

0

Lab #3

Setting up A SOHO network

Week #4/5

NACT-262 Fundamentals of System Administration

2025-2026 Fall Semester

Submitted by Jibreal Id-deen

Due by September 28, 2025

Professor Mark Jeremy

Table Of Contents

Objective	7
Network DIAGRAM	8
Procedure	11
Questions and Answers.....	104
Observations	105

Table of Figures

Figure 1 - Type the router's login website	12
Figure 2 - Click here to proceed	12
Figure 3 - Click "next"	13
Figure 4 - Set the new password	13
Figure 5 - Firmware Updating	14
Figure 6 - Log in the router Account	15
Figure 7 - The Overview of the router dashboard.....	15
Figure 8 - Click "Basic" then "Internet"	16
Figure 9 - Check the router's WAN IP Address.....	17
Figure 10 - Click "LAN Setup"	18
Figure 11 - Check the Router's LAN IP to change	19
Figure 12 - Done changing the LAN IP Address.....	20
Figure 13 - Disable the DHCP Server.....	20
Figure 14 - Apply it.....	21
Figure 15 - Click "Wireless"	22
Figure 16 - Disable Wi-Fi (2.4GHz).....	23
Figure 17 - Disable Wi-Fi (5GHZ)	23
Figure 18 - Apply it.....	23
Figure 19 - Type "Control Panel" to enter	24
Figure 20 - Follow the process to Network Connections	24
Figure 21 - Click this "Ethernet"	24
Figure 22 - Click "Properties"	25
Figure 23 - Put the manually IP address and the required stuffs on it.....	26
Figure 24 - Type "ipconfig" on Desktop PC and see the rest of the ethernet adapter	27
Figure 25 - Click "Router Status" then click "Set Password"	28
Figure 26 - Set new password and confirm it	29
Figure 27 - Connect to iDRAC and NIC 1 with ethernet from the router	30
Figure 28 - Make sure to remember the bench number for IP Address.....	31
Figure 29 - in iDRAC setting, click "System BIOS"	31

Figure 30 - Click "Network"	32
Figure 31 - Put the manually IP address and the required stuff on it.....	32
Figure 32 - Open the VMware Workstation pro	33
Figure 33 – Procced	34
Figure 34 - Make sure to select the Windows Server 2019 to be detected.....	35
Figure 35 - Select WS 2019 Standard for VM.....	36
Figure 36 - Click "Edit"	37
Figure 37 - Click "Virtual Network Editor"	38
Figure 38 - Click "Change Settings".....	39
Figure 39 - Change the VMnet information to bridge to the ethernet controller.....	40
Figure 40 - Reboot into Windows Server 2019	41
Figure 41 - Open the control panel	42
Figure 42 - Click the "Network and Internet".....	42
Figure 43 - Click "Ethernet0"	43
Figure 44 - Click "Properties".....	44
Figure 45 - Click this IPv4.....	45
Figure 46 - put the manually IP address and the required stuff on it.....	46
Figure 47 - Open the Server Manager then click "Local Server"	47
Figure 48 - Change the computer name.....	47
Figure 49 - Done changing computer name.....	48
Figure 50 - Click Manage	48
Figure 51 - Click " Add Roles and Features"	49
Figure 52 - Proceed!.....	49
Figure 53 - Click "Web Server (IIS)"	50
Figure 54 - Click "Add Features"	51
Figure 55 - Install the Web Server Role	52
Figure 56 - Installation started	53
Figure 57 - Installation successfully	53
Figure 58 - Open Notepad.....	54
Figure 59 - Make an html coding on notepad.....	54
Figure 60 - Click "Save As".....	55

Figure 61 - Type the required file name to put in	55
Figure 62 - Type "Rufus" and click this link	55
Figure 63 - Download rufus.exe	56
Figure 64 - Copying ISO files.....	56
Figure 65 - Ready to go!	56
Figure 66 - Install windows Server 2019 in PC-B	57
Figure 67 - click this WS 2019 Standard.....	57
Figure 68 - Installing Windows	58
Figure 69 - Loading files.....	58
Figure 70 - Change the computer name by pressing two number	59
Figure 71 - Done changing the computer name.....	59
Figure 72 - Type "sconfig"	59
Figure 73 - Change the IP Address and put the required stuffs on it.....	60
Figure 74 - Set the new DNS Server.....	60
Figure 75 - Use PowerShell as command then type the required command	61
Figure 76 - Type the HTML language as coding to create a website and start the web service ..	61
Figure 77 - Install WS 2019 in the Dell Server	62
Figure 78 - Installing Windows	63
Figure 79 - The overview of the WS 2019 in Dell Server.....	64
Figure 80 - Click "Add roles and features"	65
Figure 81 - Select DHCP and DNS Server	66
Figure 82 - Add Features for DHCP and DNS	68
Figure 83 - Install both of it	69
Figure 84 - Installation Completed	70
Figure 85 - Click "Tools".....	70
Figure 86 - Click "DNS".....	71
Figure 87 - See the overview of the DNS Manager.....	71
Figure 88 - Add a New Zone	72
Figure 89 - Procced the Zone Wizard	73
Figure 90 - Type the required text on Zone name	74
Figure 91 - Create a new file with this file name.....	75

