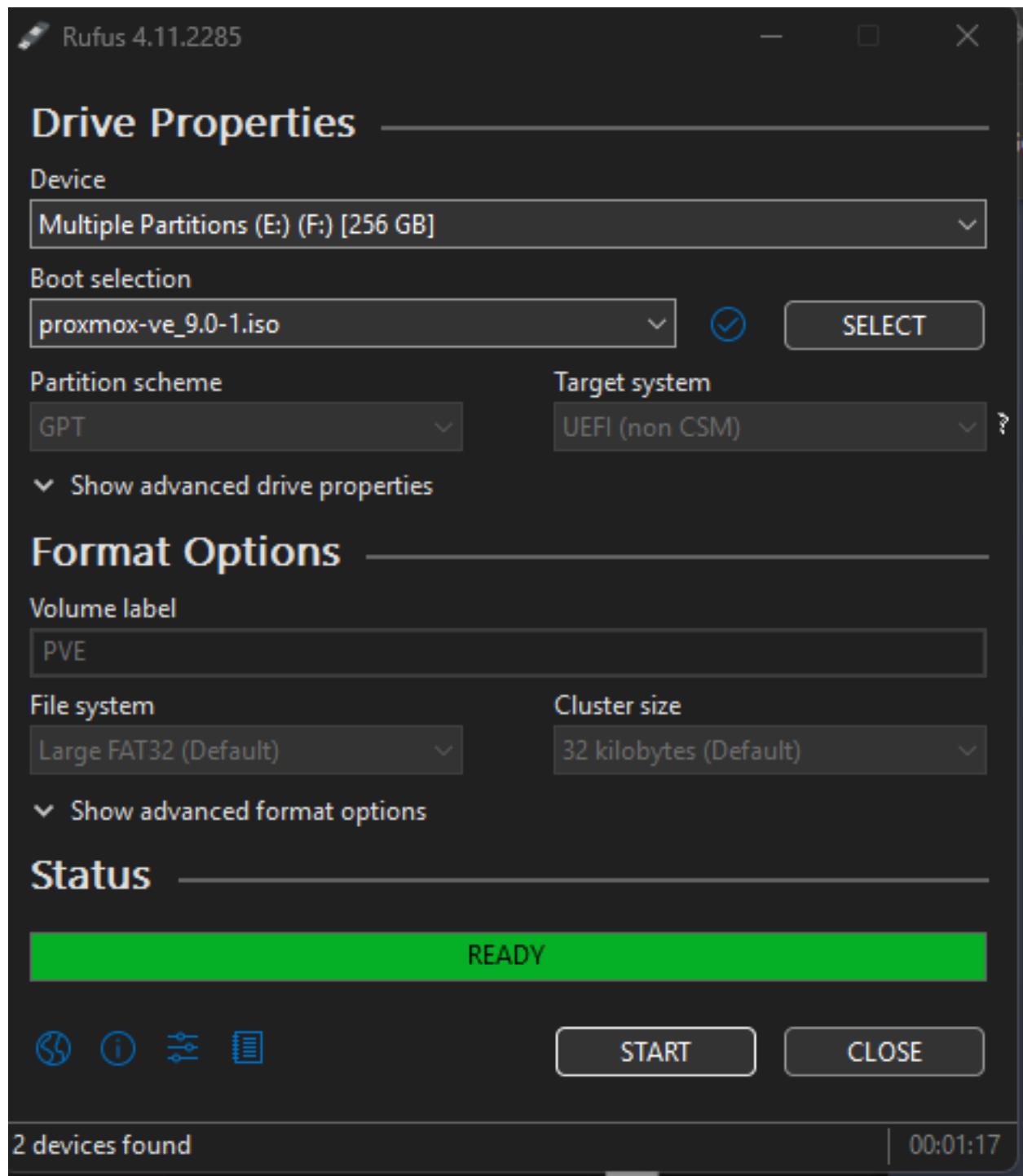
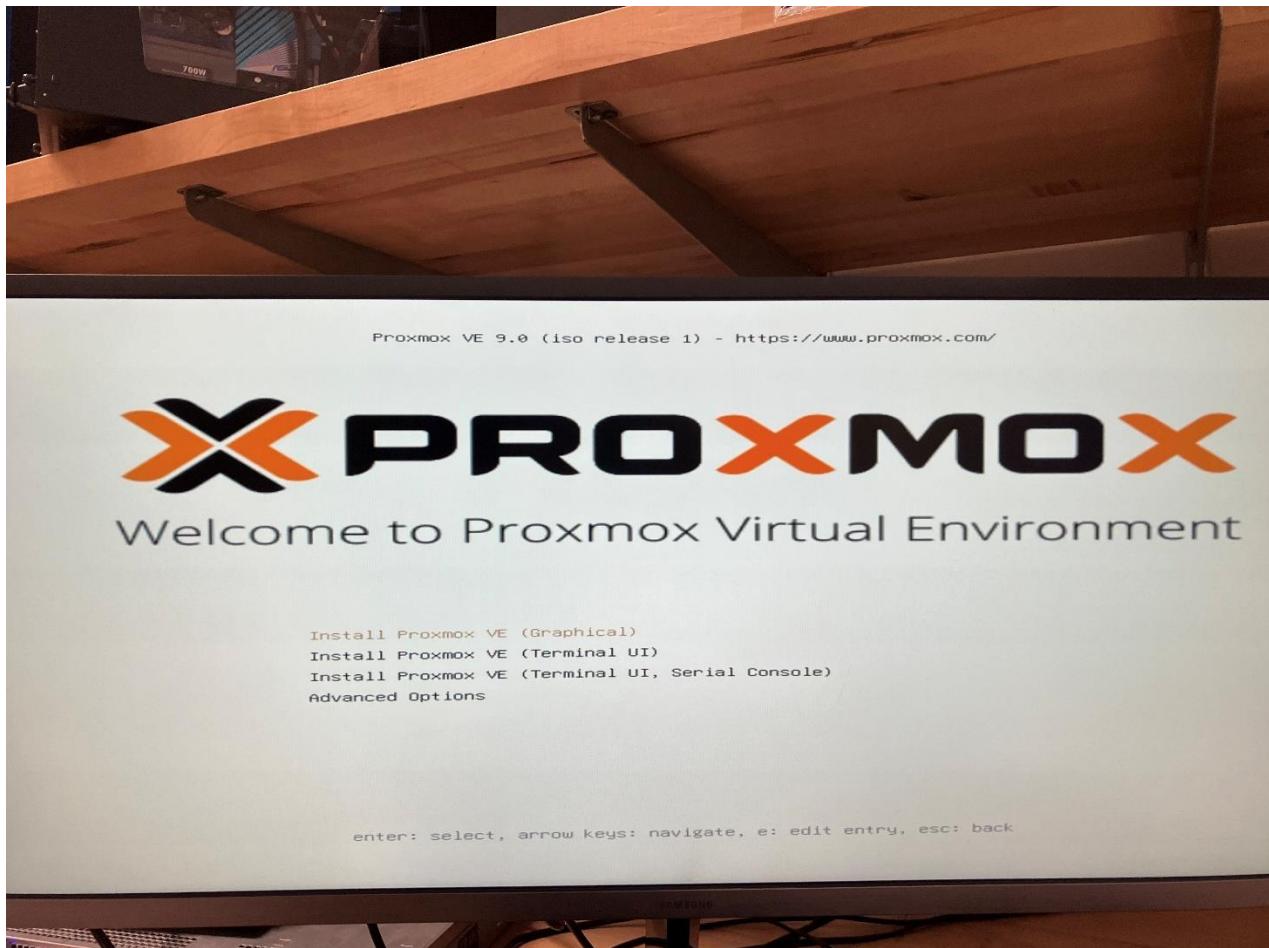


FIGURE 133 - READY TO BOOT



**FIGURE 134 - PROXMOX BOOT COMPLETED!**

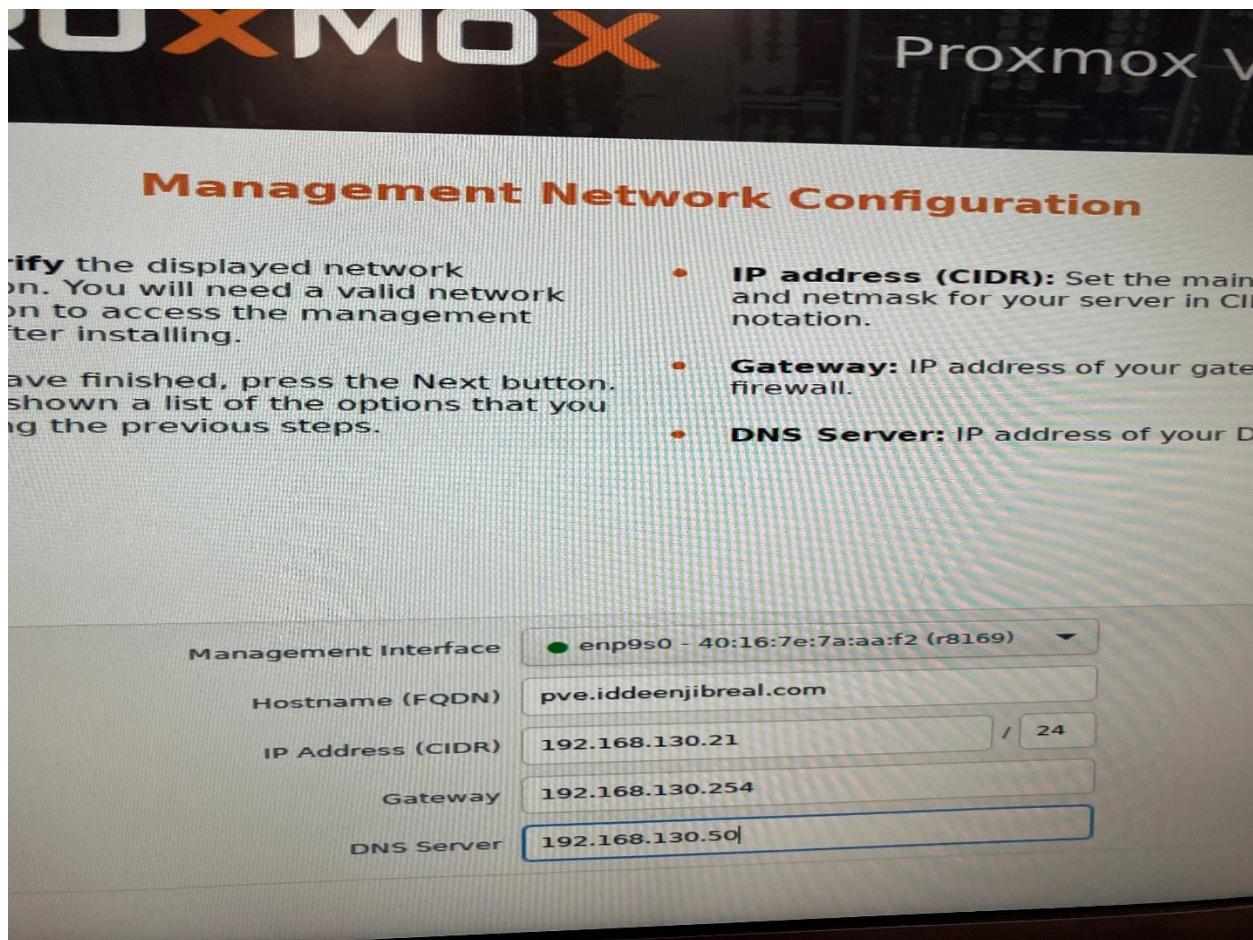


FIGURE 135 - SET THE REQUIRED IPv4 ADDRESS AND DNS SERVER MANUALLY ON IT

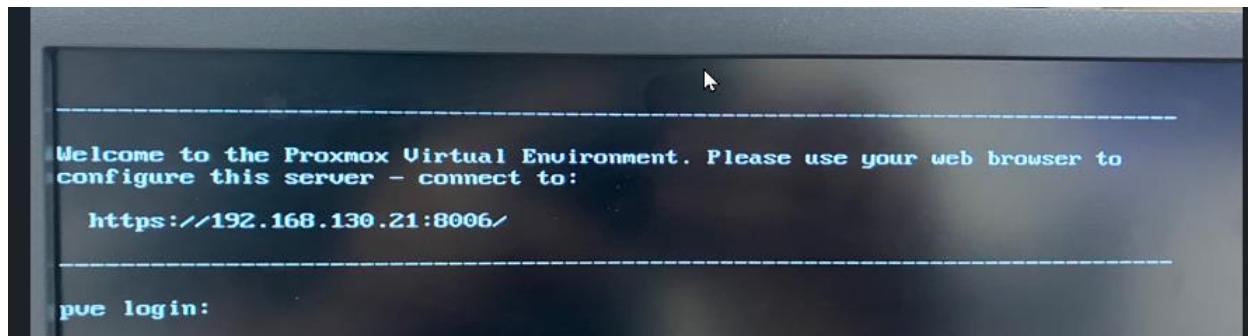


FIGURE 136 - USE THIS SERVER URL TO CONFIGURE

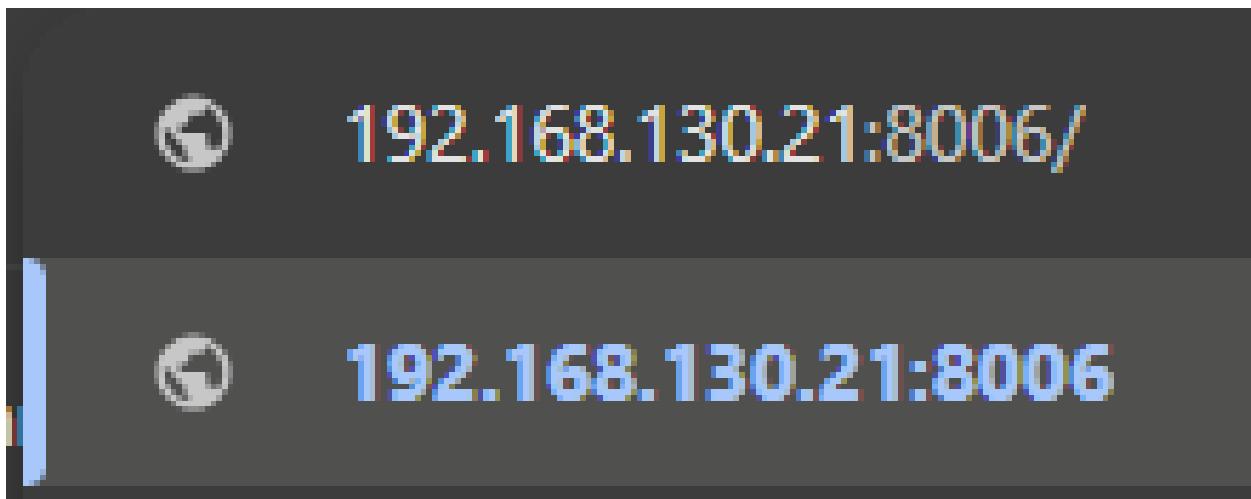


FIGURE 137 - USE THIS SERVER URL TO GO

A screenshot of the Proxmox VE Login interface. The title "Proxmox VE Login" is at the top. Below it are four input fields: "User name:" with a text input field, "Password:" with a password input field, "Realm:" with a dropdown menu set to "Linux PAM standard authentication", and "Language:" with a dropdown menu set to "English - English". At the bottom are two buttons: "Save User name:  " and a large blue "Login" button.

FIGURE 138 - LOG IN THE PROXMOX VE

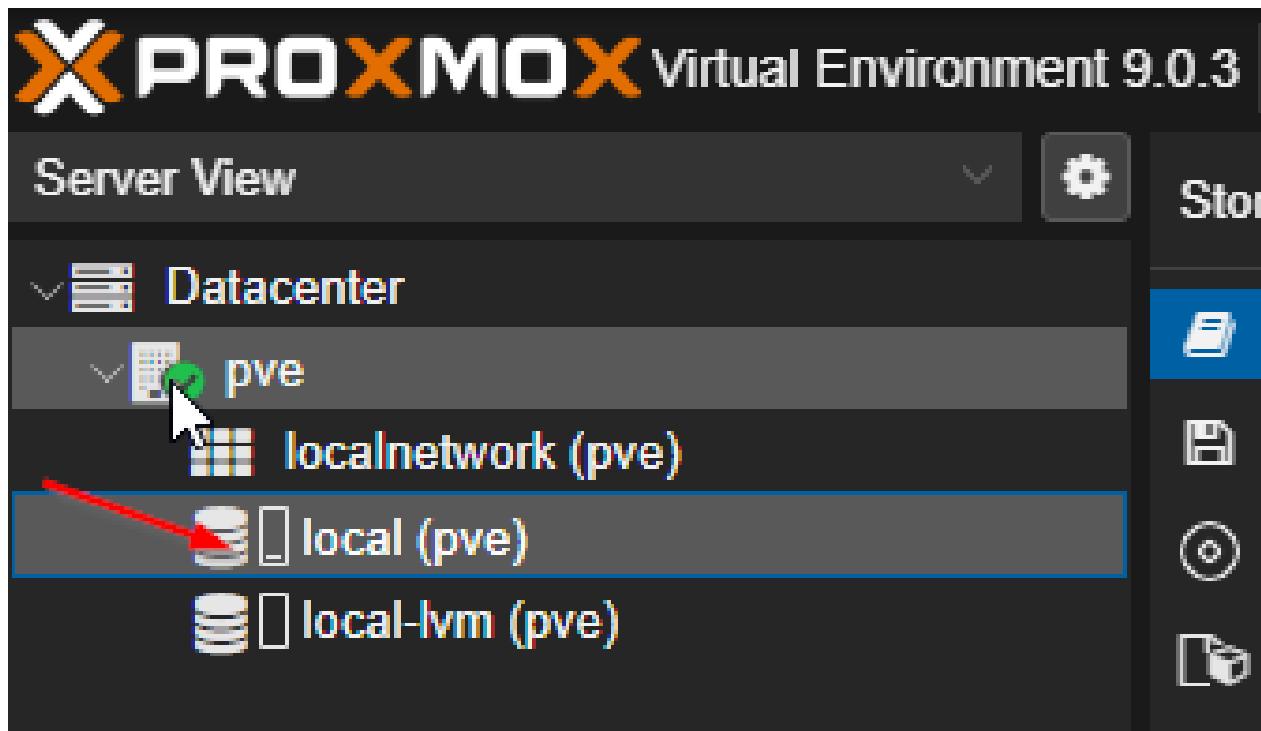


FIGURE 139 - CLICK "PVE" THEN LOCAL PVE

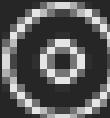
# Storage 'local' on node 'pve'



Summary



Backups



ISO Images



CT Templates



Permissions

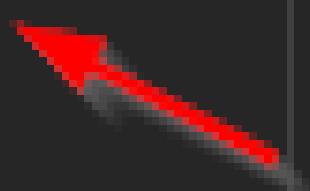


FIGURE 140 - CLICK "ISO IMAGES"

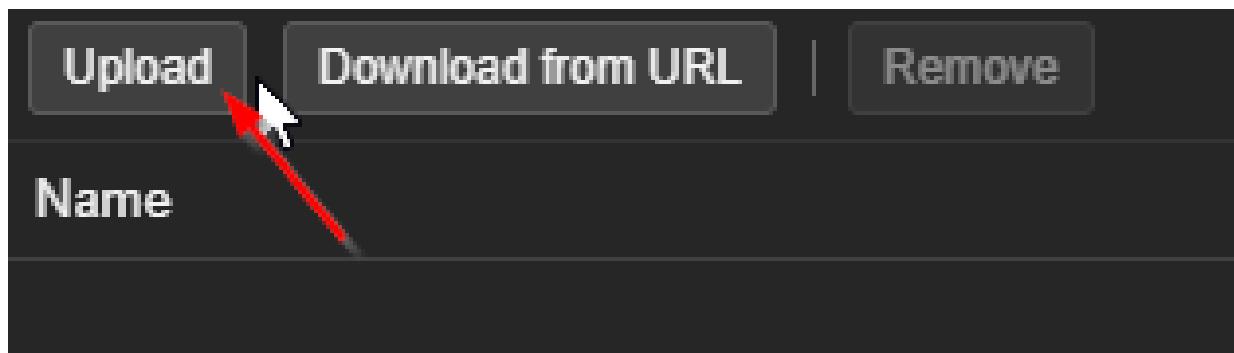


FIGURE 141 - CLICK "UPLOAD"

Upload

File: C:\fakepath\en-us\_windows\_server\_2019\_x64\_dvd\_f9471.iso Select File

File name: en-us\_windows\_server\_2019\_x64\_dvd\_f9471

File size: 5.26 GiB

MIME type: -

Hash algorithm: None

Checksum: none

Uploads are stored temporarily in '/var/tmp/' , make sure there is enough free space.