Figure 92 - Procced to complete the new Zone Wizard.....	77
Figure 93 - Click "Reverse Lookup Zones" to create another zone	78
Figure 94 - Procced until click "IPv4 Reverse Lookup Zone"	79
Figure 95 - Type the required network ID to procced	80
Figure 96 - Procced to do the same thing as for forward zone	82
Figure 97 - Click "finish".....	83
Figure 98 - Click "New Host (A or AAAA)"	84
Figure 99 - Assign DNS A record for all of the devices.....	89
Figure 100 - Go back to the dashboard, and click "Tools"	89
Figure 101 - Click "DHCP"	90
Figure 102 - See the overview of the DHCP menu	91
Figure 103 - Click "new Scope"	93
Figure 104 - "Click Next"	93
Figure 105 – Procced	94
Figure 106 - Put the starting IP Address and the end to click "Next".....	94
Figure 107 - set the Lease duration.....	95
Figure 108 - Configure DHCP Options	96
Figure 109 - Add the router Default Gateway	97
Figure 110 - Set the parent domain and edit the stuff, then click "next"	98
Figure 111 - See the Scope being Active!	98
Figure 112 - See the laptop getting IP Address from DHCP Server	99
Figure 113 - Type the IIS website on laptop.....	99
Figure 114 - See your own IIS website from the PCA	100
Figure 115 - Type another IIS website on the laptop.....	100
Figure 116 - See your own IIS Website from the PCB Core!	101
Figure 117- nslookup on DNS A and reverse IP records for router	101
Figure 118 - nslookup on DNS A and reverse IP records for PCA VM.....	102
Figure 119 - nslookup on DNS A and reverse IP records for PCB Core.....	102
Figure 120 - nslookup on DNS A and Reverse IP records for Dell Server	103

Lab #2- IPMI and Microsoft Window Server

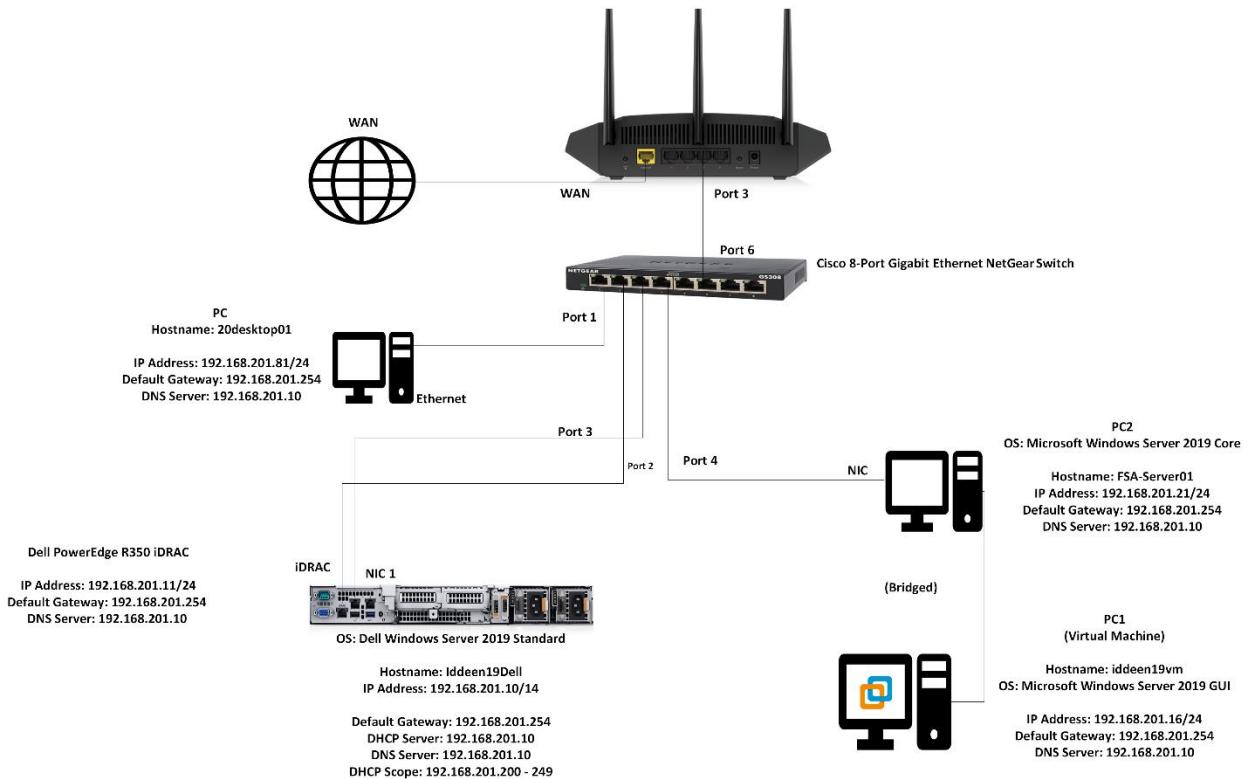
OBJECTIVE

As independent working on this, I set up a SOHO LAN with a router and a Windows Server 2019 providing DNS/DHCP on 192.168.2XX.0/24 and deploy IIS on PC1 and PC2, then verify site access and A/PTR DNS lookups from a wired laptop.