Abort Upload

FIGURE 142 - MAKE SURE TO USE WS SERVER 2019 TO UPLOAD

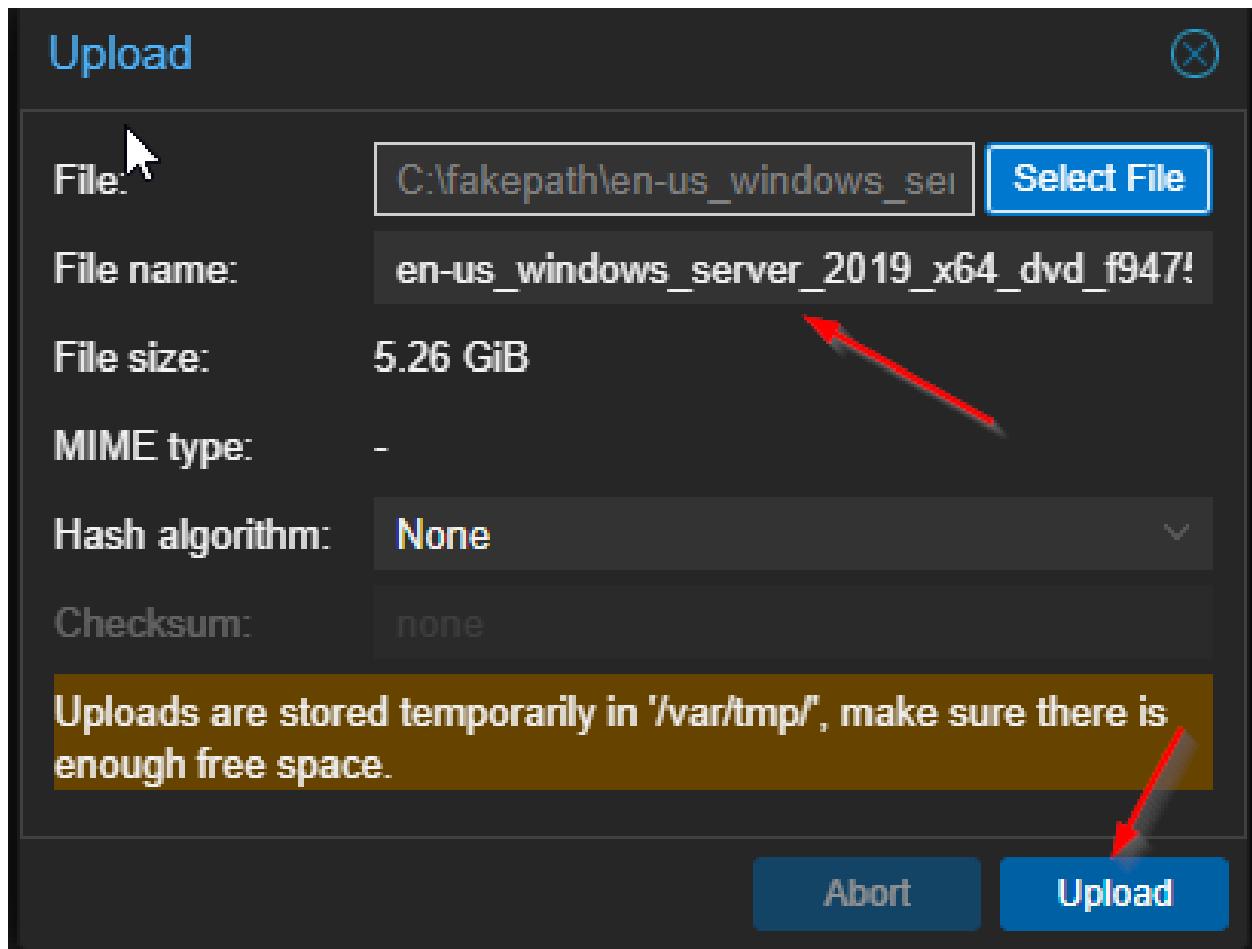


FIGURE 143 - UPLOAD ANOTHER WS 2019 SERVER AGAIN

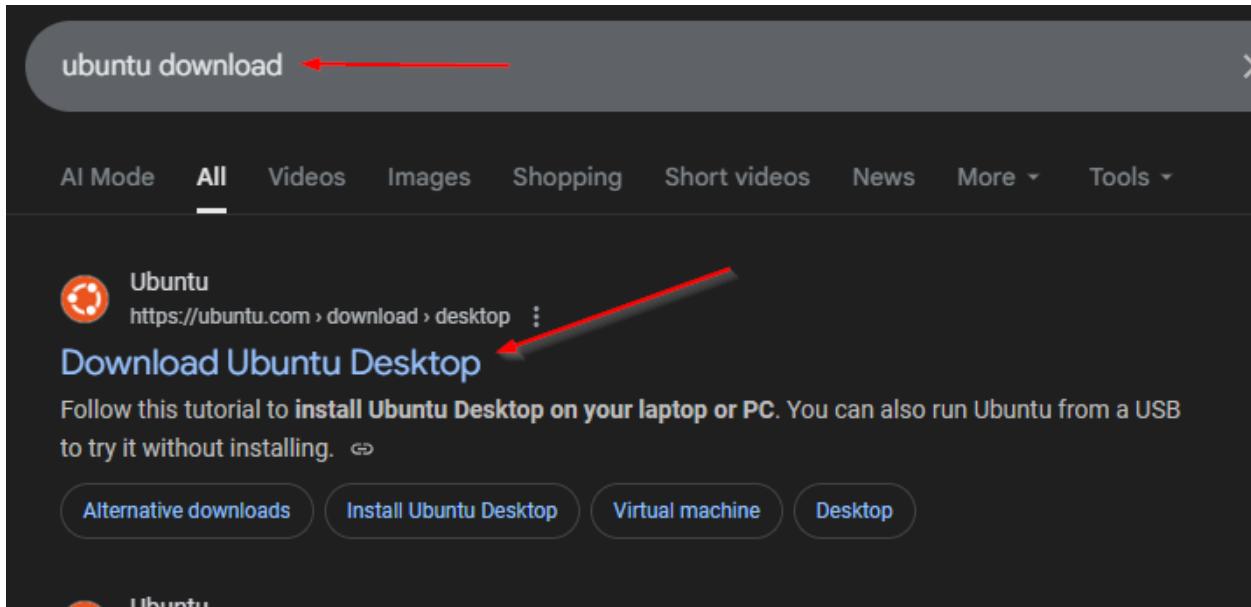


FIGURE 144 - TYPE "UBUNTU" ON GOOGLE

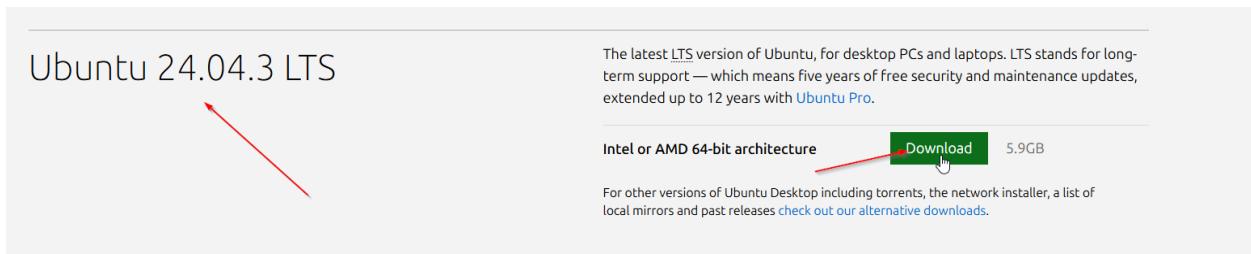


FIGURE 145 - DOWNLOAD THE LINUX

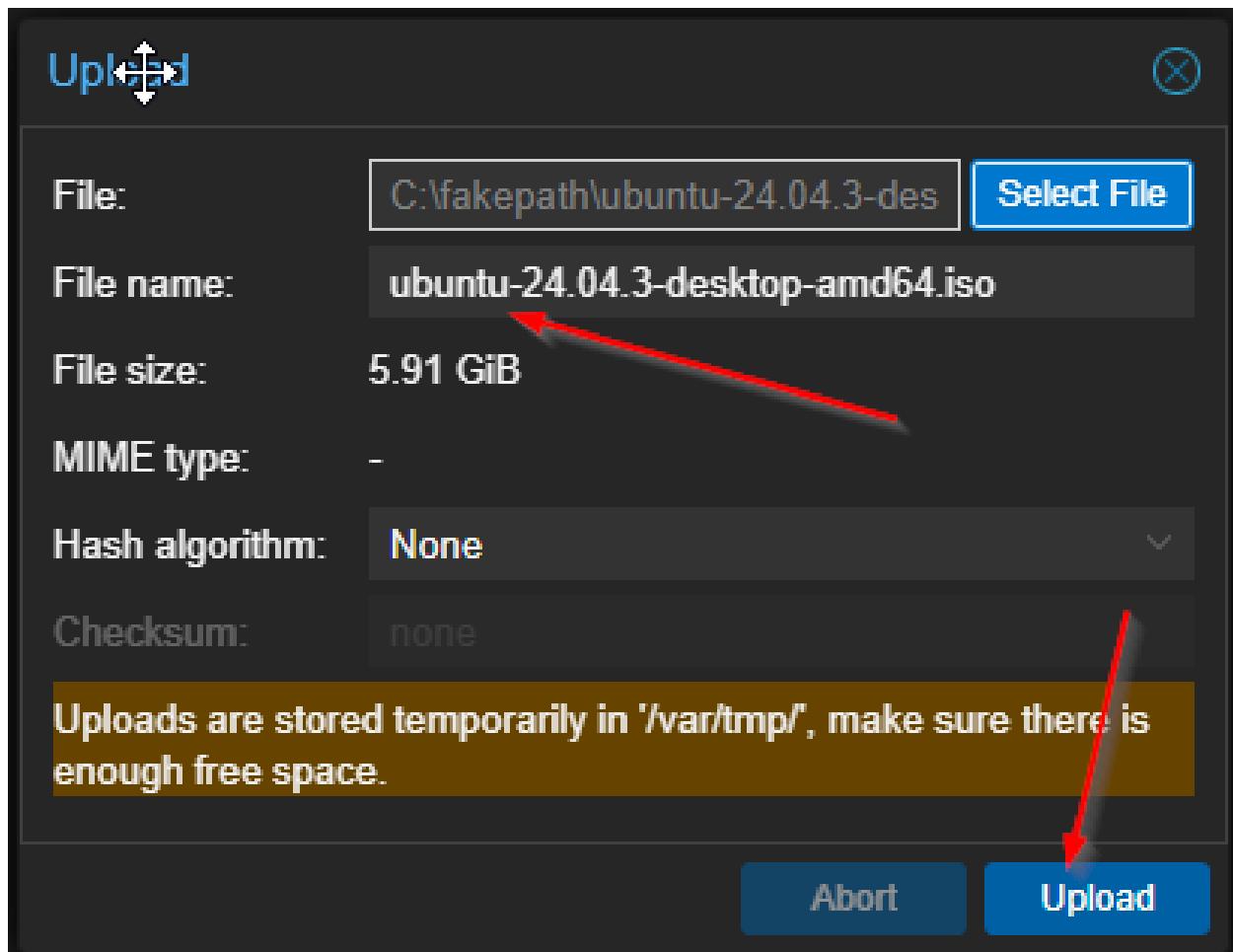


FIGURE 146 - UPLOAD THE LINUX ISO FILE



FIGURE 147 - CREATE VMS

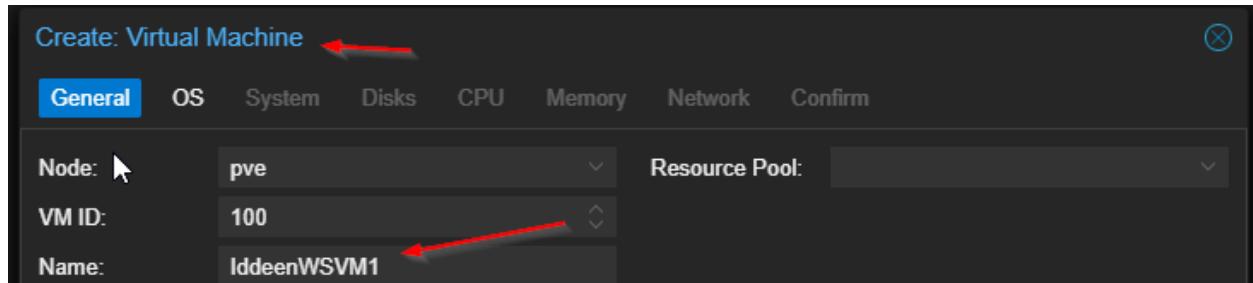


FIGURE 148 - CREATE A VM FOR WINDOWS SERVER 2019

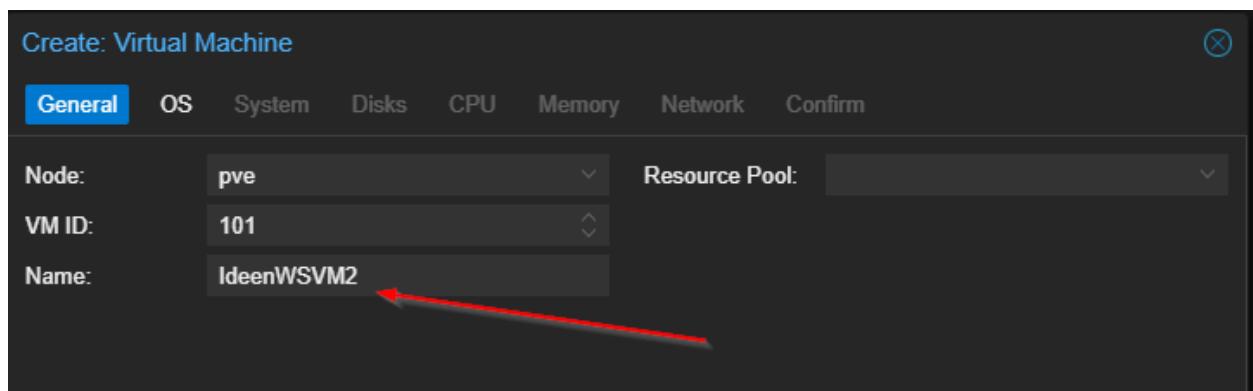


FIGURE 149 - CREATE ANOTHER VM FOR WINDOWS SERVER 2019

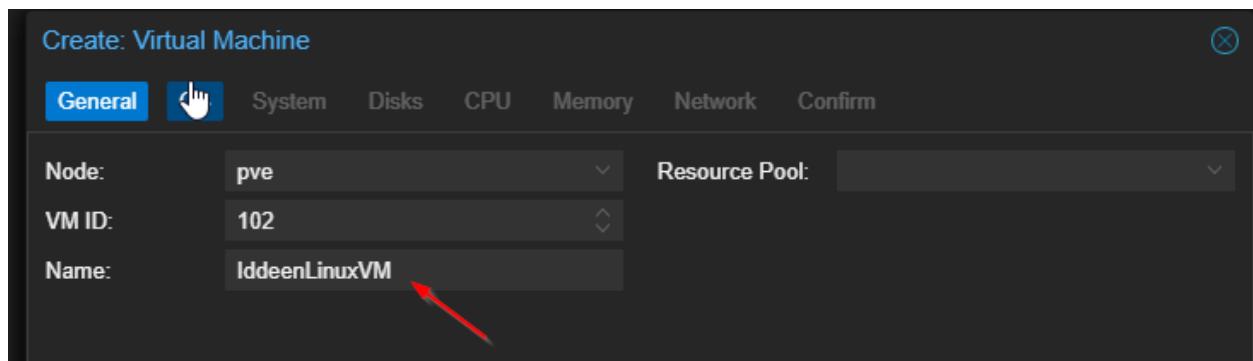


FIGURE 150 - CREATE ANOTHER VM FOR THE UBUNTU CLIENT

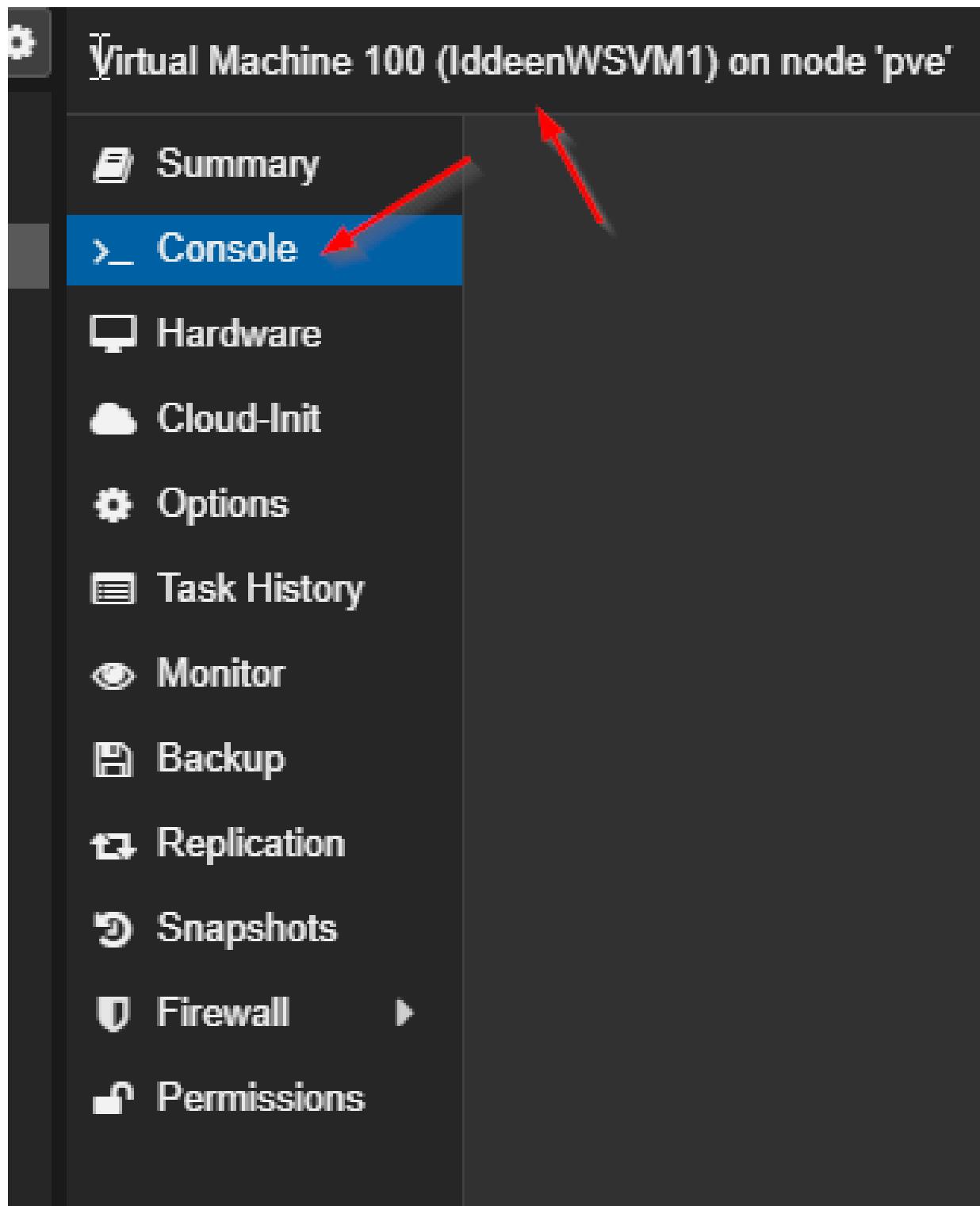
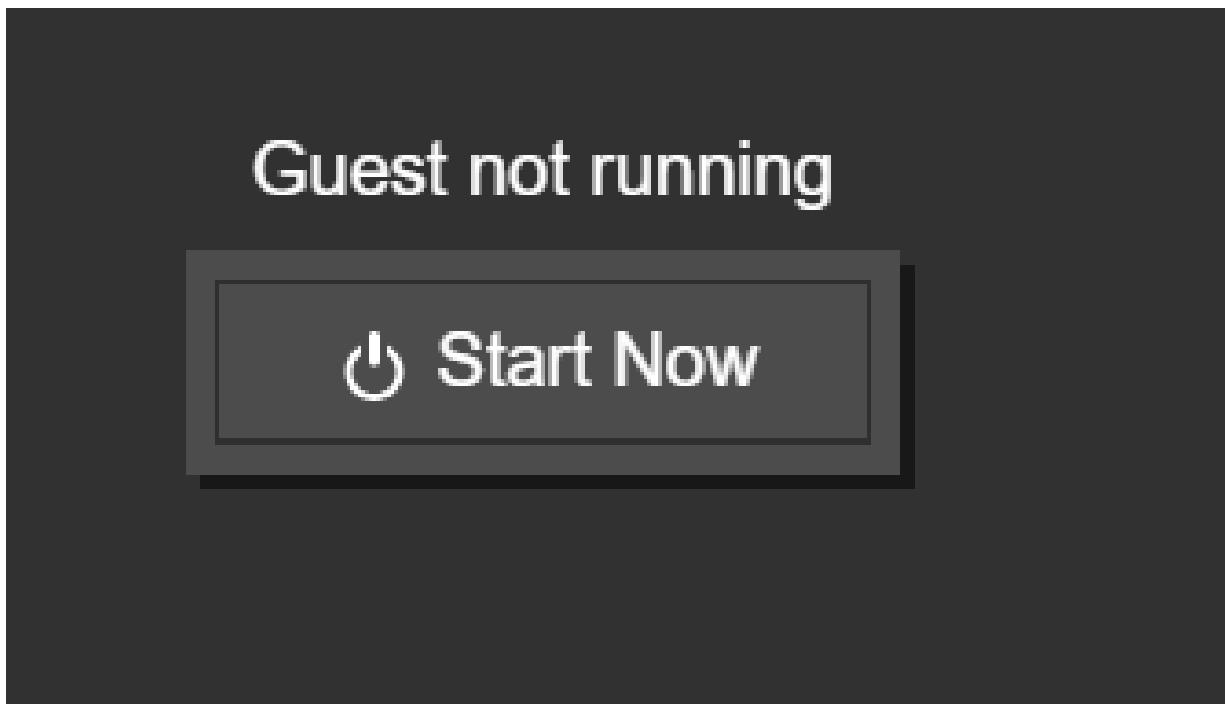
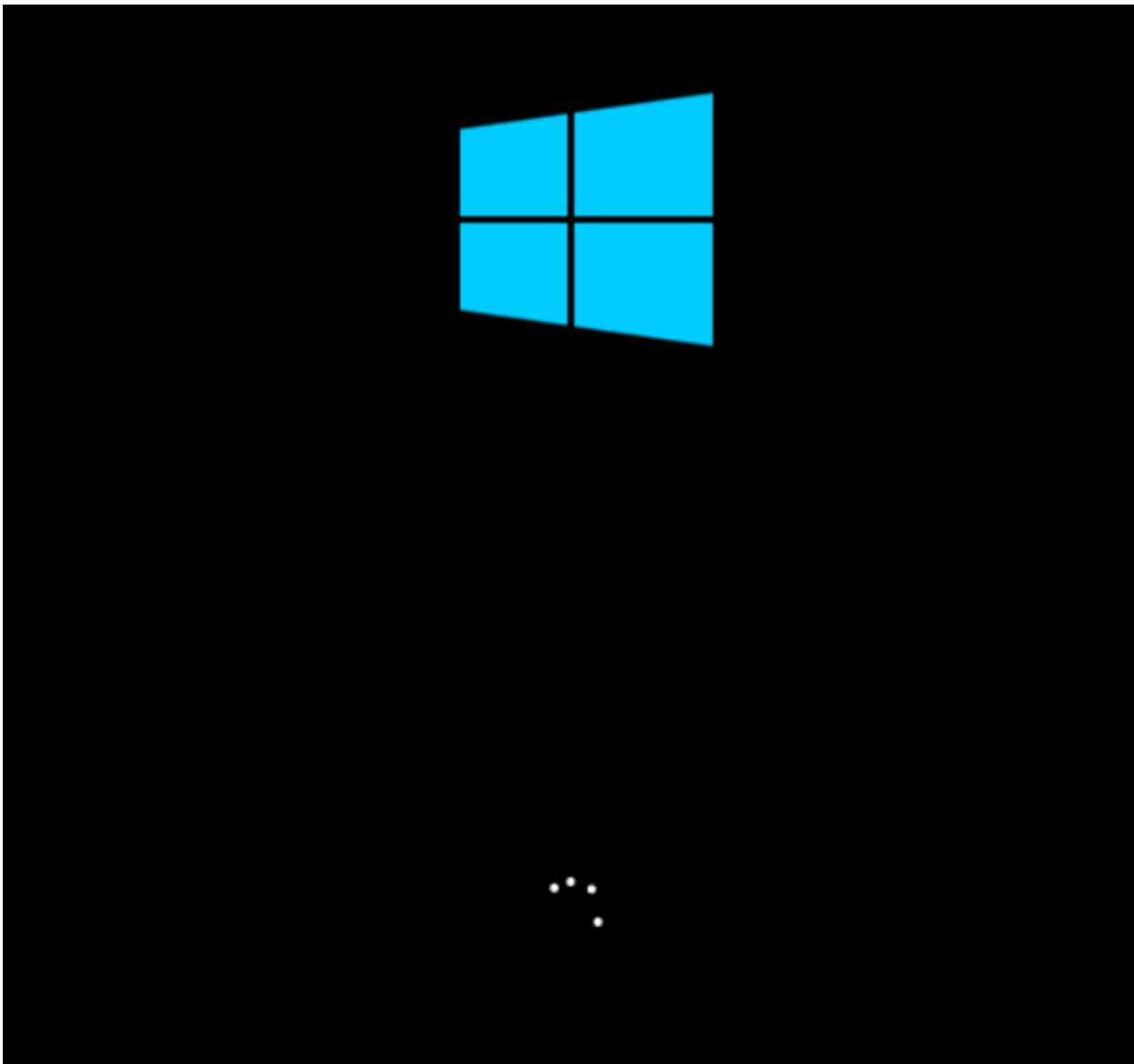


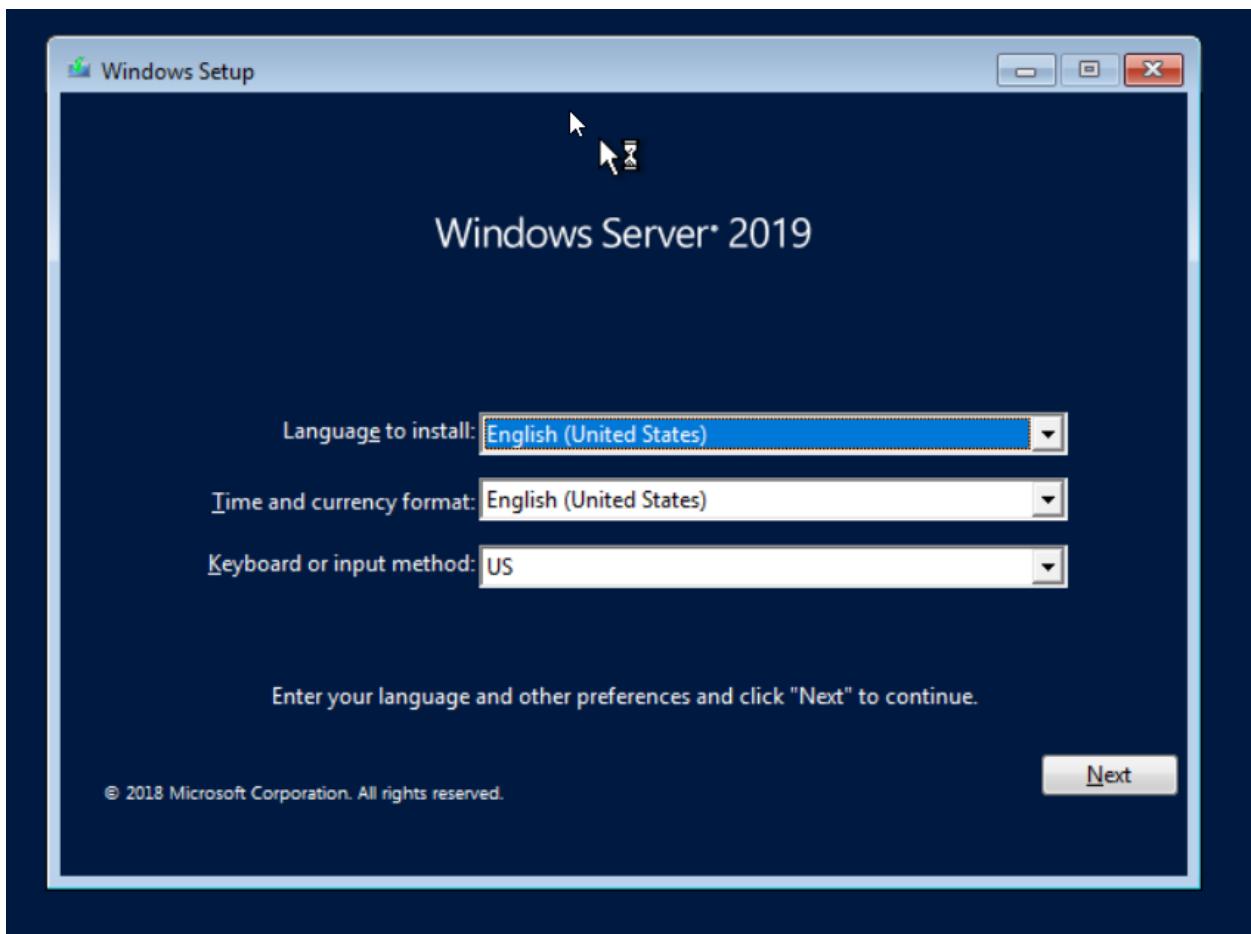
FIGURE 151 - CLICK "CONSOLE" FOR THE VM WS SERVER 2019