NETWORK DIAGRAM

NetGear AX1800 Wi-Fi Router

WAN IP Address: DHCP
LAN IP Address: 192.168.201.254/24



Hostname	Iddeen19Dell
Virtual Machine or Physical?	Physical
Operating System	Windows Server 2019 Standard (GUI)

RAM size	128GB
HD size	4TB
IPMI IP Address (if none – remove line)	192.168.201.11
IPMI Gateway IP address (if none – remove line)	192.168.201.254
Ethernet #1 IP Address (if none – remove line)	192.168.201.10
Ethernet Gateway IP Address (if none – remove line)	192.168.201.254
Primary DNS IP Address (if none – remove line)	192.168.201.10
Network Services (if none – remove line)	DHCP Server, DNS Server

Hostname	iDRAC
Virtual Machine or Physical?	Physical
Operating System	iDRAC9 firmware
RAM size	128GB
HD size	4TB
IPMI IP Address (if none – remove line)	192.168.201.11
IPMI Gateway IP address (if none – remove line)	192.168.201.254
Primary DNS IP Address (if none – remove line)	192.168.201.10
Network Services (if none – remove line)	Remote Management

Hostname	Iddeen19vm
Virtual Machine or Physical?	Virtual Machine (VMware Workstation, Bridged)

Operating System	Windows Server 2019 Standard (GUI)
RAM size	32GB
Ethernet #1 IP Address (if none – remove line)	192.168.201.16
Ethernet Gateway IP Address (if none – remove line)	192.168.201.10
Primary DNS IP Address (if none – remove line)	192.168.201.10
Network Services (if none – remove line)	IIS (custom homepage)

Hostname	FSA-Server01
Virtual Machine or Physical?	Physical
Operating System	Windows Server 2019 Standard Core
RAM size	32GB
HD size	950GB
Ethernet #1 IP Address (if none – remove line)	192.168.201.21
Ethernet Gateway IP Address (if none – remove line)	192.168.201.254
Primary DNS IP Address (if none – remove line)	192.168.201.10
Network Services (if none – remove line)	IIS (custom homepage)

PROCEDURE



FIGURE 1 - TYPE THE ROUTER'S LOGIN WEBSITE

**For the fastest set up, download the Nighthawk app
from Nighthawk-App.com**

Go to Nighthawk-App.com and download the Nighthawk app on your mobile phone or tablet device using a mobile data connection to complete your Wi-Fi network set up.



FIGURE 2 - CLICK HERE TO PROCCED

NETGEAR® AX1800 WiFi Router R6700AX



Welcome

Let's set up your router.

Make sure that your router is connected to Internet with an Ethernet cable to continue.

NEXT

FIGURE 3 - CLICK "NEXT"

Admin Account Settings

The admin password is used to log in to your router's web interface. Secure your Network by changing the admin password.

Username	<input type="text" value="admin"/>	New Password	<input type="password" value="*****"/>	
			<input type="password" value="*****"/>	
		Confirm New Password	<input type="password" value="*****"/>	
			<input type="password" value="*****"/>	