**FIGURE 152 - START NOW**



**FIGURE 153 - BOOT THE WINDOWS SERVER 2019 UP**



**FIGURE 154 - PROCEED WITH THE WS SERVER 2019 FOR VM1 AND VM2**

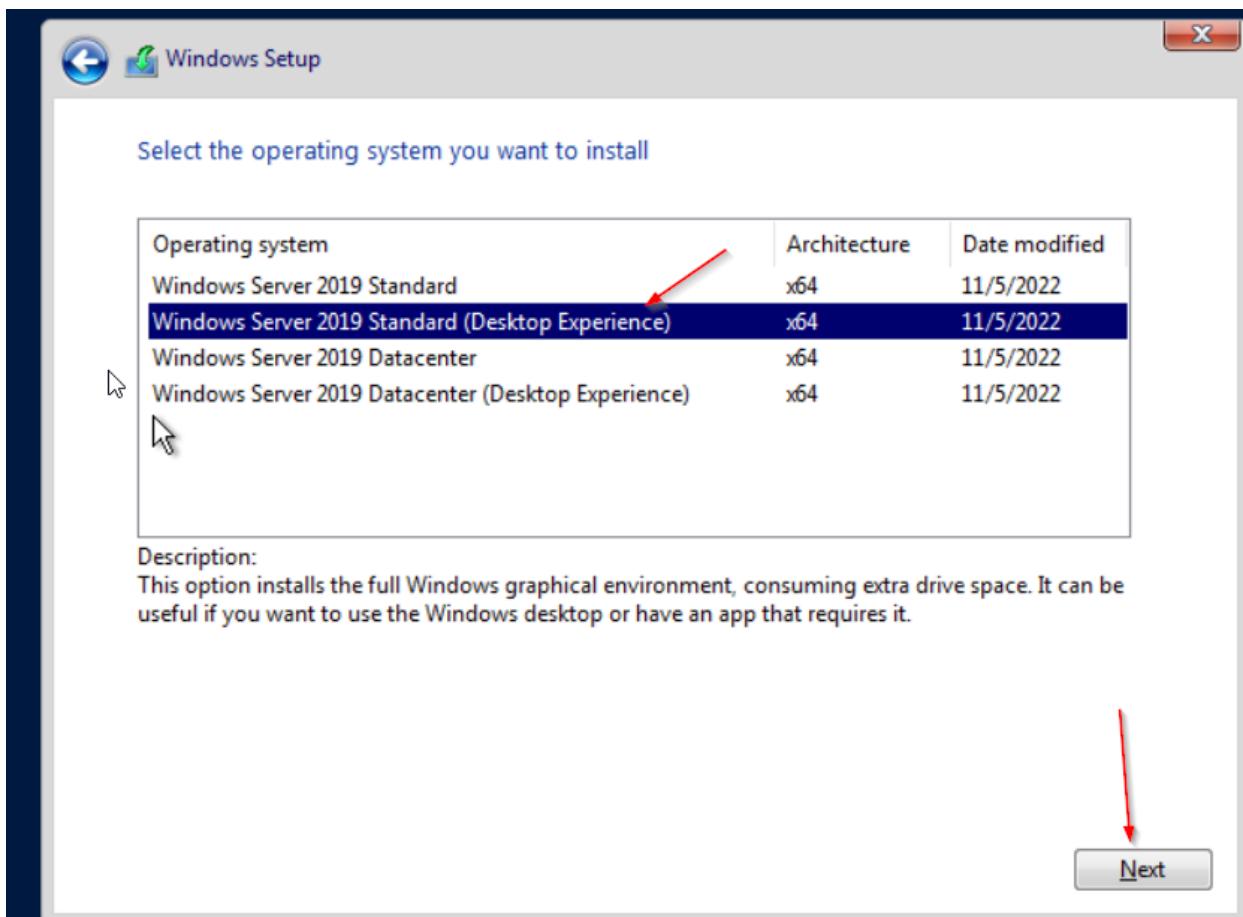


FIGURE 155 - CLICK THE VERSION WITH THE GUI

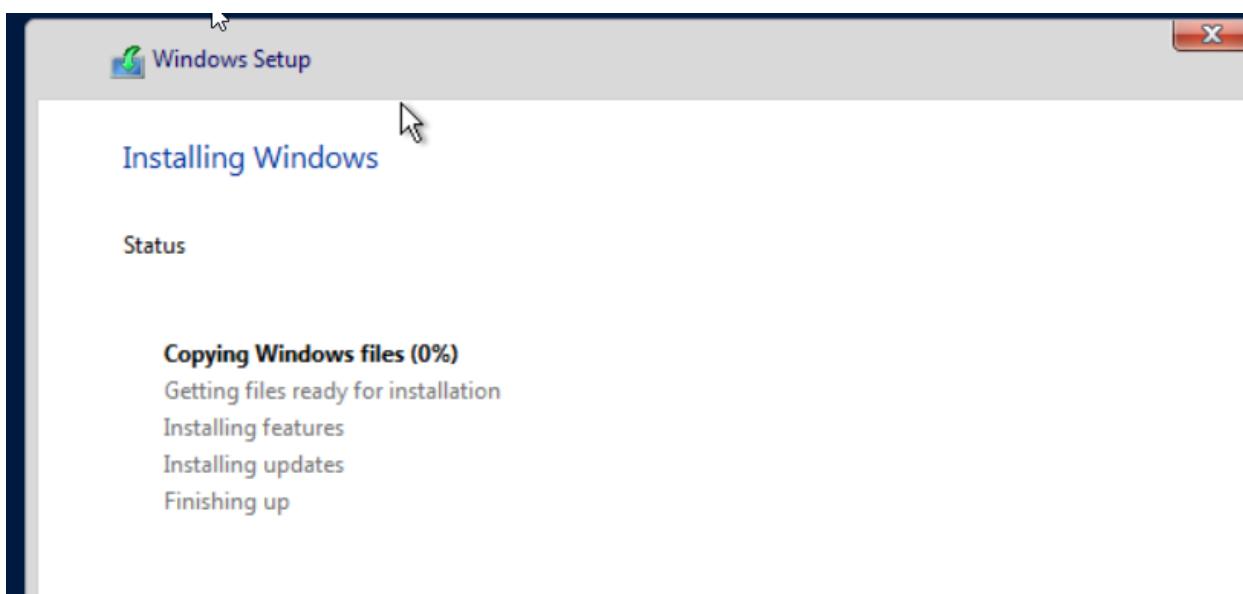


FIGURE 156 - INSTALLING WINDOWS

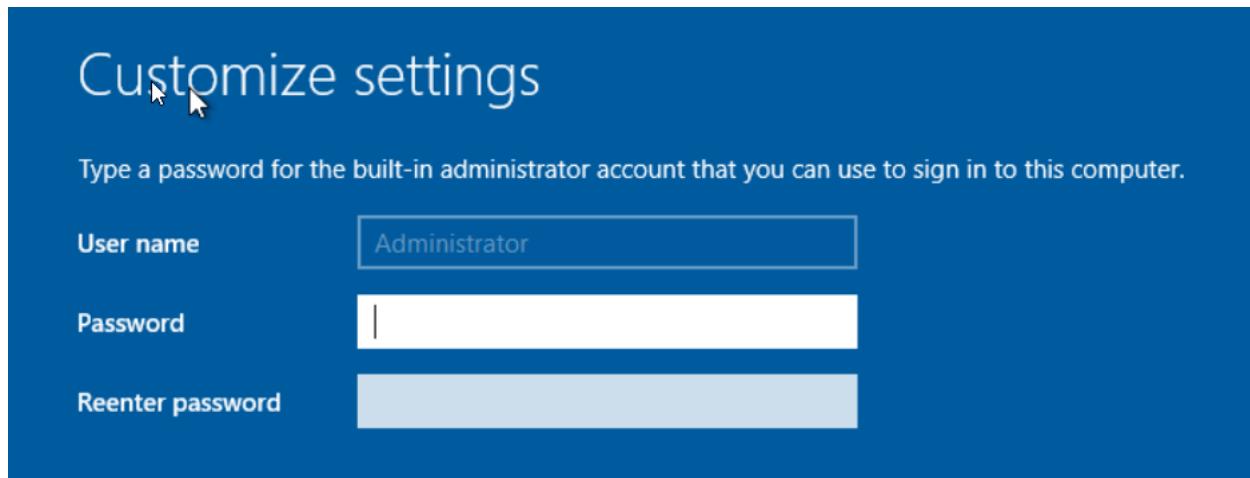


FIGURE 157 - CREATE AN ADMINISTRATOR PASSWORD

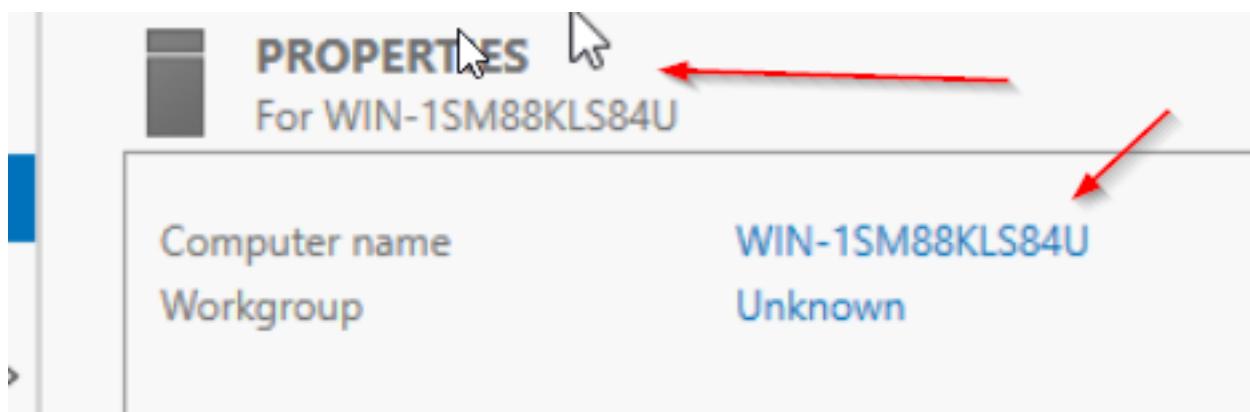


FIGURE 158 - CHANGE THE COMPUTER NAME FOR VM1

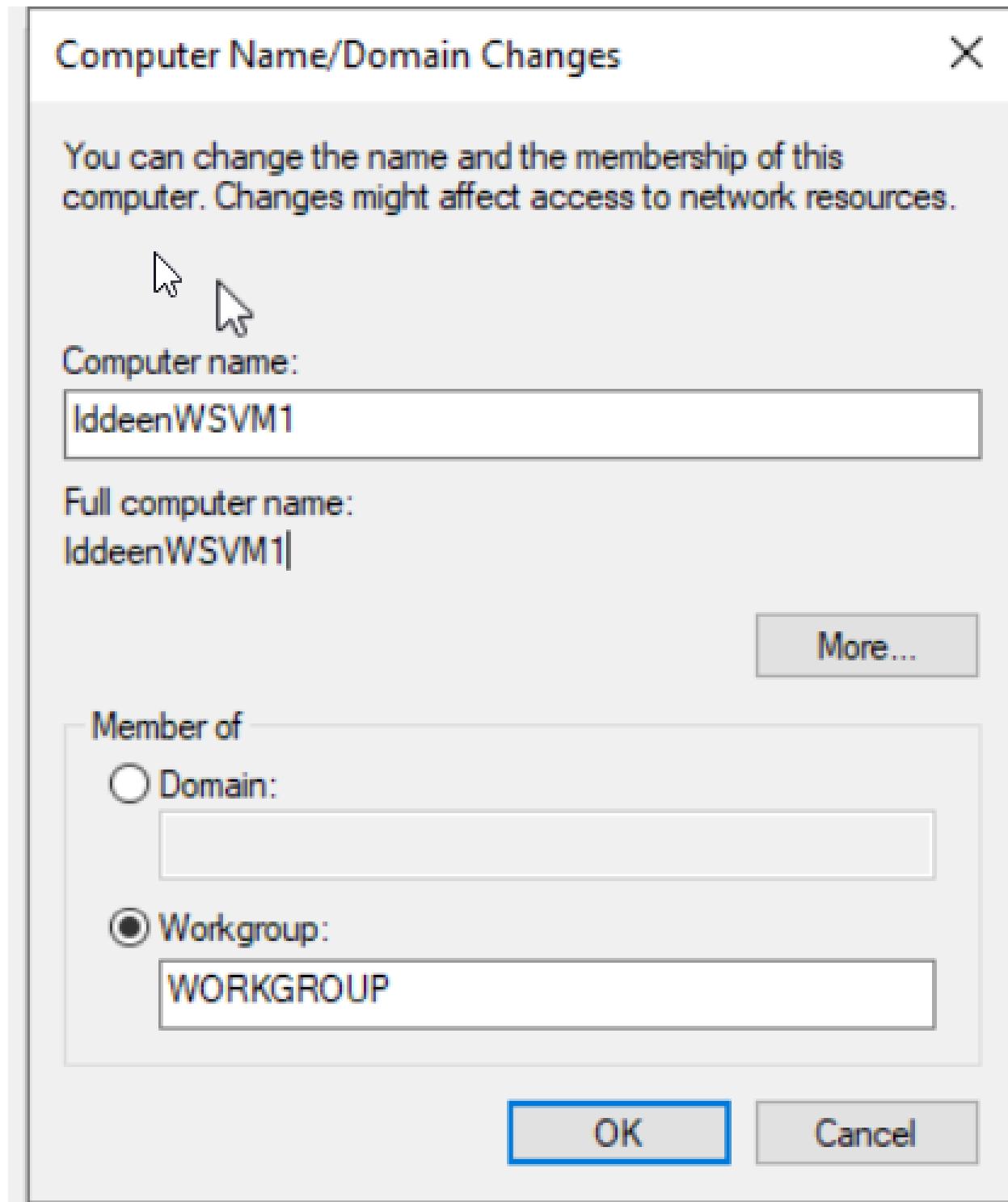
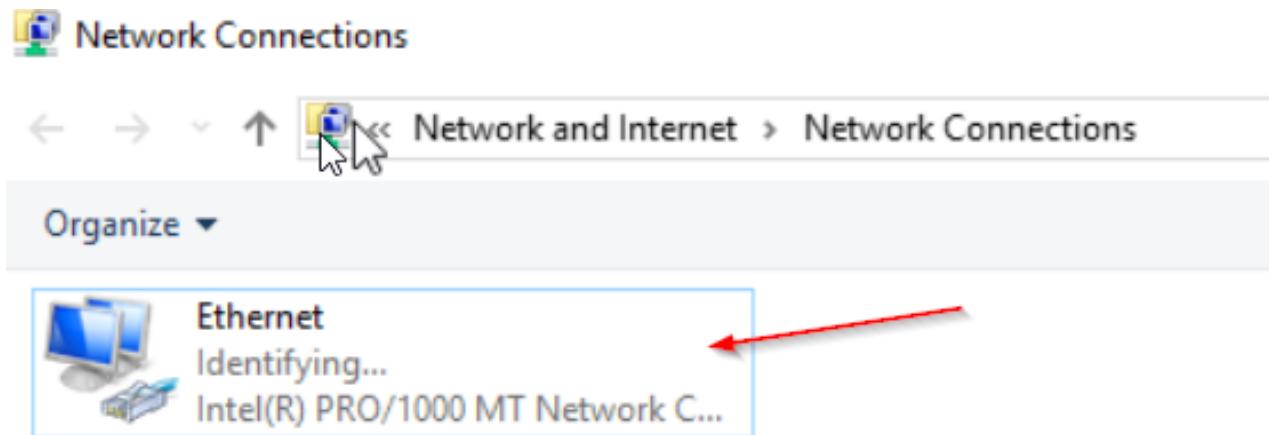


FIGURE 159 - CHANGE THE COMPUTER NAME TO APPLY THESE CHANGES



**FIGURE 160 - GO TO NETWORK CONNECTIONS AND CLICK "ETHERNET"**

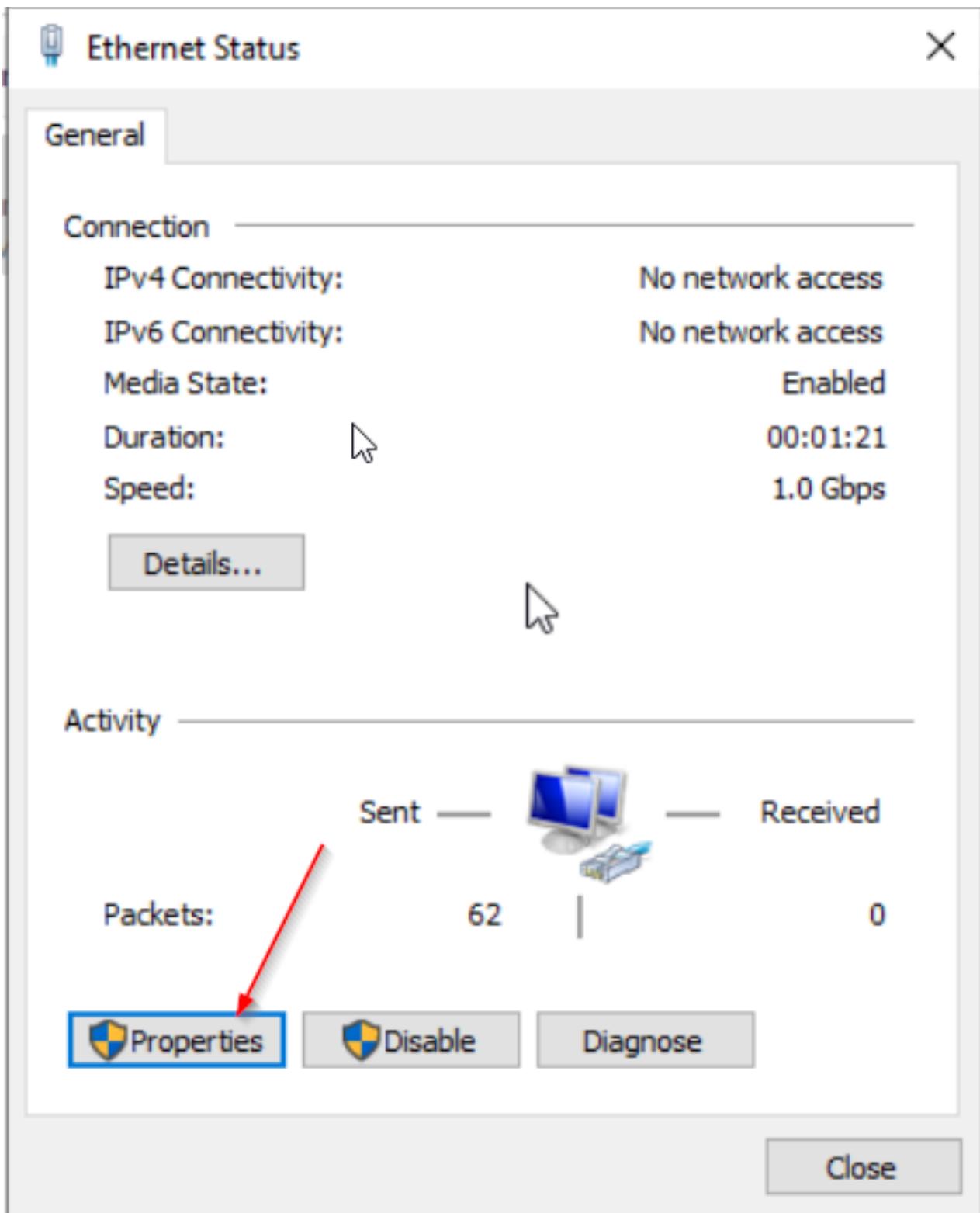


FIGURE 161 - CLICK "PROPERTIES"

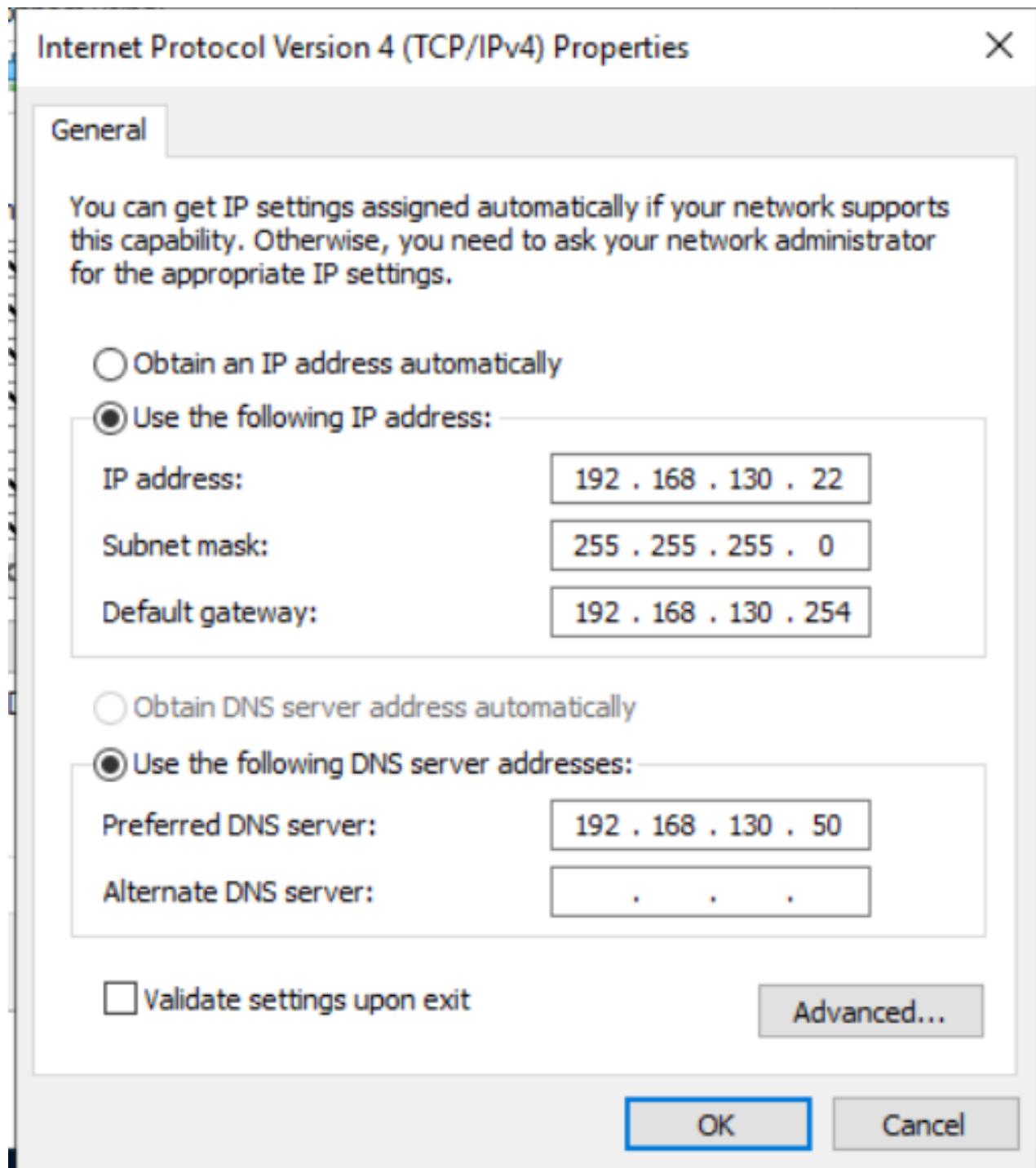


FIGURE 162 - SET THE REQUIRED STATIC IPv4 AND DNS ON IT

Select one or more roles to install on the selected server.

## Roles

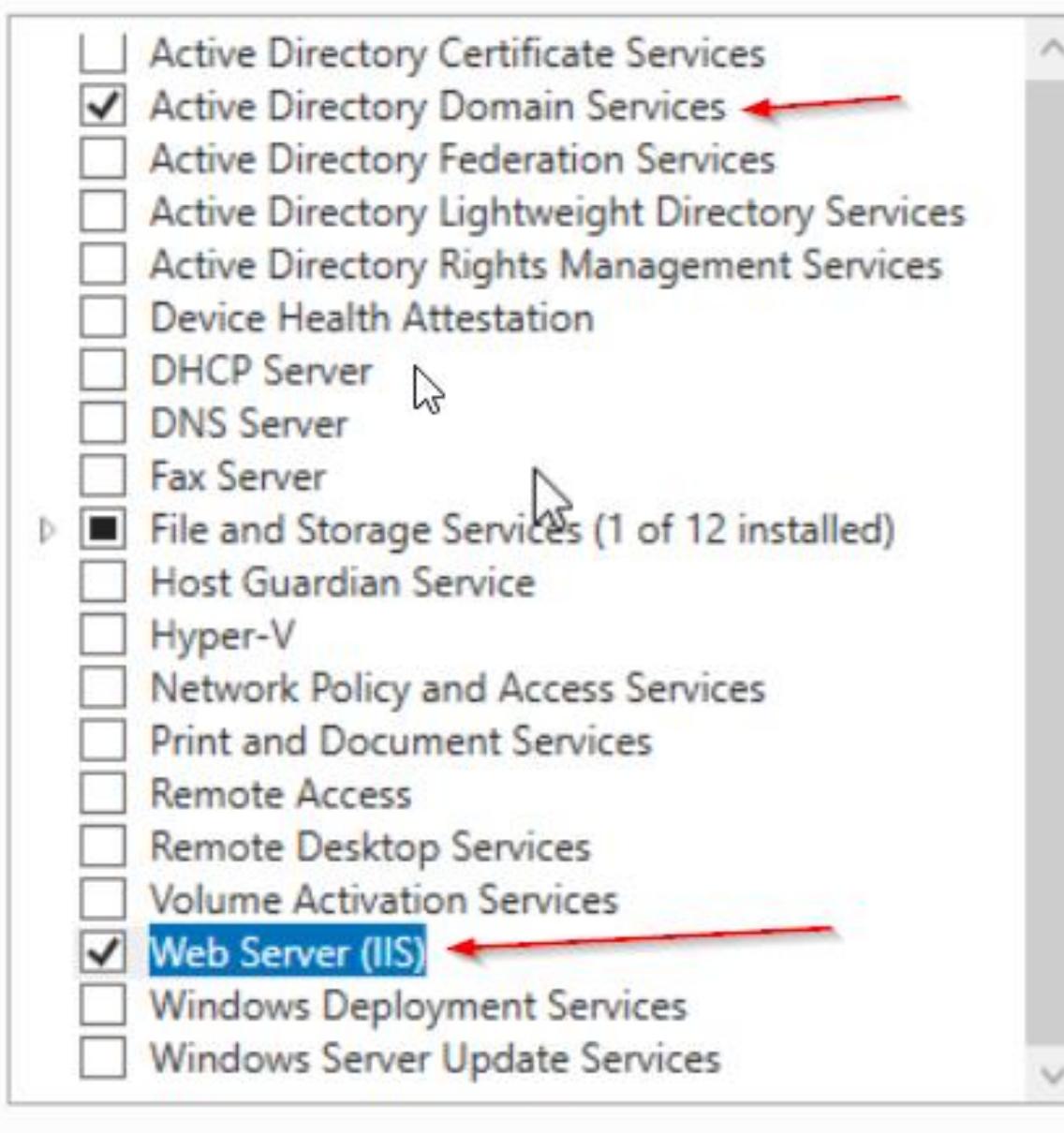


FIGURE 163 - SELECT IIS AND AD SERVICE TO INSTALL

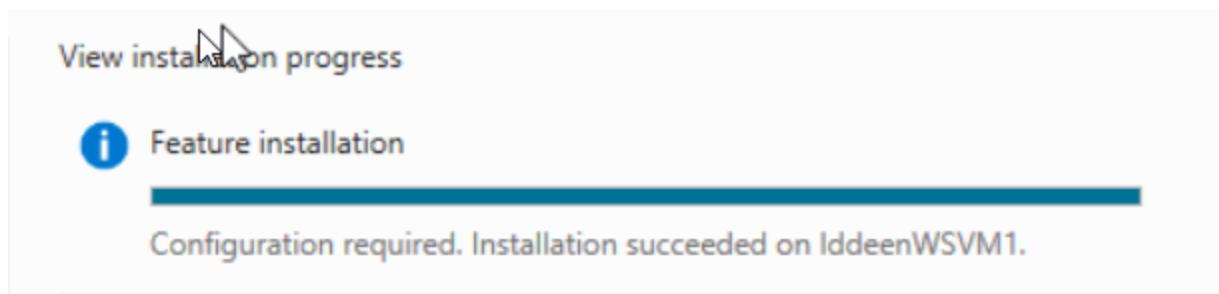


FIGURE 164 - INSTALLATION COMPLETED

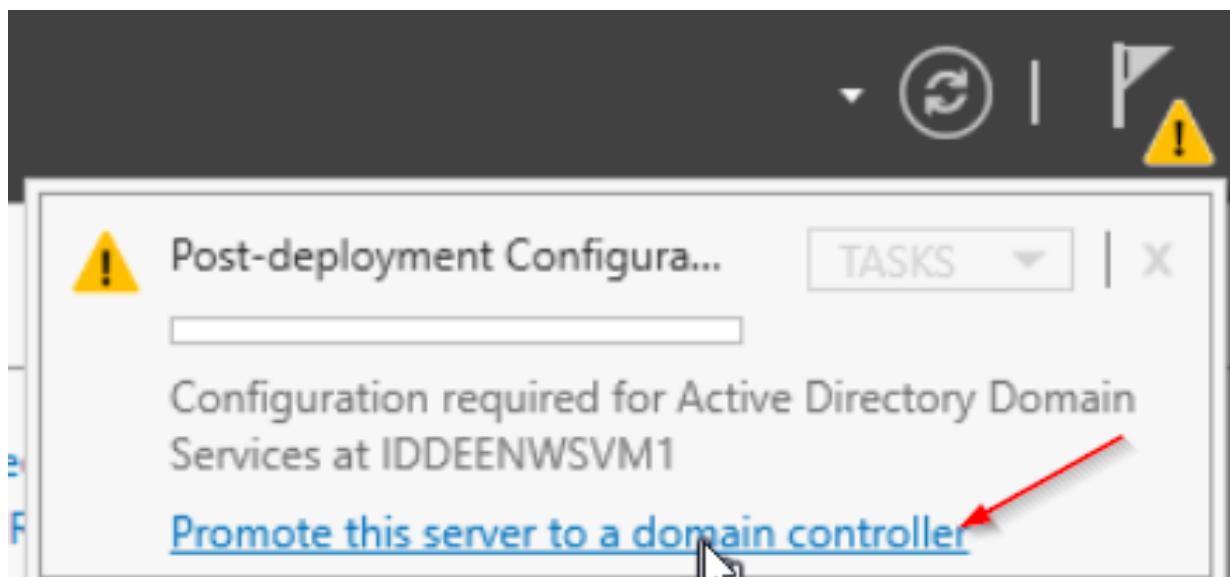


FIGURE 165 - PROMOTE THE SERVER TO A DOMAIN CONTROLLER

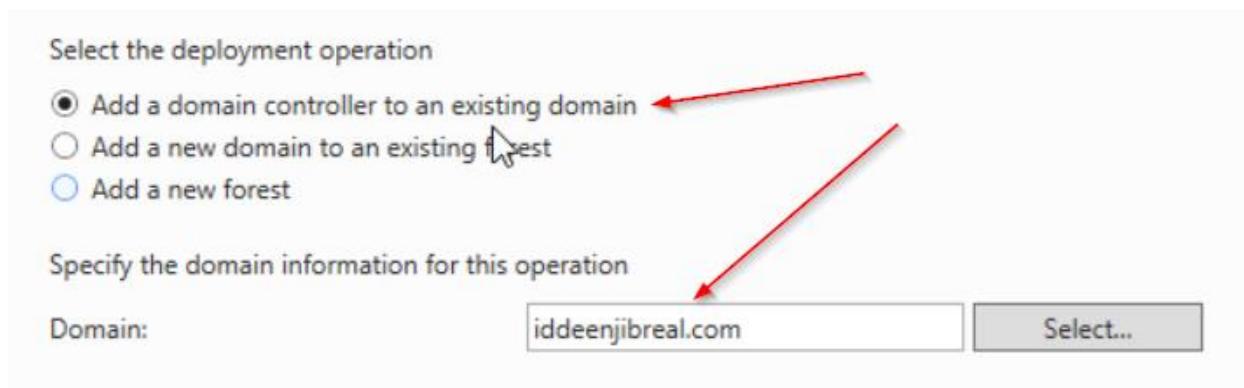
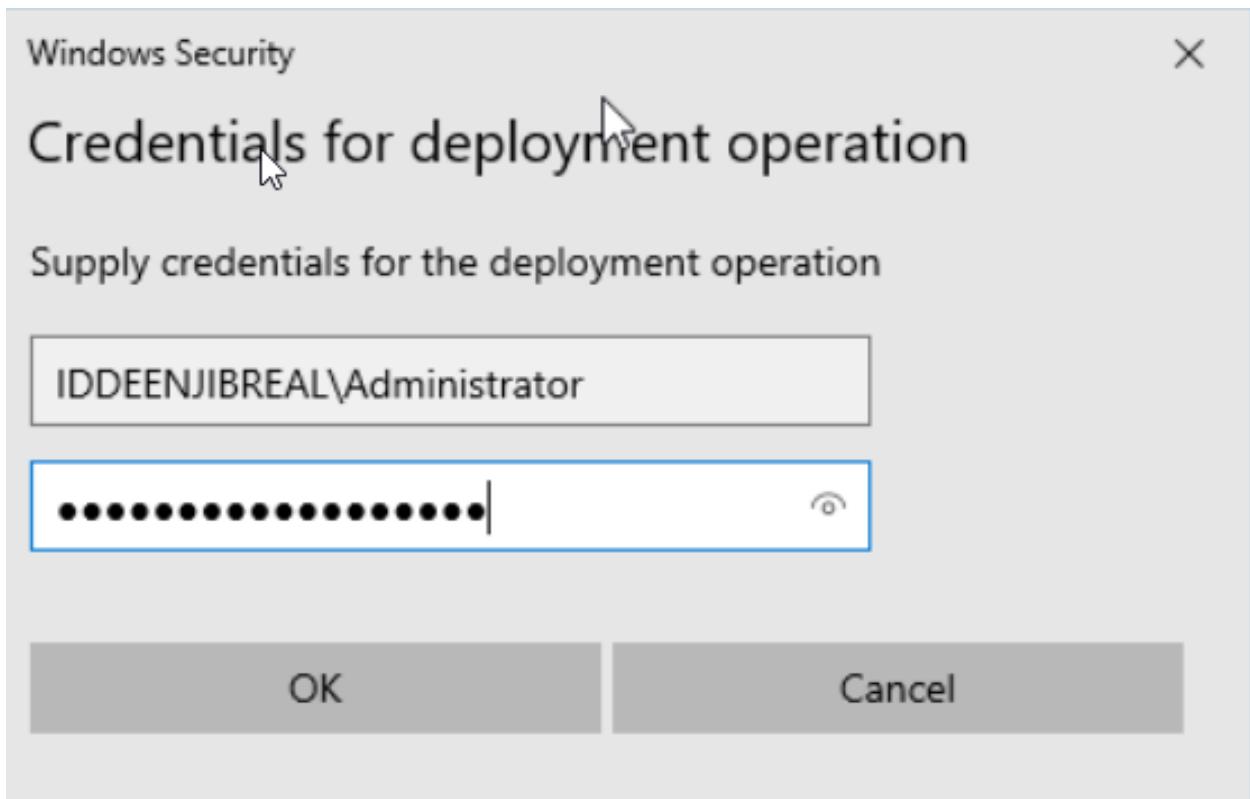
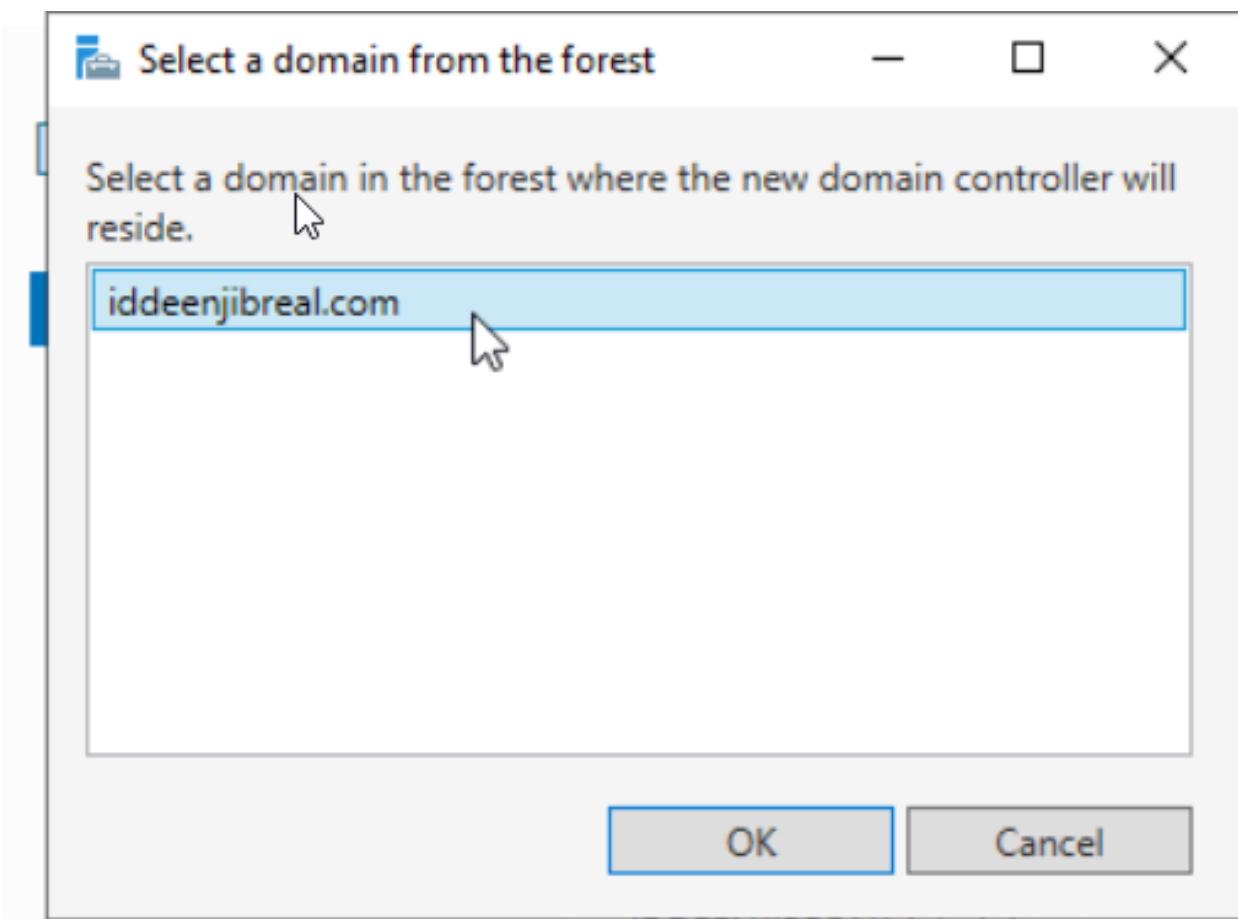


FIGURE 166 - ADD A DOMAIN CONTROLLER TO AN EXISTING DOMAIN AND TYPE THE NAME OF DOMAIN



**FIGURE 167 - LOG IN TO THE EXISTING DOMAIN WITH ADMINISTRATOR STATUS**



**FIGURE 168 - SELECT A DOMAIN FROM THE FOREST**

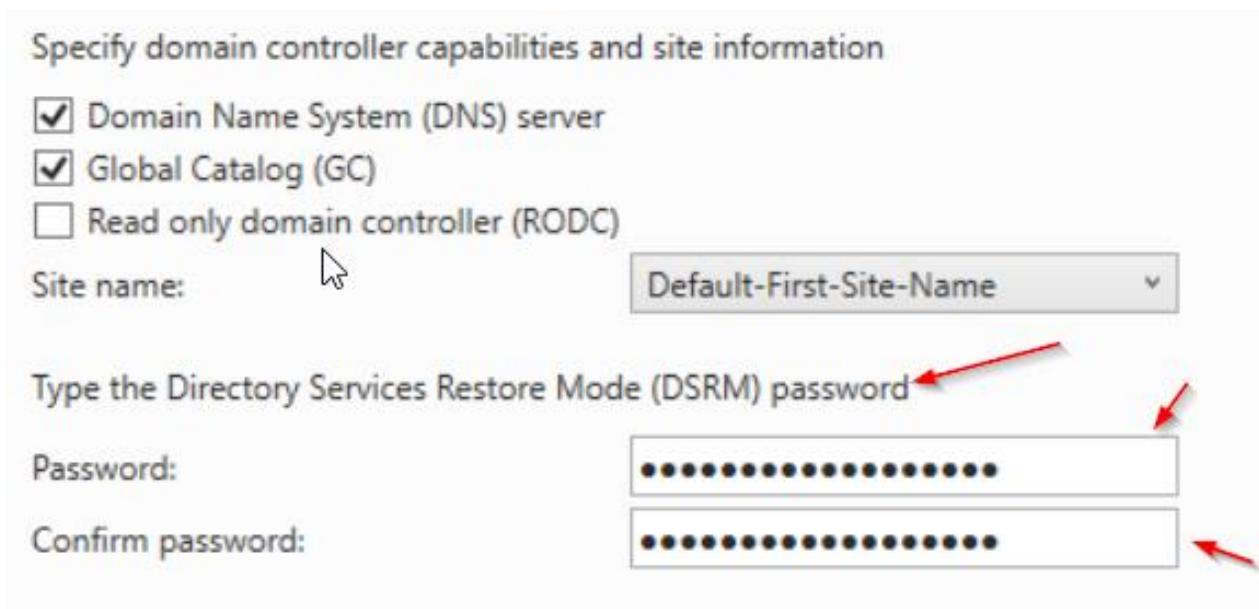


FIGURE 169 - SET THE DSRM PASSWORD

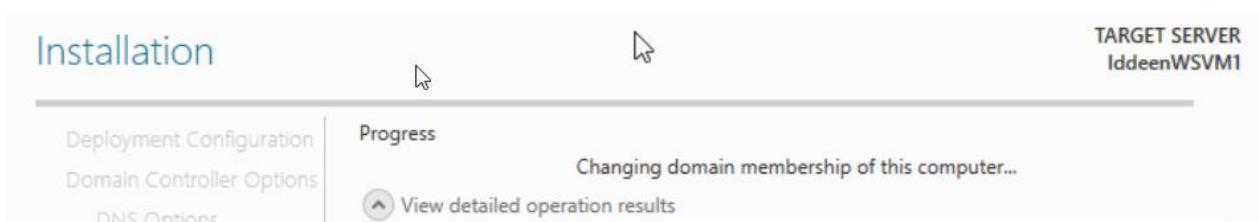


FIGURE 170 - AD INSTALLATION IN THE EFFECT

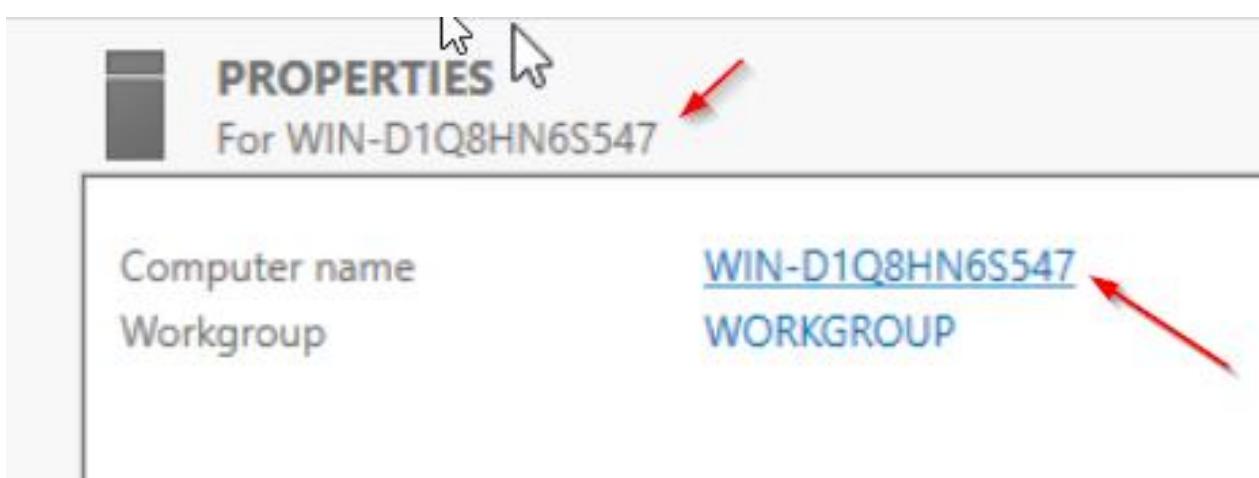


FIGURE 171 - CLICK THE COMPUTER NAME TO CHANGE

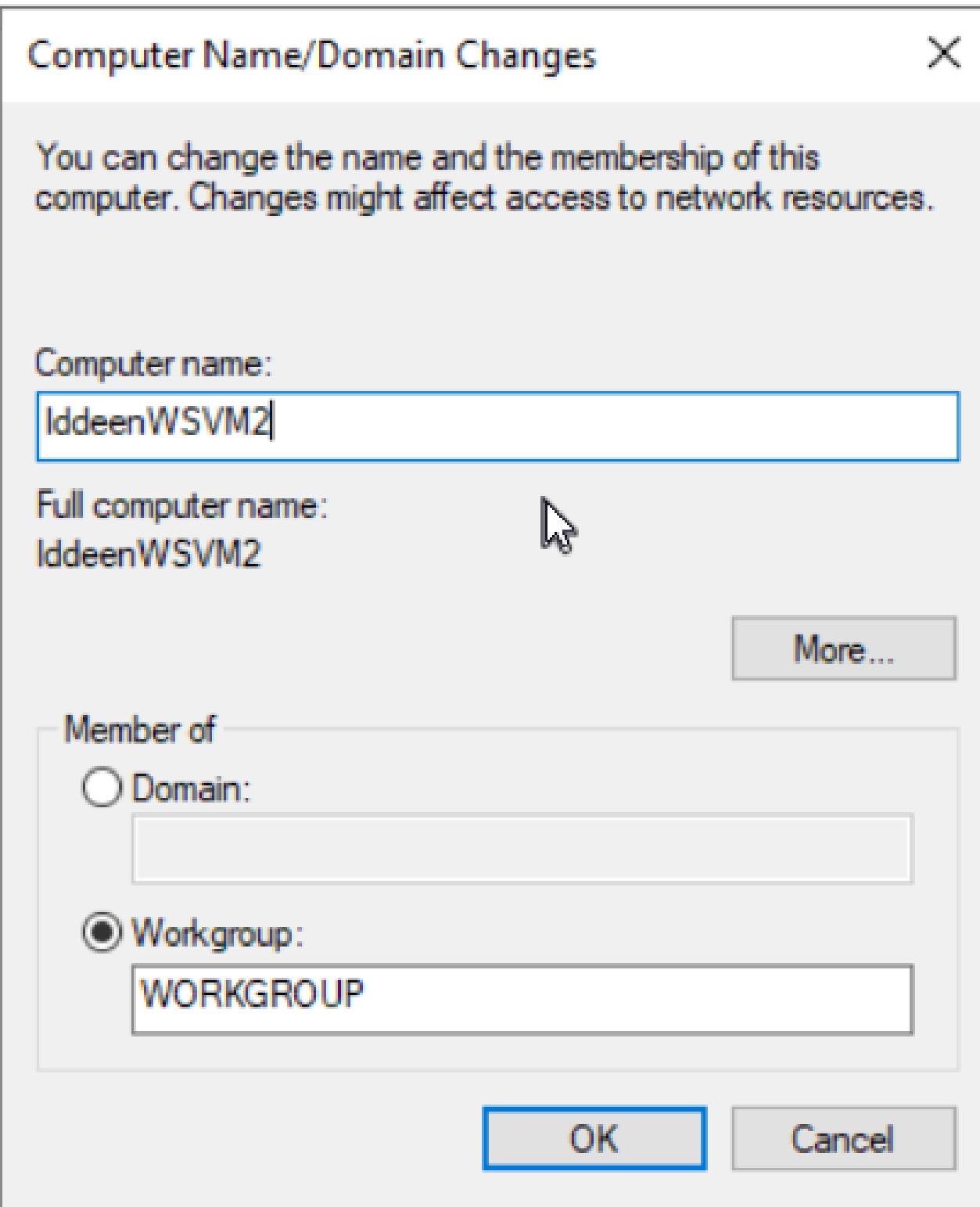


FIGURE 172 - CHANGE THE COMPUTER NAME

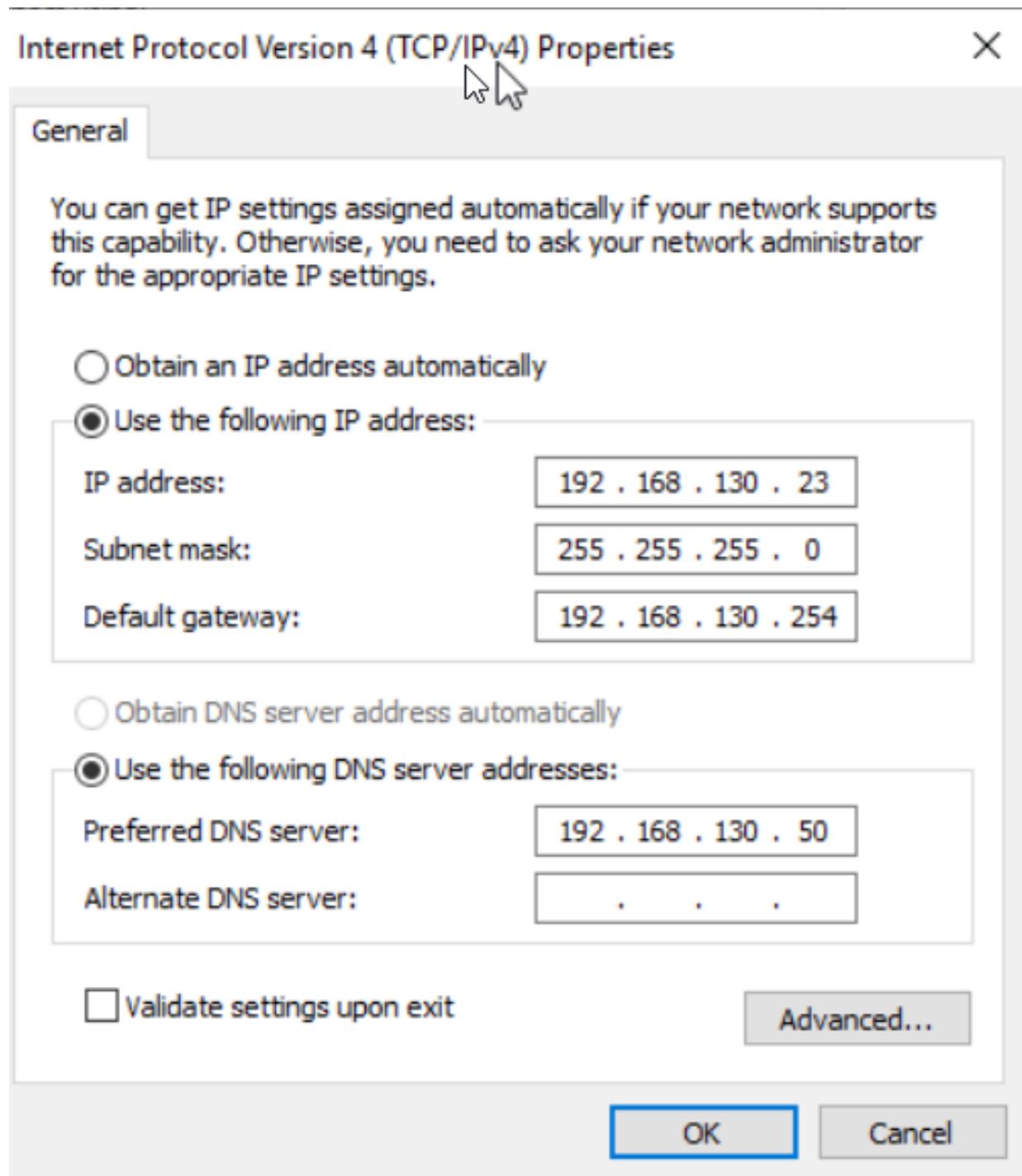


FIGURE 173 - SET THE REQUIRED STATIC MANUALLY WITH DNS ON IT

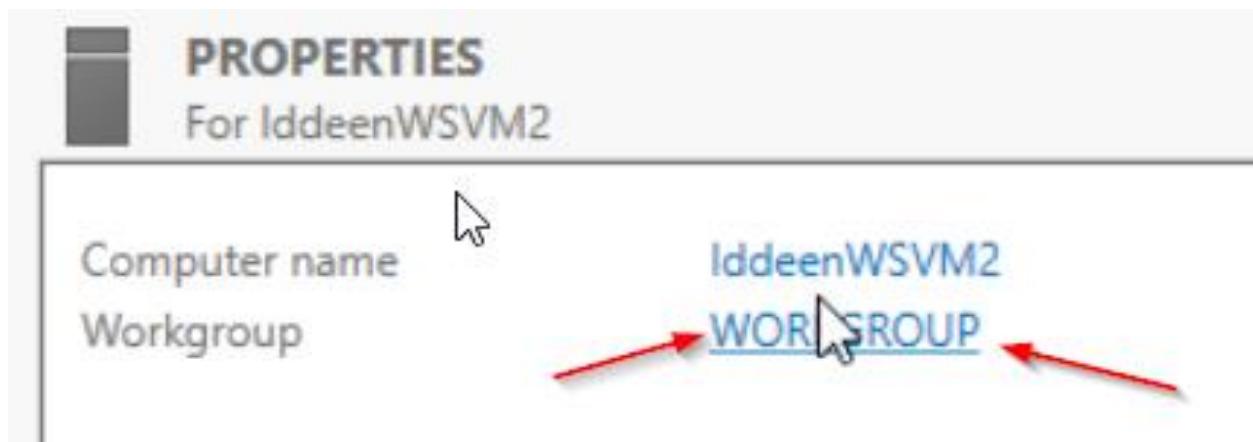


FIGURE 174 - CLICK "WORKGROUP"