FIGURE 4 - SET THE NEW PASSWORD

NETGEAR® AX1800 WiFi

Router R6700AX



Firmware Updating



Please Wait

FIGURE 5 - FIRMWARE UPDATING

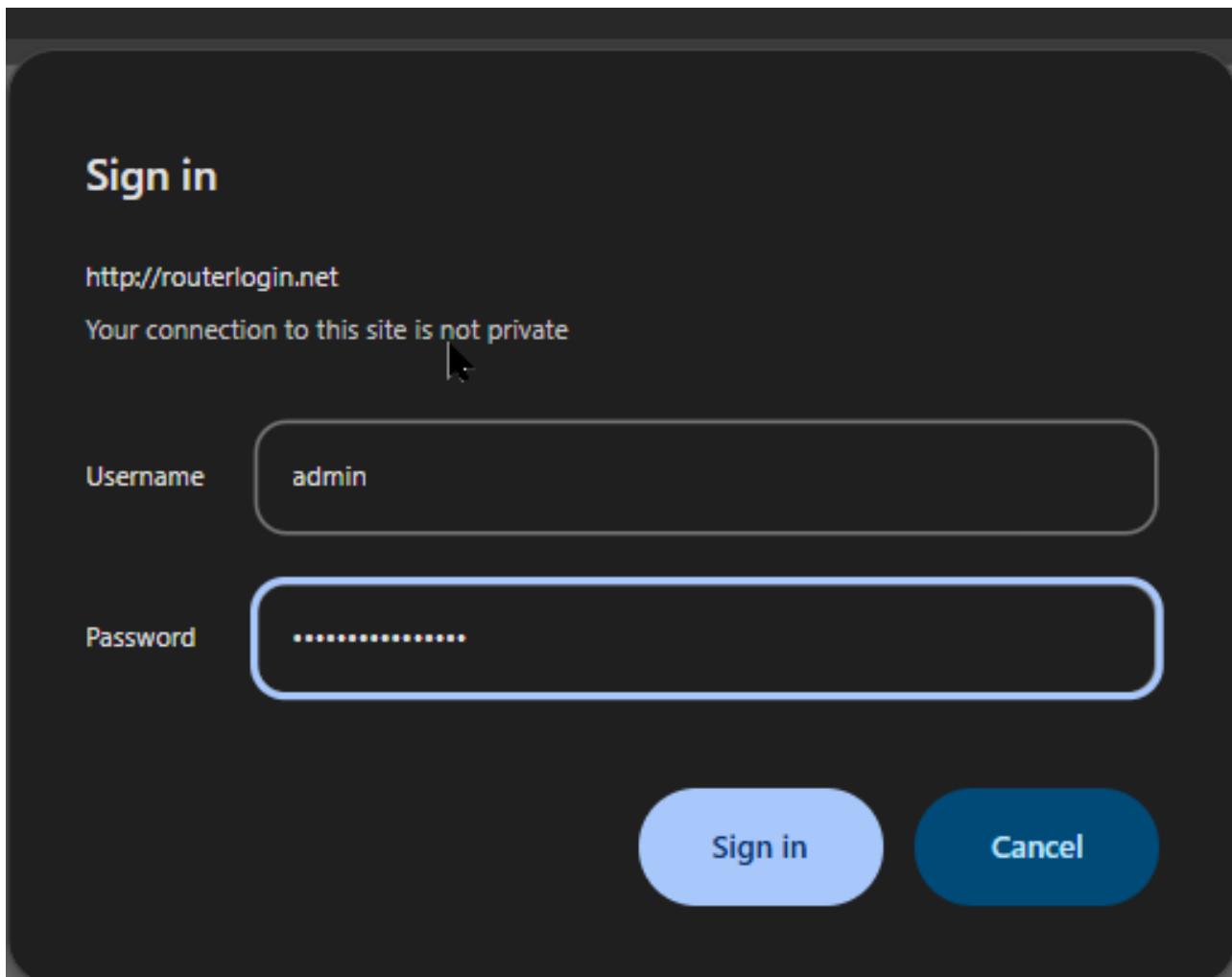


FIGURE 6 - LOG IN THE ROUTER ACCOUNT

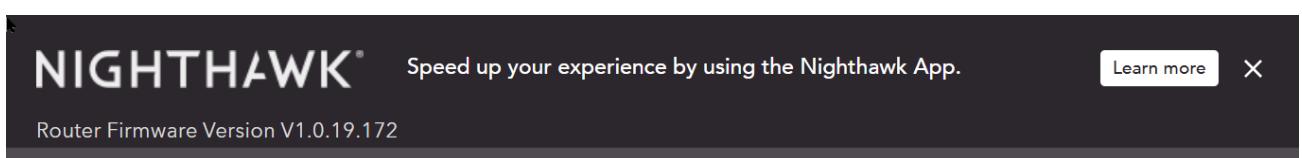


FIGURE 7 - THE OVERVIEW OF THE ROUTER DASHBOARD

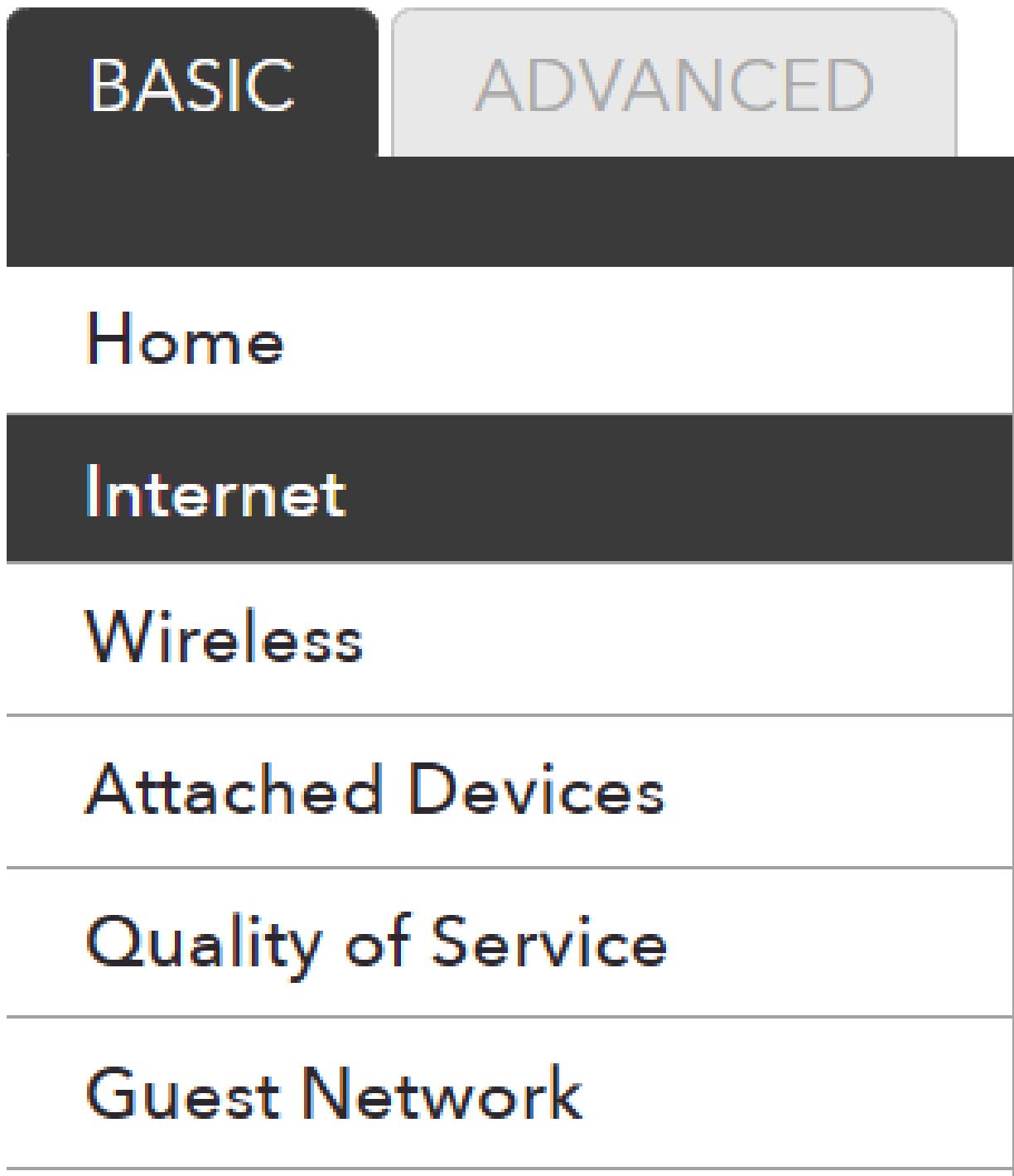


FIGURE 8 - CLICK "BASIC" THEN "INTERNET"

- Get Dynamically from ISP

- Use Static IP Address

IP Address:

10 . 1 . 20 . 174

FIGURE 9 - CHECK THE ROUTER'S WAN IP ADDRESS

Setup



Internet Setup

Wireless Setup

Guest Network

WAN Setup

LAN Setup

QoS Setup

Device Name

FIGURE 10 - CLICK "LAN SETUP"

LAN TCP/IP Setup



IP Address:

192 . 168 . 1 . 1

IP Subnet Mask:

255 . 255 . 255 . 0

FIGURE 11 - CHECK THE ROUTER'S LAN IP TO CHANGE

LAN TCP/IP Setup

IP Address:

192 . 168 . 201 . 254

IP Subnet Mask:

255 . 255 . 255 . 0

FIGURE 12 - DONE CHANGING THE LAN IP ADDRESS



Use Router as DHCP Server



FIGURE 13 - DISABLE THE DHCP SERVER



Apply

FIGURE 14 - APPLY IT

BASIC

ADVANCED

Home

Internet

Wireless

Attached Devices

Quality of Service

Guest Network

FIGURE 15 - CLICK "WIRELESS"

Wireless Network (2.4GHz b/g/n/ax)

- Enable SSID Broadcast
- Enable 20/40 MHz Coexistence

FIGURE 16 - DISABLE WI-FI (2.4GHz)

Wireless Network (5GHz 802.11a/n/ac/ax)

- Enable SSID Broadcast

Name (SSID):

NETGEAR17-5G

FIGURE 17 - DISABLE WI-FI (5GHZ)