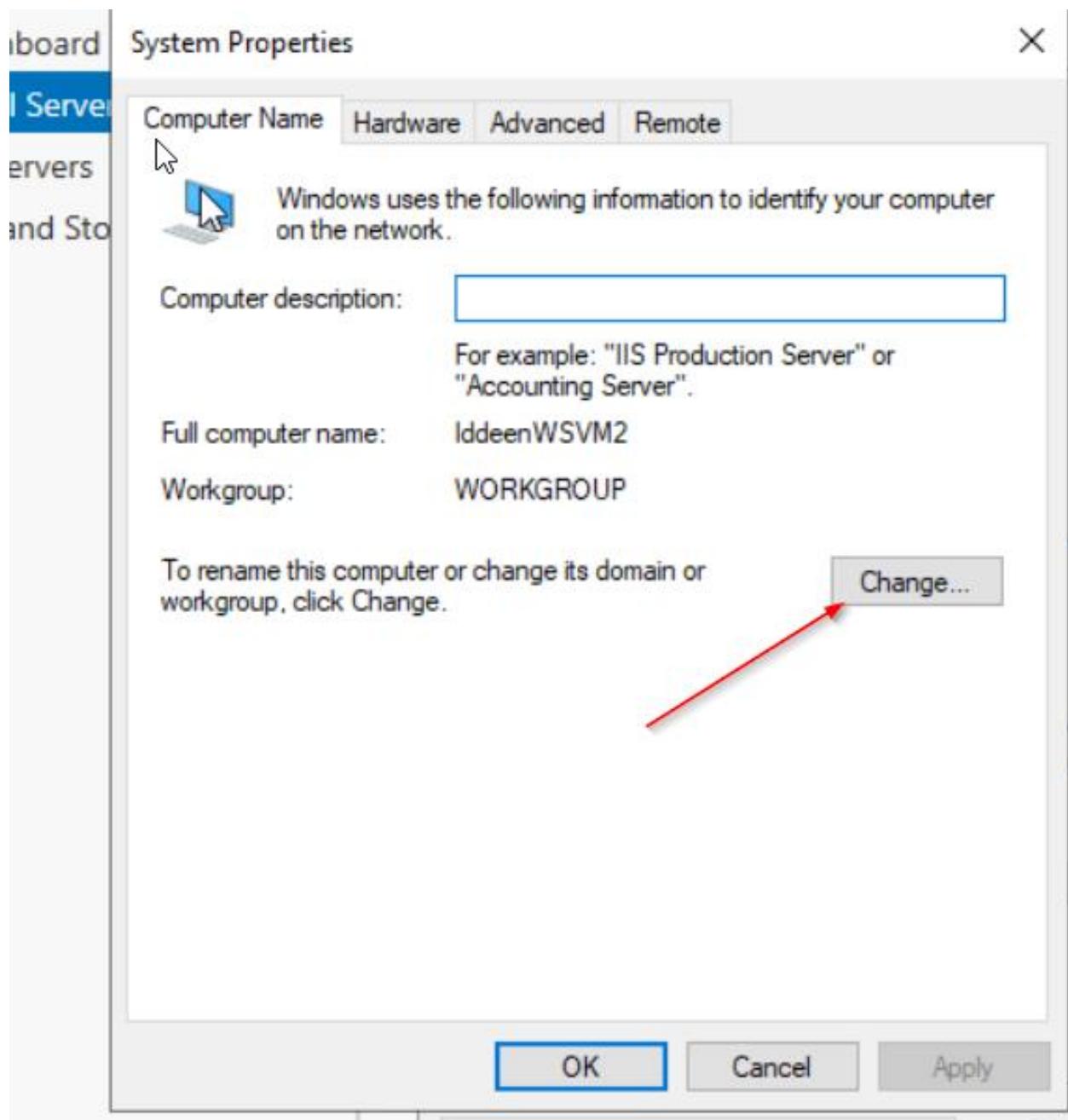


FIGURE 175 - CLICK CHANGE

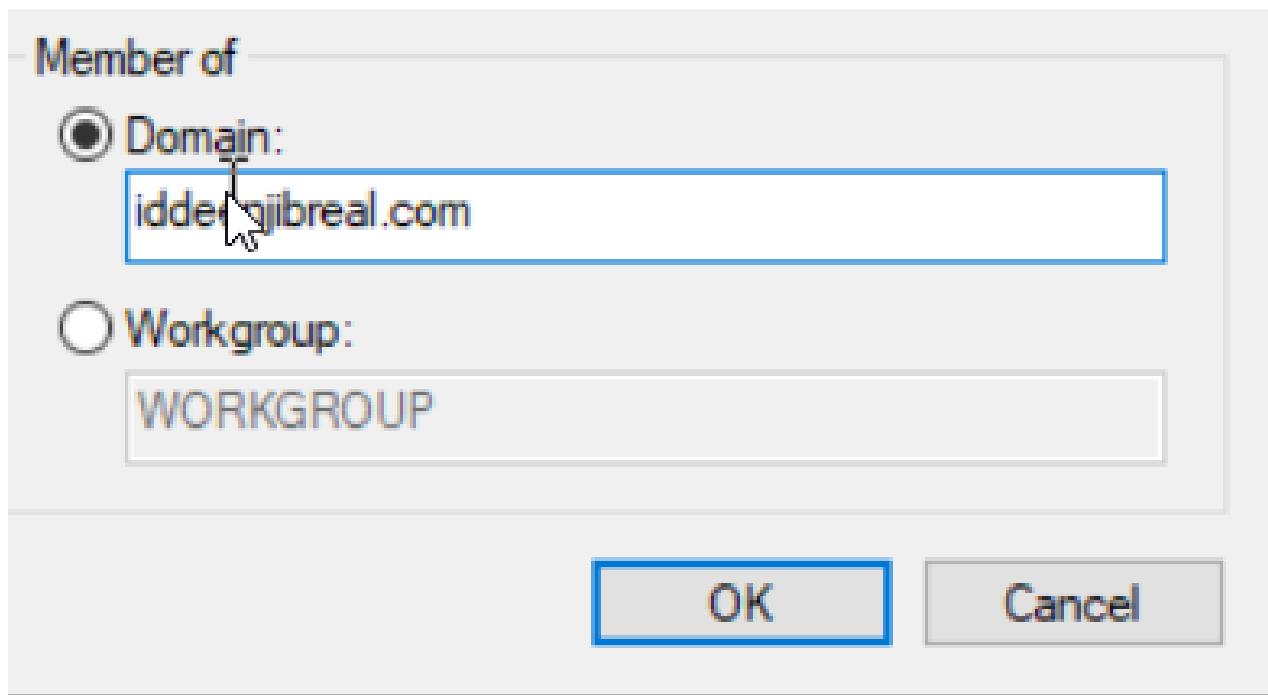


FIGURE 176 - TYPE THE NAME OF THE DOMAIN TO JOIN

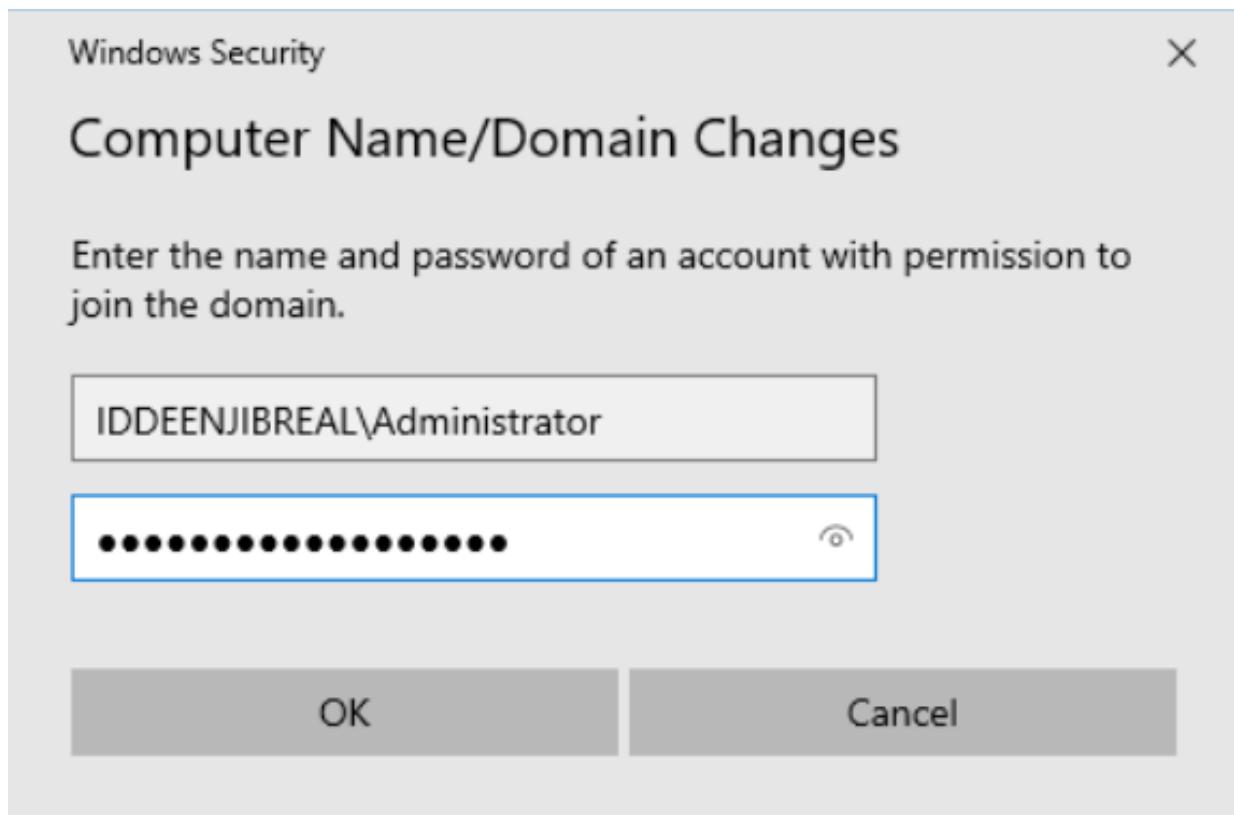


FIGURE 177 - LOG IN TO THE DOMAIN WITH ADMINISTRATOR STATUS

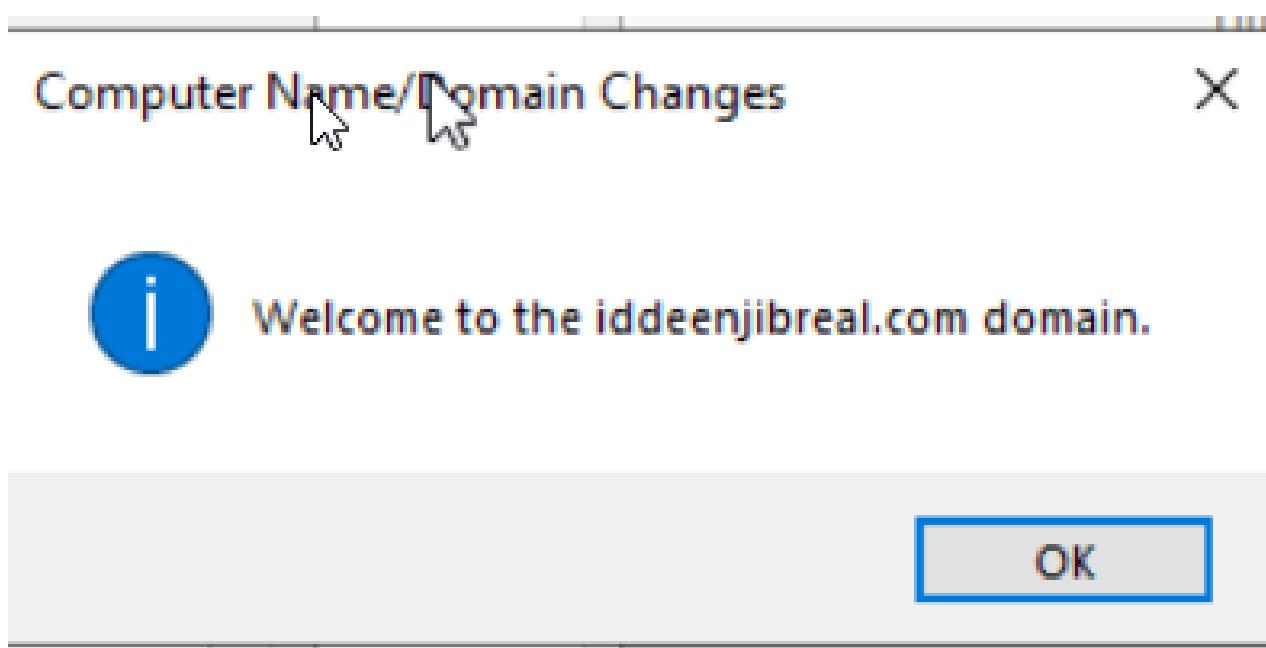


FIGURE 178 - SUCCESSFULLY JOINED THE DOMAIN

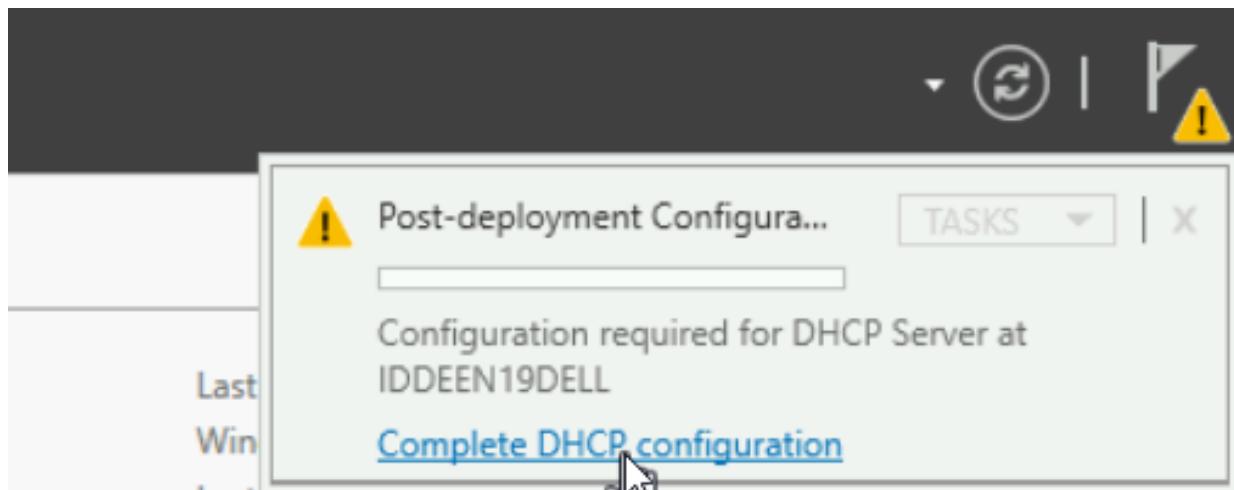


FIGURE 179 - ON THE DELL SERVER, COMPLETE THE DHCP CONFIGURATION

The status of the post install configuration steps are indicated below:

|  |       |      |
|--|-------|------|
| Creating security groups   | ..... | Done |
| Please restart the DHCP server service on the target computer for the security groups to be effective. |       |      |
| Authorizing DHCP server  | ..... | Done |

FIGURE 180 - AUTHORIZING THE DHCP SERVER

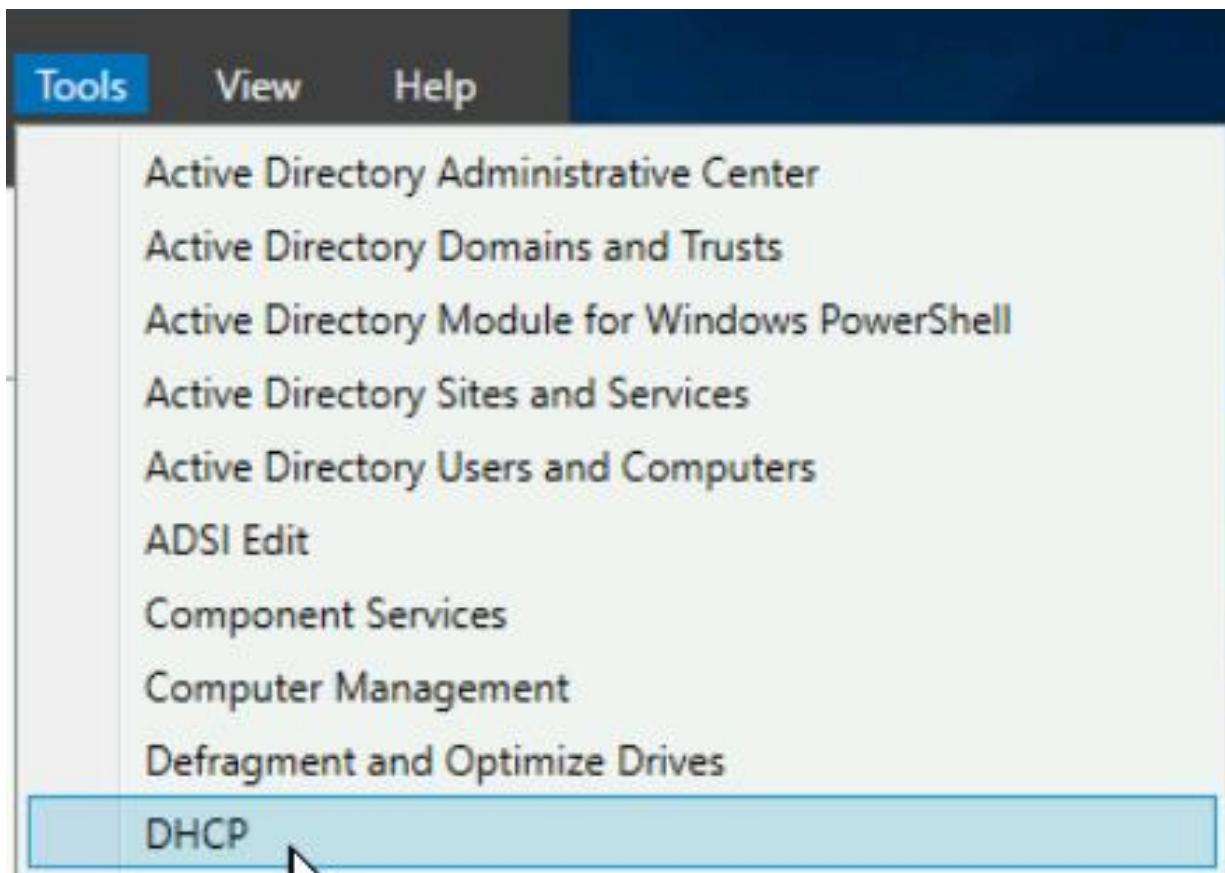


FIGURE 181 - FROM THE TOOLS, THEN CLICK DHCP

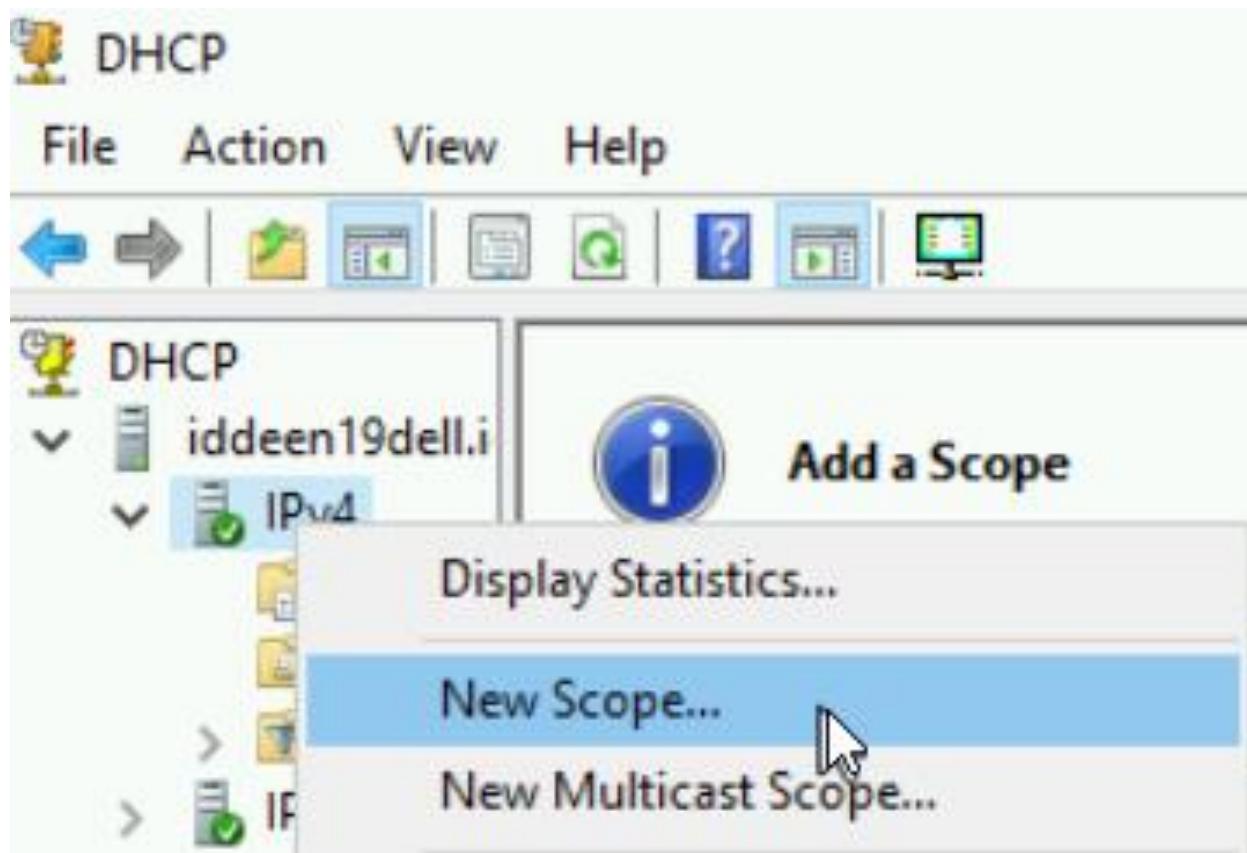


FIGURE 182 - CLICK NEW SCOPE



**FIGURE 183 - PROCEED WITH THE NEW SCOPE WIZARD FOR DHCP**

## New Scope Wizard

### IP Address Range

You define the scope address range by identifying a set of consecutive IP addresses.



#### Configuration settings for DHCP Server

Enter the range of addresses that the scope distributes.

Start IP address:

End IP address:

#### Configuration settings that propagate to DHCP Client

Length:

Subnet mask:

< Back

Next >

Cancel

## New Scope Wizard

### Configure DHCP Options

You have to configure the most common DHCP options before clients can use the scope.



When clients obtain an address, they are given DHCP options such as the IP addresses of routers (default gateways), DNS servers, and WINS settings for that scope.

The settings you select here are for this scope and override settings configured in the Server Options folder for this server.

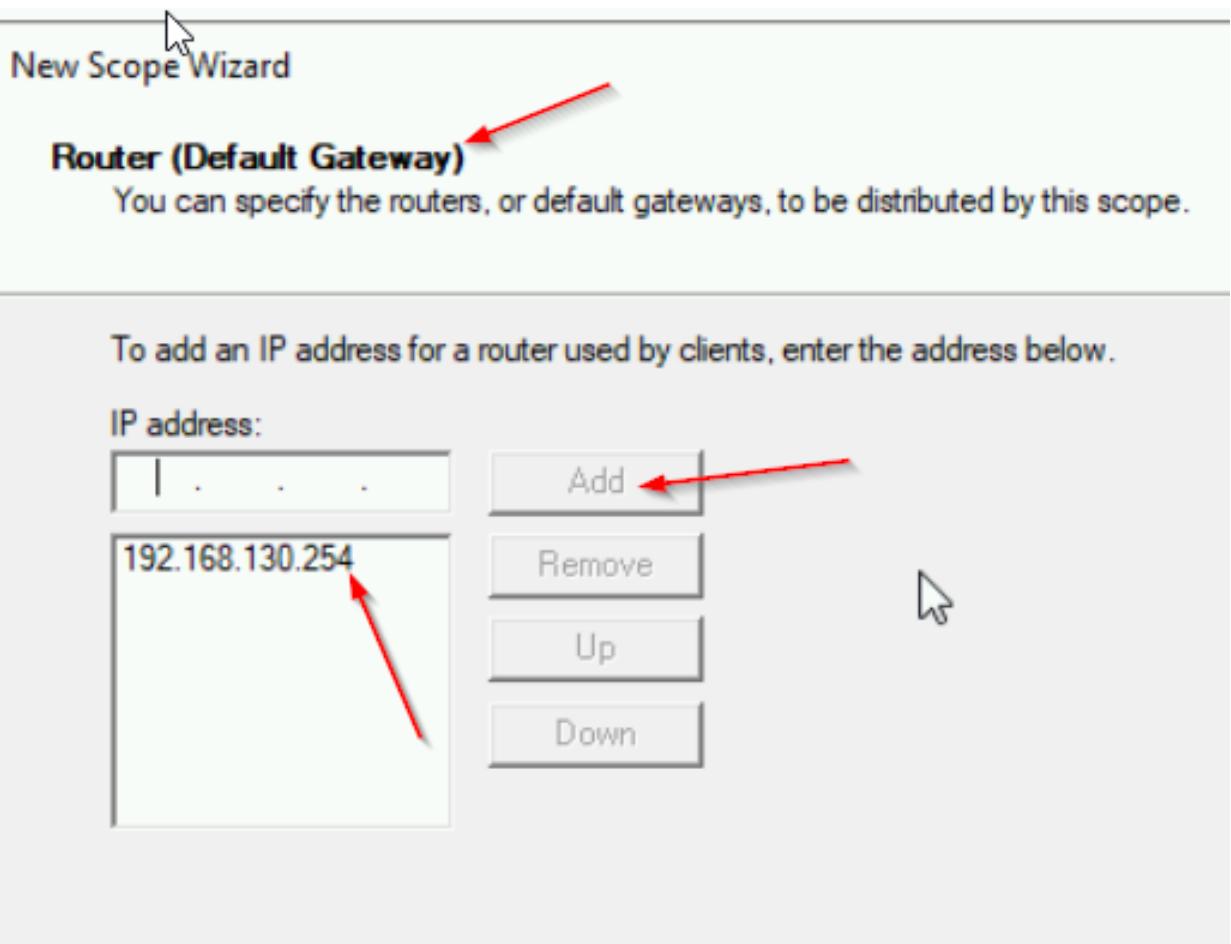
Do you want to configure the DHCP options for this scope now?

- Yes, I want to configure these options now
- No, I will configure these options later

< Back

Next >

Cancel



## New Scope Wizard



### Domain Name and DNS Servers

The Domain Name System (DNS) maps and translates domain names used by clients on your network.



You can specify the parent domain you want the client computers on your network to use for DNS name resolution.

Parent domain:

To configure scope clients to use DNS servers on your network, enter the IP addresses for those servers.

Server name:

IP address:

|                |
|----------------|
| 192.168.130.50 |
|----------------|

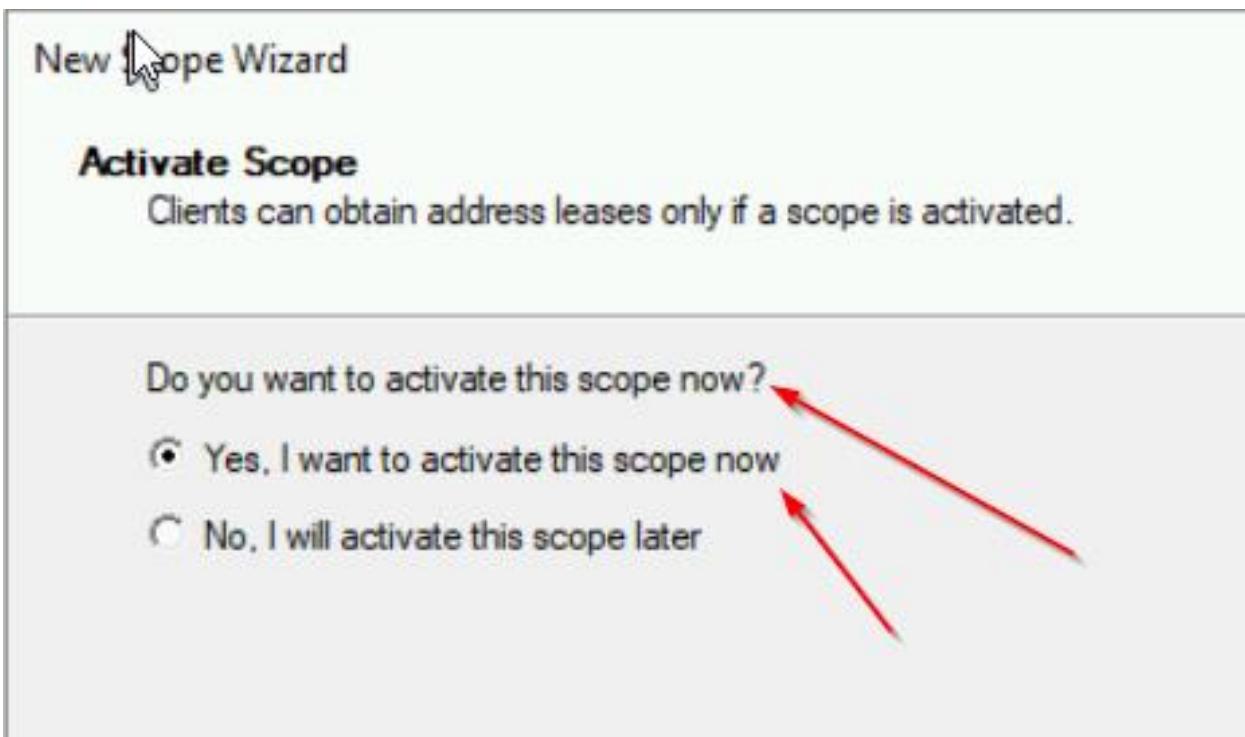


FIGURE 184 - DHCP CONFIGURATION COMPLETED. NOW ACTIVATE THE SCOPE

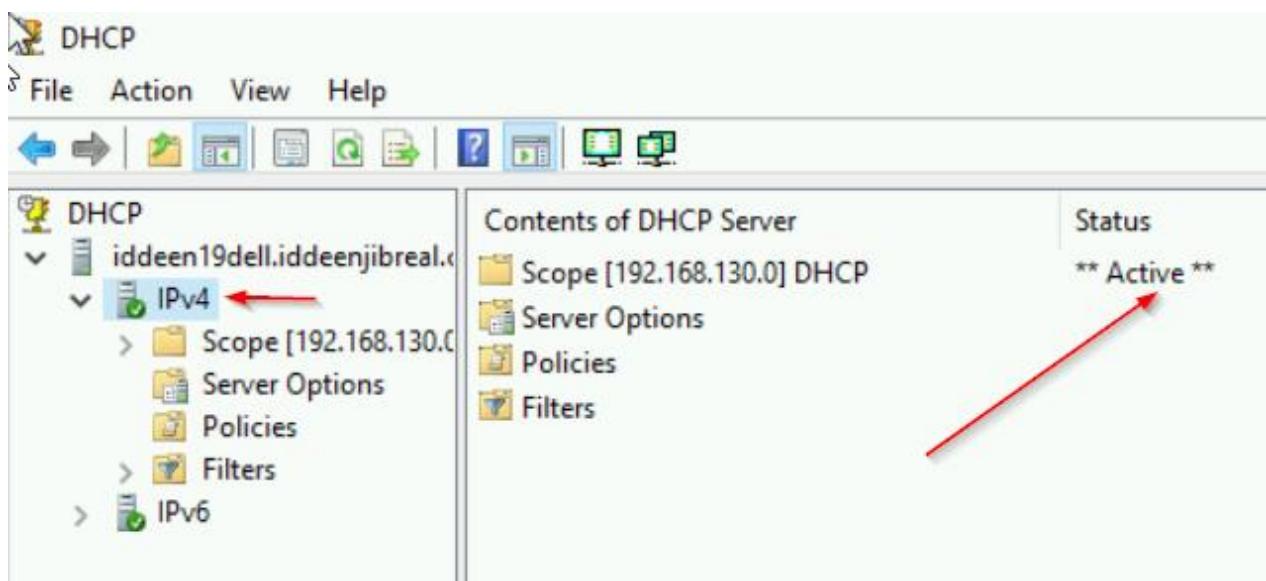
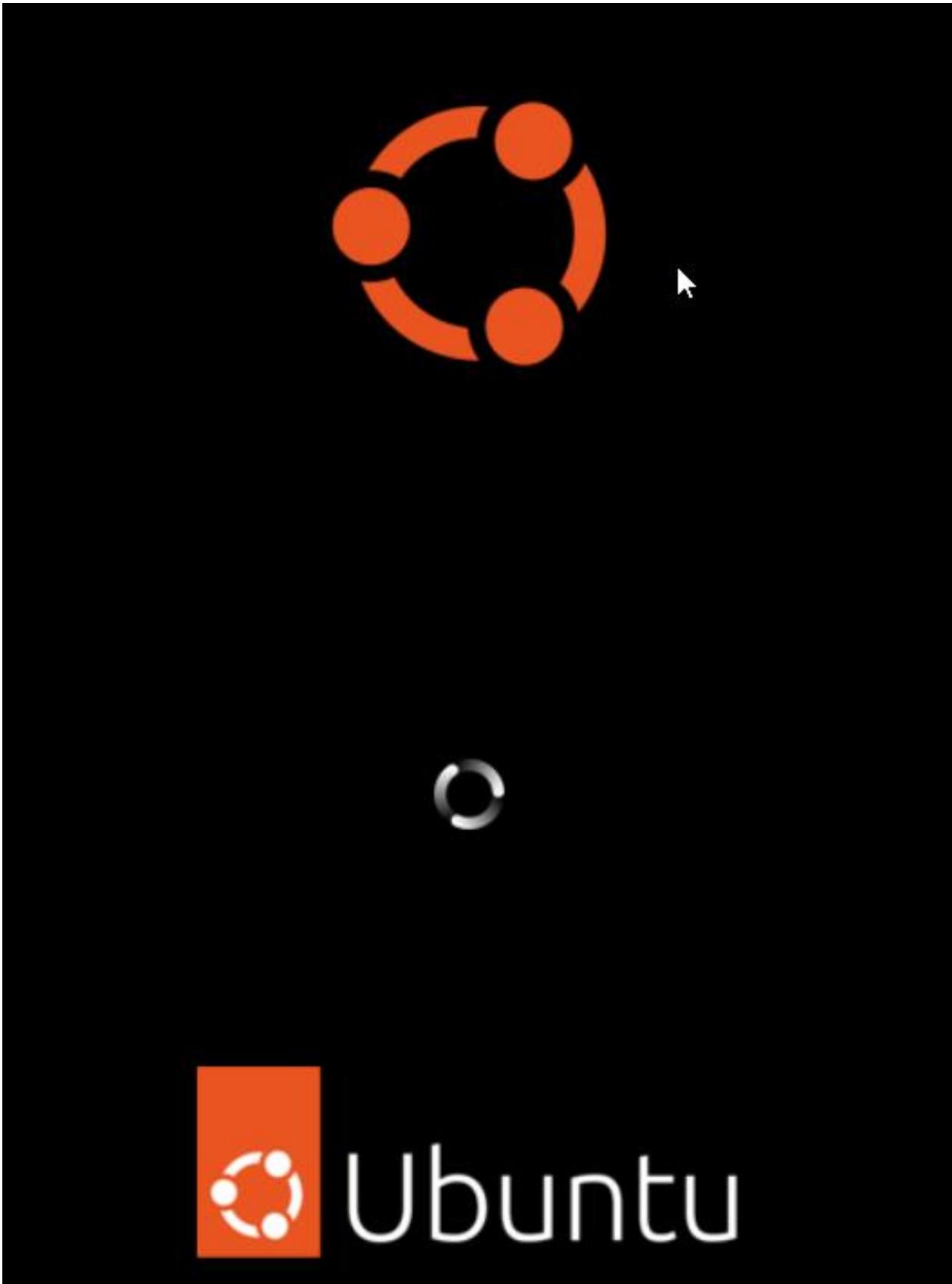


FIGURE 185 - MAKE SURE TO CHECK THAT THE SCOPE IS ACTIVE



**FIGURE 186 - BOOT THE UBUNTU**

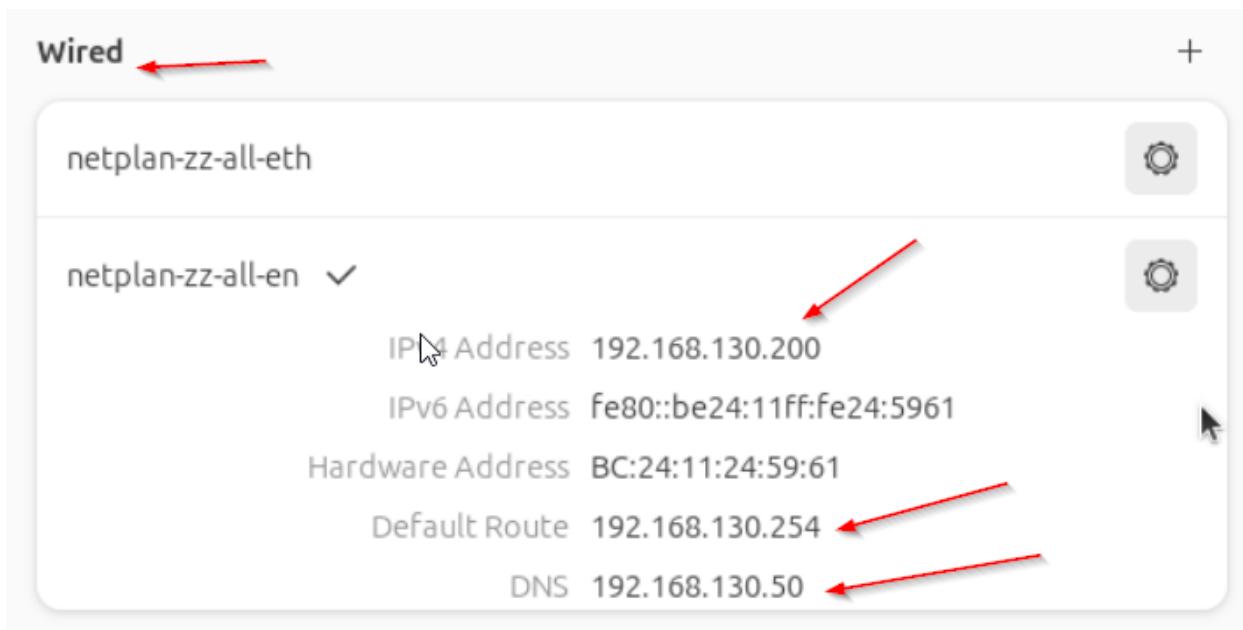


FIGURE 187 - CHECK THAT UBUNTU GETS A DHCP IP ADDRESS

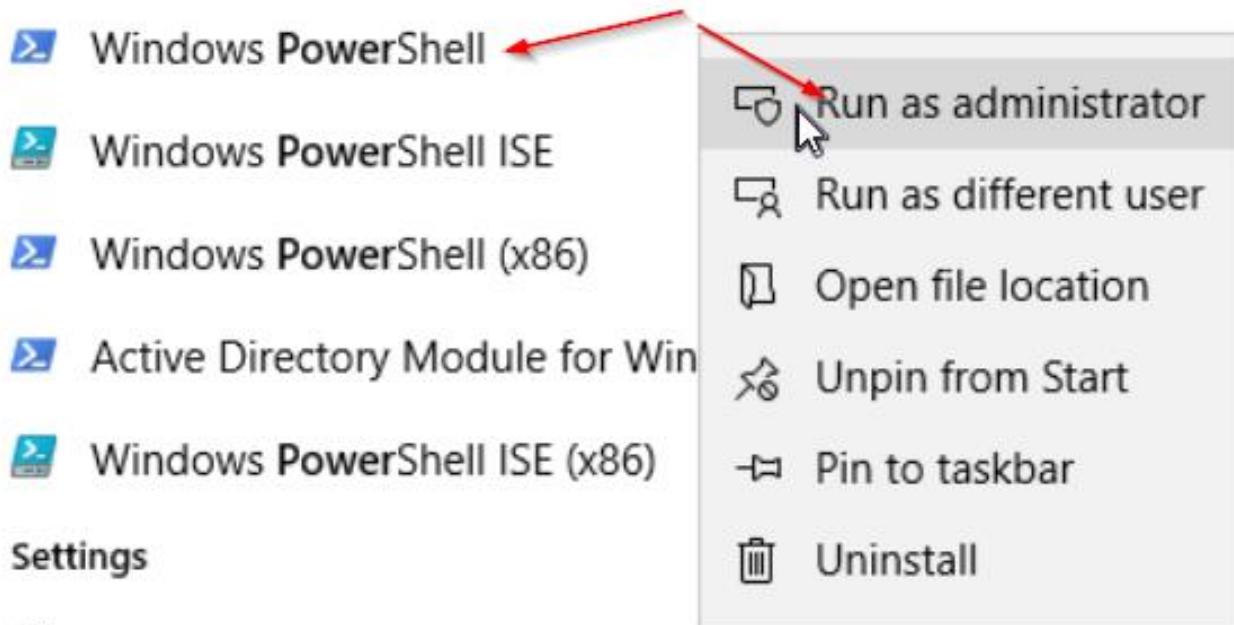


FIGURE 188 - ON PTOXMOX VM 1 WS SERVER 2019, RUN POWERSHELL AS ADMINISTRATOR

---

```
➤ Select Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

PS C:\Users\Administrator.IDDEENJIBREAL> Install-WindowsFeature Web-Server -IncludeManagementTools
```