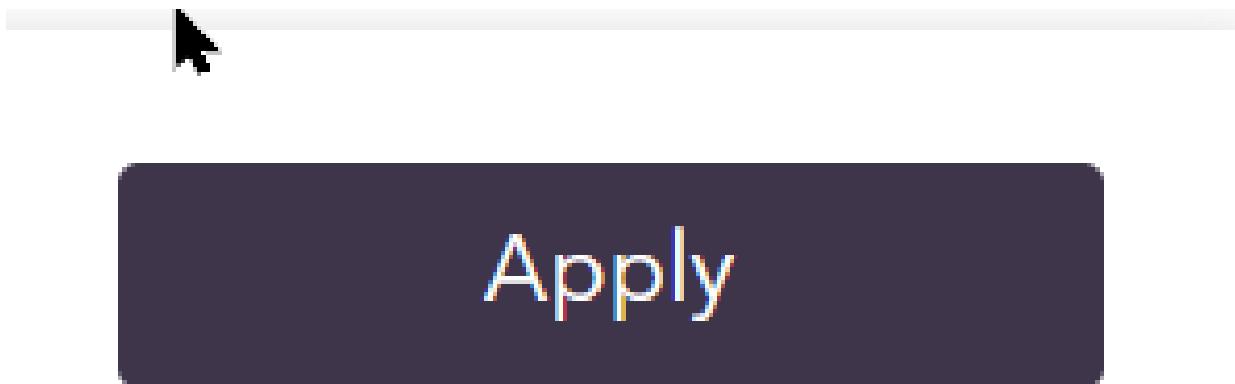


FIGURE 18 - APPLY IT

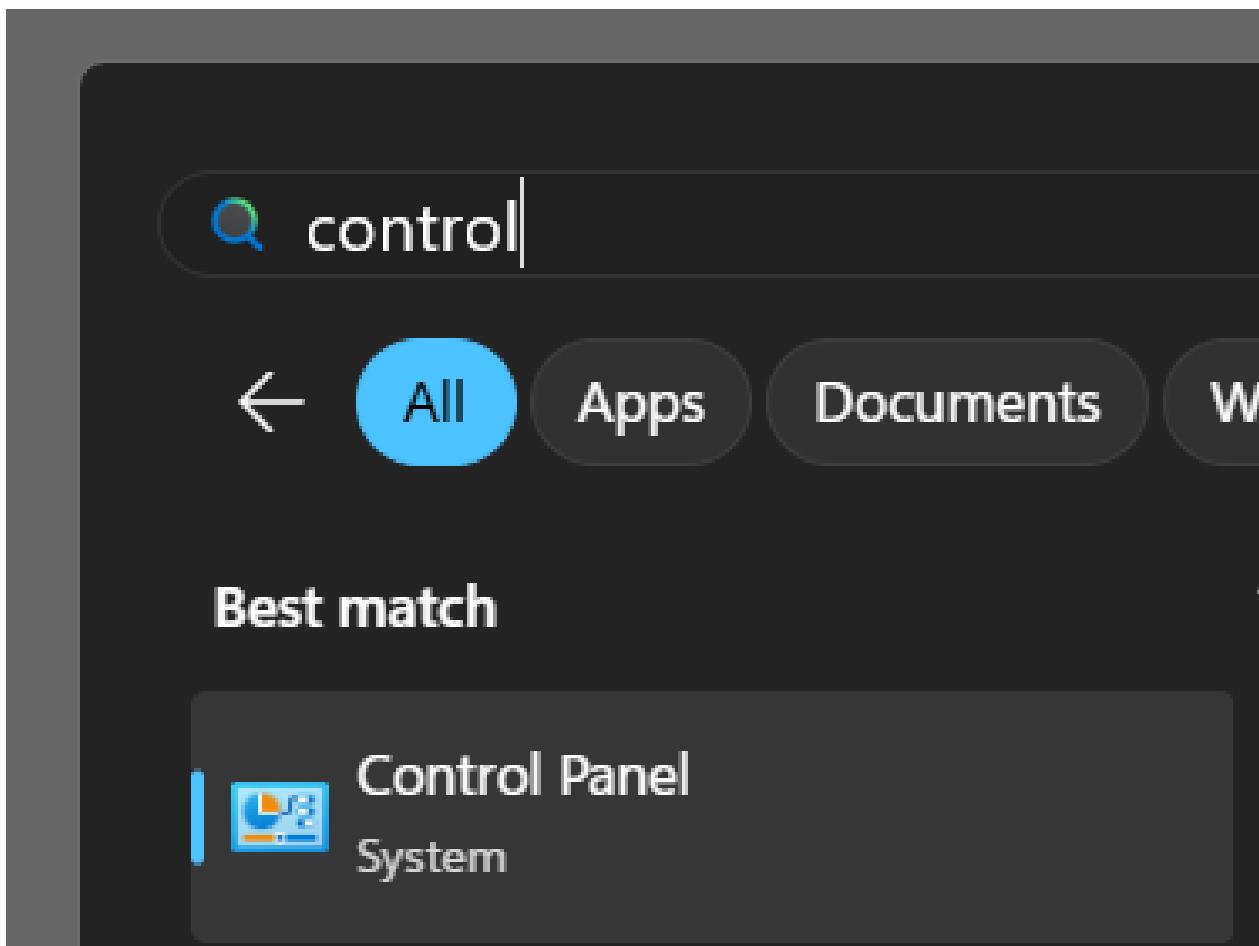


FIGURE 19 - TYPE "CONTROL PANEL" TO ENTER

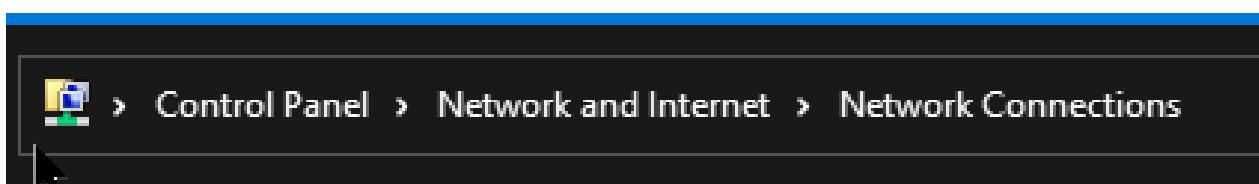


FIGURE 20 - FOLLOW THE PROCESS TO NETWORK CONNECTIONS

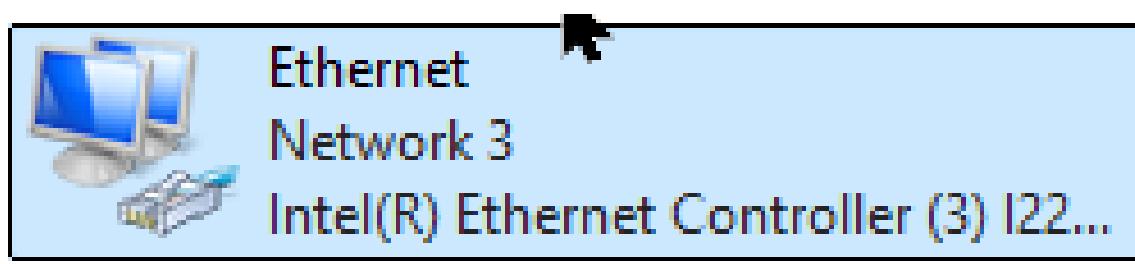


FIGURE 21 - CLICK THIS "ETHERNET"