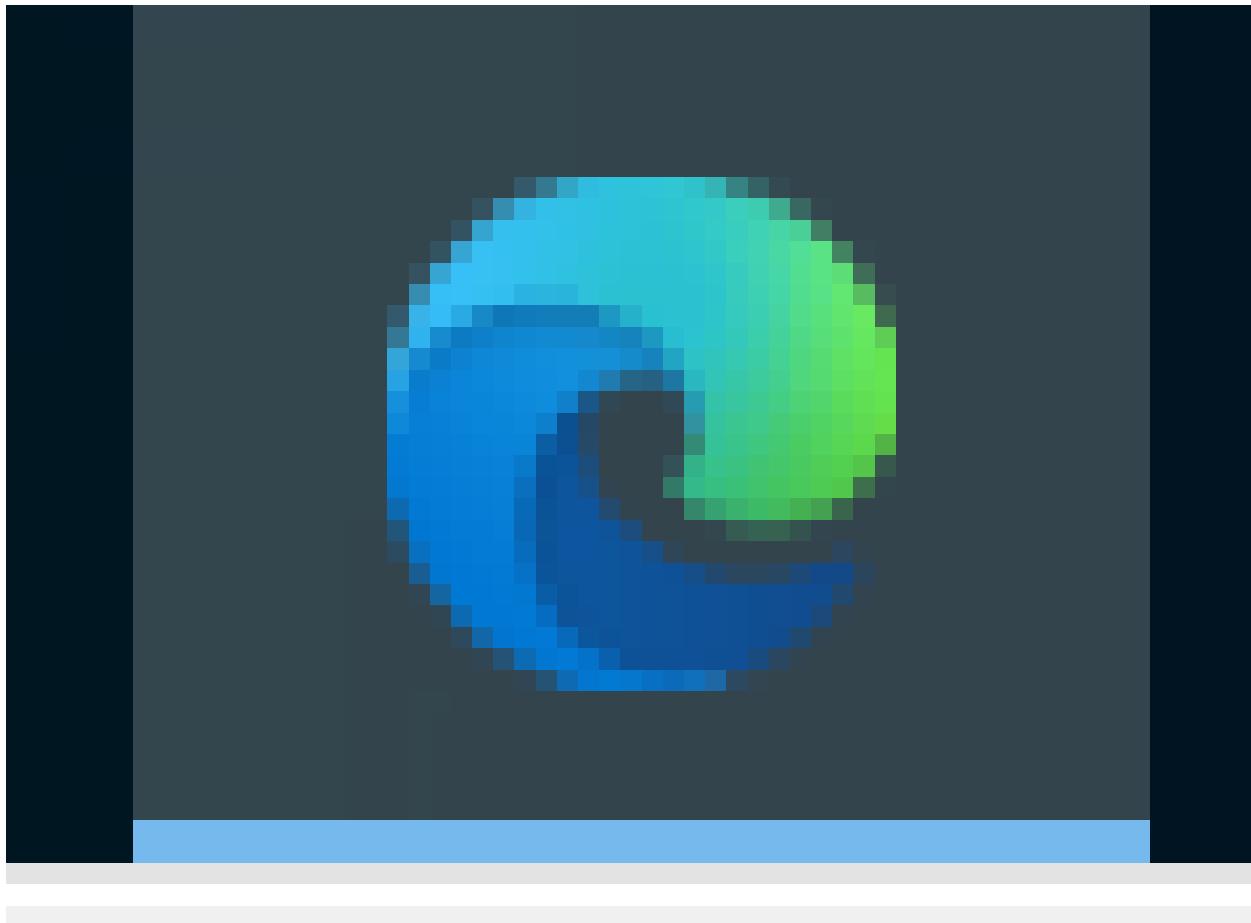
FIGURE 189 - USE THE COMMAND TO INSTALL THE WEB SERVER

```
PS C:\Users\Administrator.IDDEENJIBREAL> @"
>> <!doctype html>
>> <html><head><meta charset="utf-8"></head>
>> <body>
>> <h1>Hostname: IddeenWSVM1</h1>
>> <p>Name: Jibreal Id-deen</p>
>> <p>Class: Fundamentals of Systems Administrator</p>
>> <p>Professor: Professor Jeremy</p>
>> <p>Lab: Proxmox Server</p>
>> </body></html>
>> "@ | Out-File -Encoding utf8 C:\inetpub\wwwroot\index.html
```

FIGURE 190 - USE THE HTML CODING LANGUAGE TO CREATE A WEBSITE

```
PS C:\Users\Administrator> @"
>> <!doctype html>
>> <html><head><meta charset="utf-8"></head>
>> <body>
>> <h1>IddeenWSVM2</h1>
>> <p>Name: Jibreal Id-deen</p>
>> <p>Class: Fundamentals of Systems Administrator</p>
>> <p>Professor: Professor Jeremy</p>
>> <p>Lab: Proxmox Server</p>
>> </body></html>
>> "@ | Out-File -Encoding utf8 C:\inetpub\wwwroot\index.html
```

FIGURE 191 - DO THE SAME THING FOR ANOTHER VM WITH WS SERVER 2019



**FIGURE 192 - ON VM WINDOWS 10, USE THE EDGE WEBSITE TO LOOK**



**FIGURE 193 - TYPE THE IP ADDRESS TO LOOK**

# **Hostname: IddeenWSVM1**

Name: Jibreal Id-deen

Class: Fundamentals of Systems Administrator

Professor: Professor Jeremy

Lab: Proxmox Server

**FIGURE 194 - THE SHOWCASE OF THE WEBSITE CREATED BY PROXMOX VM**



i Not secure | 192.168.130.23

**FIGURE 195 - DO THE SAME THING FOR ANOTHER VM ON PROXMOX**

# **IddeenWSVM2**

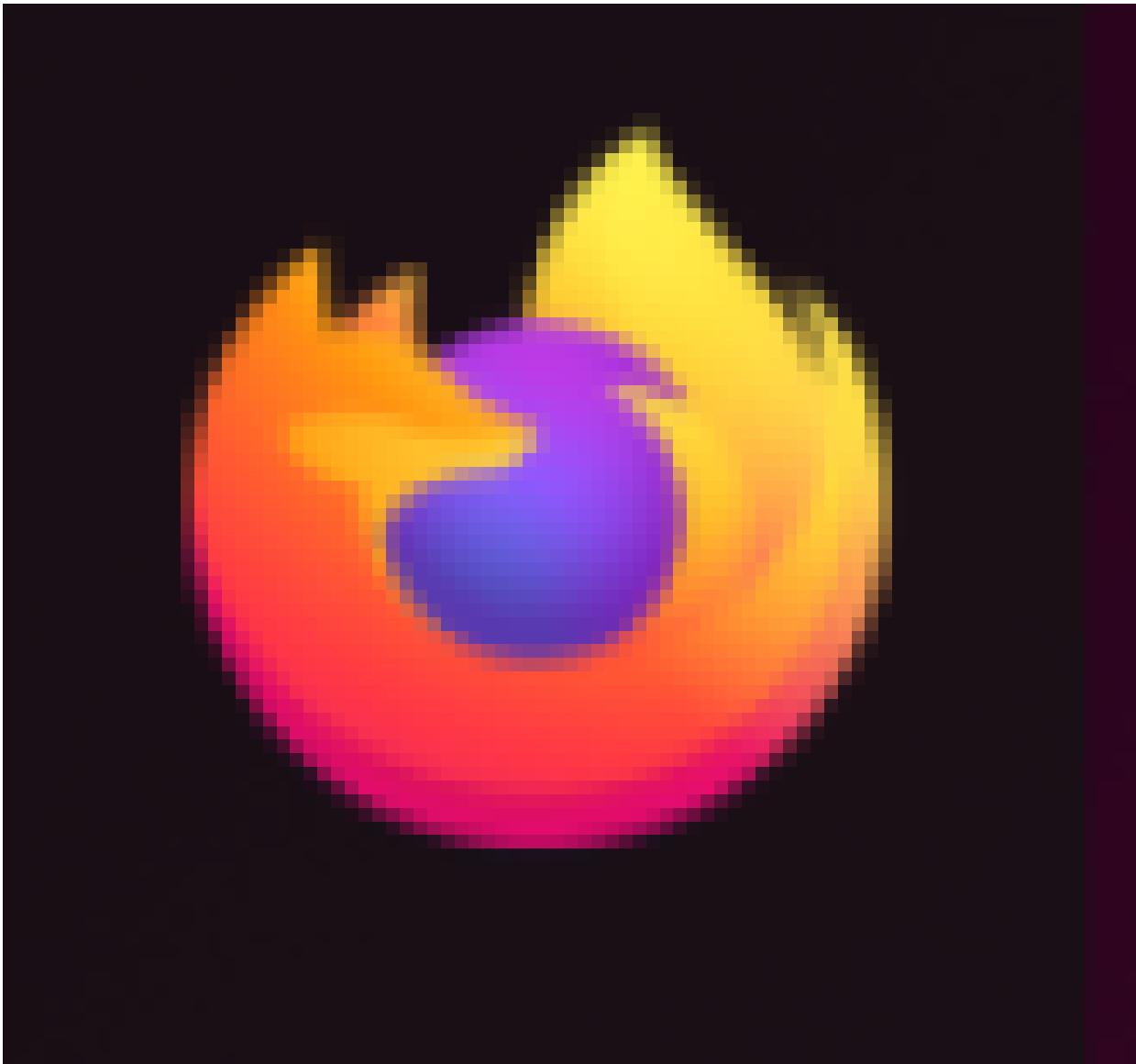
Name: Jibreal Id-deen

Class: Fundamentals of Systems Administrator

Professor: Professor Jeremy

Lab: Proxmox Server

**FIGURE 196 - THE SHOWCASE OF THE WEBSITE CREATED BY SECOND VM ON PROXMOX**



**FIGURE 197 - ON PTOXMOX VM LINUX, GO TO FIREFOX TO LOOK**



**FIGURE 198 - TYPE THE IP ADDRESS FROM THE VM TO LOOK**

# **Hostname: IddeenWSVM1**

Name: Jibreal Id-deen

Class: Fundamentals of Systems Administrator

Professor: Professor Jeremy

Lab: Proxmox Server

**FIGURE 199 - THE SHOWCASE OF THE WEBSITE CREATED BY VM ON PROXMOX**

# **IddeenWSVM2**

Name: Jibreal Id-deen

Class: Fundamentals of Systems Administrator

Professor: Professor Jeremy

Lab: Proxmox Server

**FIGURE 200 - DO THE SAME THING FROM THE EARLIER WITH ANOTHER IP ADDRESS FROM VMS**

```
C:\Users\Administrator>nslookup PC1
Server:  Iddeen19Dell.iddeenjibreal.com
Address: 192.168.130.50
Name:      PC1.iddeenjibreal.com
Address: 192.168.130.20
```

```
C:\Users\Administrator>nslookup 192.168.130.20
Server:  Iddeen19Dell.iddeenjibreal.com
Address: 192.168.130.50
Name:      PC1.iddeenjibreal.com
Address: 192.168.130.20
```

FIGURE 201 - USE NOOKUP COMMAND TO LOOK AT THE IP ADDRESS AND DNS NAME FOR PC1

```
C:\Users\Administrator>nslookup Router1
Server:  Iddeen19Dell.iddeenjibreal.com
Address: 192.168.130.50
Name:      Router1.iddeenjibreal.com
Address: 192.168.130.254
```

```
C:\Users\Administrator>nslookup 192.168.130.254
Server:  Iddeen19Dell.iddeenjibreal.com
Address: 192.168.130.50
Name:      Router1.iddeenjibreal.com
Address: 192.168.130.254
```

FIGURE 202 - NSLOOKUP FOR ROUTER

```
C:\Users\Administrator>nslookup iDRAC
Server: Iddeen19Dell.iddeenjibreal.com
Address: 192.168.130.50

Name: iDRAC.iddeenjibreal.com
Address: 192.168.130.12
```

```
C:\Users\Administrator>nslookup 192.168.130.12
Server: Iddeen19Dell.iddeenjibreal.com
Address: 192.168.130.50

Name: iDRAC.iddeenjibreal.com
Address: 192.168.130.12
```

FIGURE 203 - NSLOOKUP ON IDRAC

```
C:\Users\Administrator>nslookup IddeenWSVM2
Server: Iddeen19Dell.iddeenjibreal.com
Address: 192.168.130.50

Name: IddeenWSVM2.iddeenjibreal.com
Address: 192.168.130.23
```

```
C:\Users\Administrator>nslookup 192.168.130.23
Server: Iddeen19Dell.iddeenjibreal.com
Address: 192.168.130.50

Name: IddeenWSVM2.iddeenjibreal.com
Address: 192.168.130.23
```

FIGURE 204 - NSLOOKUP ON VM

```
C:\Users\Administrator>nslookup IddeenWS10
Server: Iddeen19Dell.iddeenjibreal.com
Address: 192.168.130.50

Name: IddeenWS10.iddeenjibreal.com
Address: 192.168.130.16
```

```
C:\Users\Administrator>nslookup 192.168.130.16
Server: Iddeen19Dell.iddeenjibreal.com
Address: 192.168.130.50

Name: IddeenWS10.iddeenjibreal.com
Address: 192.168.130.16
```

FIGURE 205 - NSLOOKUP ON WINDOWS 10

```
C:\Users\Administrator>nslookup Iddeen19VM1
Server: Iddeen19Dell.iddeenjibreal.com
Address: 192.168.130.50

Name: Iddeen19VM1.iddeenjibreal.com
Address: 192.168.130.14
```

```
C:\Users\Administrator>nslookup 192.168.130.14
Server: Iddeen19Dell.iddeenjibreal.com
Address: 192.168.130.50

Name: Iddeen19VM1.iddeenjibreal.com
Address: 192.168.130.14
```

FIGURE 206 - NSLOOKUP ON ANOTHER VMs

```
C:\Users\Administrator>nslookup Iddeen19Dell
Server:  Iddeen19Dell.iddeenjibreal.com
Address: 192.168.130.50

Name:      Iddeen19Dell.iddeenjibreal.com
Address: 192.168.130.50
```

```
EdC:\Users\Administrator>nslookup 192.168.130.14
Server:  Iddeen19Dell.iddeenjibreal.com
Address: 192.168.130.50
```

FIGURE 207 - NSLOOKUP ON DELL SERVER

```
C:\Users\Administrator>
C:\Users\Administrator>nslookup FSA-Server01
Server:  Iddeen19Dell.iddeenjibreal.com
Address: 192.168.130.50

Name:      FSA-Server01.iddeenjibreal.com
Address: 192.168.130.15
```

```
C:\Users\Administrator>nslookup 192.168.130.15
Server:  Iddeen19Dell.iddeenjibreal.com
Address: 192.168.130.50

Name:      FSA-Server01.iddeenjibreal.com
Address: 192.168.130.15
```

FIGURE 208 - NSLOOKUP ON WINDOWS SERVER 2019 CORE

```
ubuntu@ubuntu:~$ nslookup PC1
Server:      127.0.0.53
Address:     127.0.0.53#53

Non-authoritative answer:
Name:  PC1.iddeenjibreal.com
Address: 192.168.130.20

ubuntu@ubuntu:~$
```

```
ubuntu@ubuntu:~$ nslookup 192.168.130.20
20.130.168.192.in-addr.arpa      name = PC1.iddeenjibreal.com.

Authoritative answers can be found from:

ubuntu@ubuntu:~$
```

FIGURE 209 - IN UBUNTU, USE NSLOOKUP ON PC1

```
ubuntu@ubuntu:~$ nslookup Router1
Server:      127.0.0.53
Address:     127.0.0.53#53

Non-authoritative answer:
Name:  Router1.iddeenjibreal.com
Address: 192.168.130.254
```

```
ubuntu@ubuntu:~$ nslookup 192.168.130.254
254.130.168.192.in-addr.arpa      name = Router1.iddeenjibreal.com.

Authoritative answers can be found from:
```

FIGURE 210 - NSLOOKUP ON ROUTER

```
ubuntu@ubuntu:~$ nslookup iDRAC
Server:          127.0.0.53
Address:         127.0.0.53#53

Non-authoritative answer:
Name:   iDRAC.iddeenjibreal.com
Address: 192.168.130.12
```

```
ubuntu@ubuntu:~$ nslookup 192.168.130.12
12.130.168.192.in-addr.arpa      name = iDRAC.iddeenjibreal.com.

Authoritative answers can be found from:
```

FIGURE 211 - NSLOOKUP ON iDRAC

```
ubuntu@ubuntu:~$ nslookup IddeenWSVM2
Server:      127.0.0.53
Address:     127.0.0.53#53

Non-authoritative answer:
Name:  IddeenWSVM2.iddeenjibreal.com
Address: 192.168.130.23
```

```
ubuntu@ubuntu:~$ nslookup 192.168.130.23  
23.130.168.192.in-addr.arpa      name = IddeenWSVM2.iddeenjibreal.com.
```

Authoritative answers can be found from:

```
ubuntu@ubuntu:~$ nslookup IddeenWSVM1
```

```
Server:          127.0.0.53  
Address:        127.0.0.53#53
```

Non-authoritative answer:

```
Name:  IddeenWSVM1.iddeenjibreal.com  
Address: 192.168.130.22
```

```
ubuntu@ubuntu:~$ nslookup 192.168.130.22  
22.130.168.192.in-addr.arpa      name = IddeenWSVM1.iddeenjibreal.com.
```

Authoritative answers can be found from:

FIGURE 212 - NSLOOKUP ON VMs

```
ubuntu@ubuntu:~$ nslookup IddeenWS10
Server:      127.0.0.53
Address:     127.0.0.53#53

Non-authoritative answer:
Name:  IddeenWS10.iddeenjibreal.com
Address: 192.168.130.16
```

```
ubuntu@ubuntu:~$ nslookup 192.168.130.16
16.130.16.192.in-addr.arpa    name = IddeenWS10.iddeenjibreal.com.

Authoritative answers can be found from:
```

FIGURE 213 - NSLOOKUP ON WINDOWS 10

```
ubuntu@ubuntu:~$ nslookup Iddeen19VM1
Server:      127.0.0.53
Address:     127.0.0.53#53

Non-authoritative answer:
Name:  Iddeen19VM1.iddeenjibreal.com
Address: 192.168.130.14

ubuntu@ubuntu:~$ nslookup 192.168.130.14
14.130.168.192.in-addr.arpa    name = Iddeen19VM1.iddeenjibreal.com.

Authoritative answers can be found from:
```

FIGURE 214 - NSLOOKUP ON VM

```
ubuntu@ubuntu:~$ nslookup Iddeen19Dell
Server:      127.0.0.53
Address:     127.0.0.53#53
```

```
Non-authoritative answer: ↑
Name:  Iddeen19Dell.iddeenjibreal.com
Address: 192.168.130.50
```

```
ubuntu@ubuntu:~$ nslookup 192.168.130.50
50.130.168.192.in-addr.arpa    name = Iddeen19Dell.iddeenjibreal.com.

Authoritative answers can be found from:
```

FIGURE 215 - NSLOOKUP ON DELL SERVER

```
ubuntu@ubuntu:~$ nslookup FSA-Server01
Server:      127.0.0.53
Address:     127.0.0.53#53
```

```
Non-authoritative answer:
Name:  FSA-Server01.iddeenjibreal.com
Address: 192.168.130.15
```

```
ubuntu@ubuntu:~$ nslookup 192.168.130.15
15.130.168.192.in-addr.arpa    name = FSA-Server01.iddeenjibreal.com.

Authoritative answers can be found from:
```

FIGURE 216 - NSLOOKUP ON WINDOWS SERVER 2019 CORE

## **QUESTIONS AND ANSWERS**

- N/A

## **OBSERVATIONS**

---

Wow. This lab was really taking a while to understand the process; it just takes a lot of time to do this much stuff to do. And I lost my original USB; I had to do it again from the start. But it came up faster than I thought.