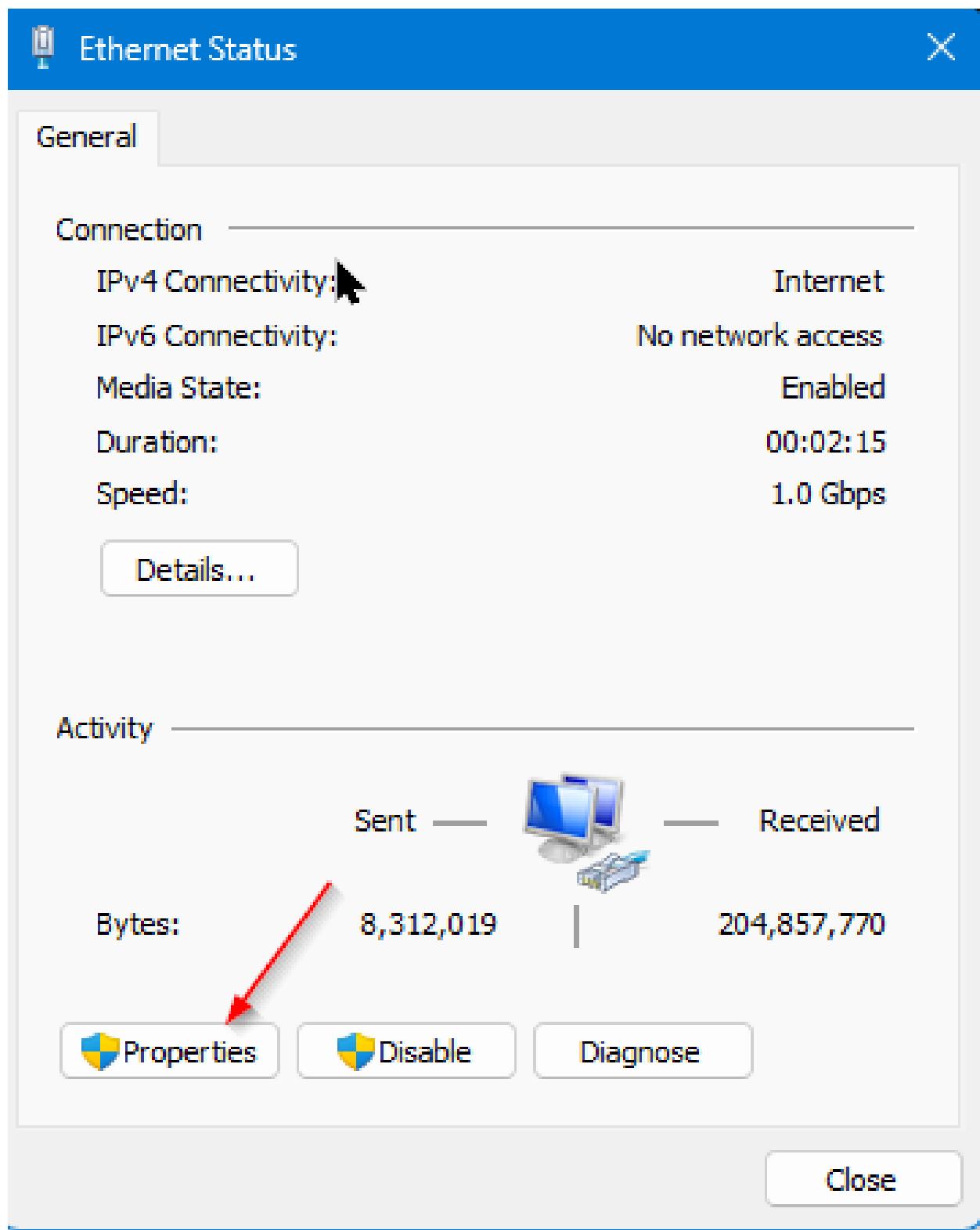


FIGURE 22 - CLICK "PROPERTIES"

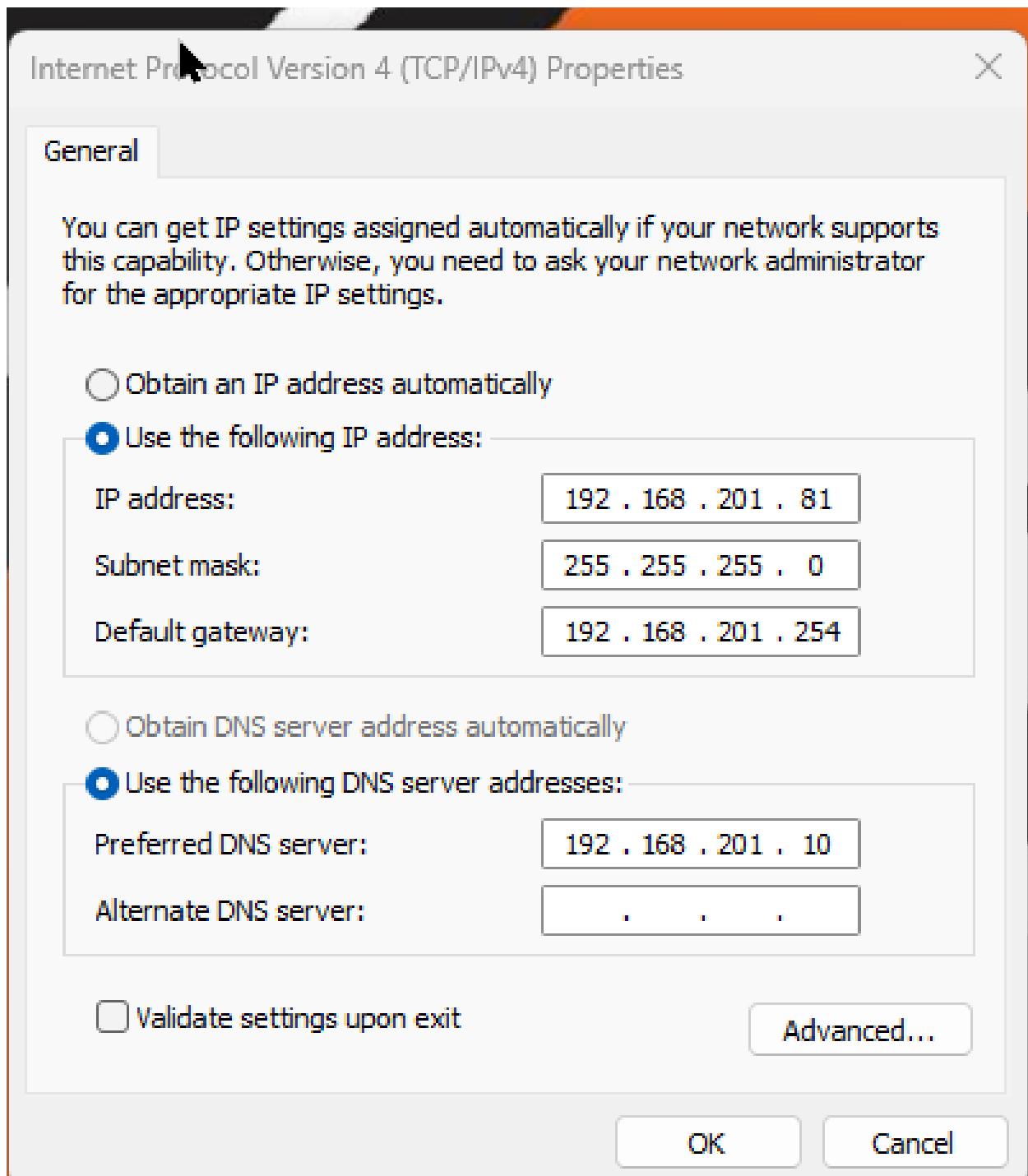


FIGURE 23 - PUT THE MANUALLY IP ADDRESS AND THE REQUIRED STUFFS ON IT

```
Ethernet adapter Ethernet:
```

```
Connection-specific DNS Suffix . . . . .
Description . . . . . : Intel(R) Ethernet Controller (3) I225-V
Physical Address. . . . . : D8-5E-D3-88-B2-16
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::a5a3:81ed:36e2:af0a%3(Preferred)
IPv4 Address. . . . . : 192.168.201.81(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.201.254
DHCPv6 IAID . . . . . : 198729427
DHCPv6 Client DUID. . . . . : 00-01-00-01-30-0B-15-AA-D8-5E-D3-88-B2-16
DNS Servers . . . . . : 192.168.201.10
NetBIOS over Tcpip. . . . . : Enabled
```

FIGURE 24 - TYPE "IPCONFIG" ON DESKTOP PC AND SEE THE REST OF THE ETHERNET ADAPTER

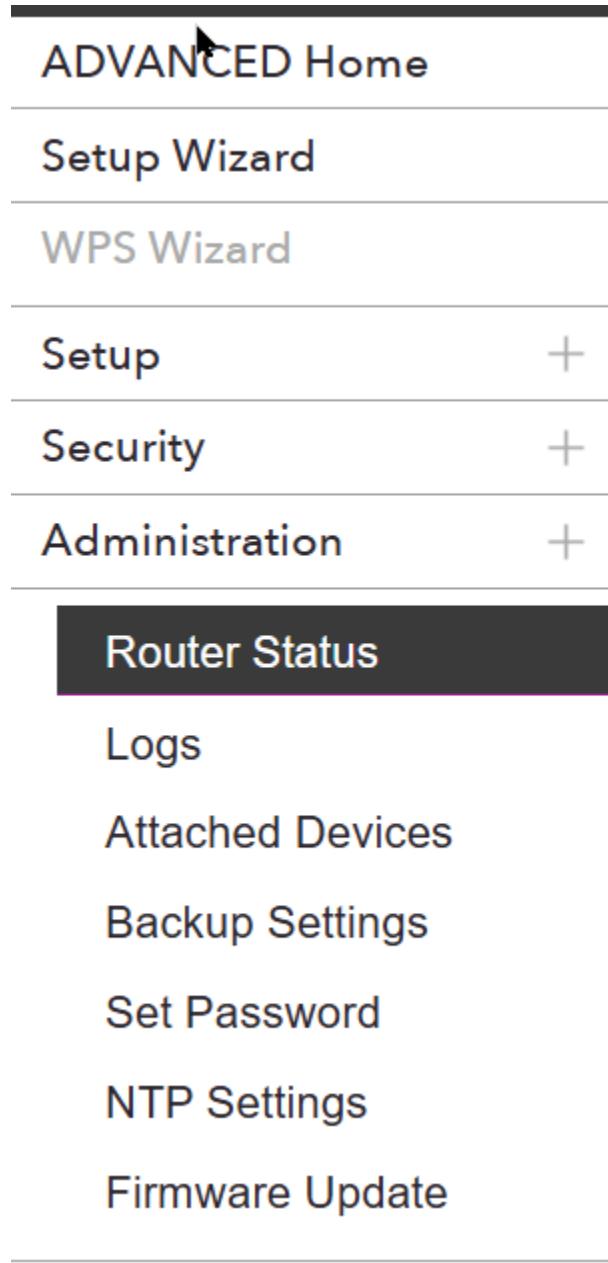


FIGURE 25 - CLICK "ROUTER STATUS" THEN CLICK "SET PASSWORD"

Change Password

Change the router's local management password.

Old Password:	<input type="text"/>	
New Password:	<input type="text"/>	
Confirm New Password:	<input type="text"/>	

FIGURE 26 - SET NEW PASSWORD AND CONFIRM IT

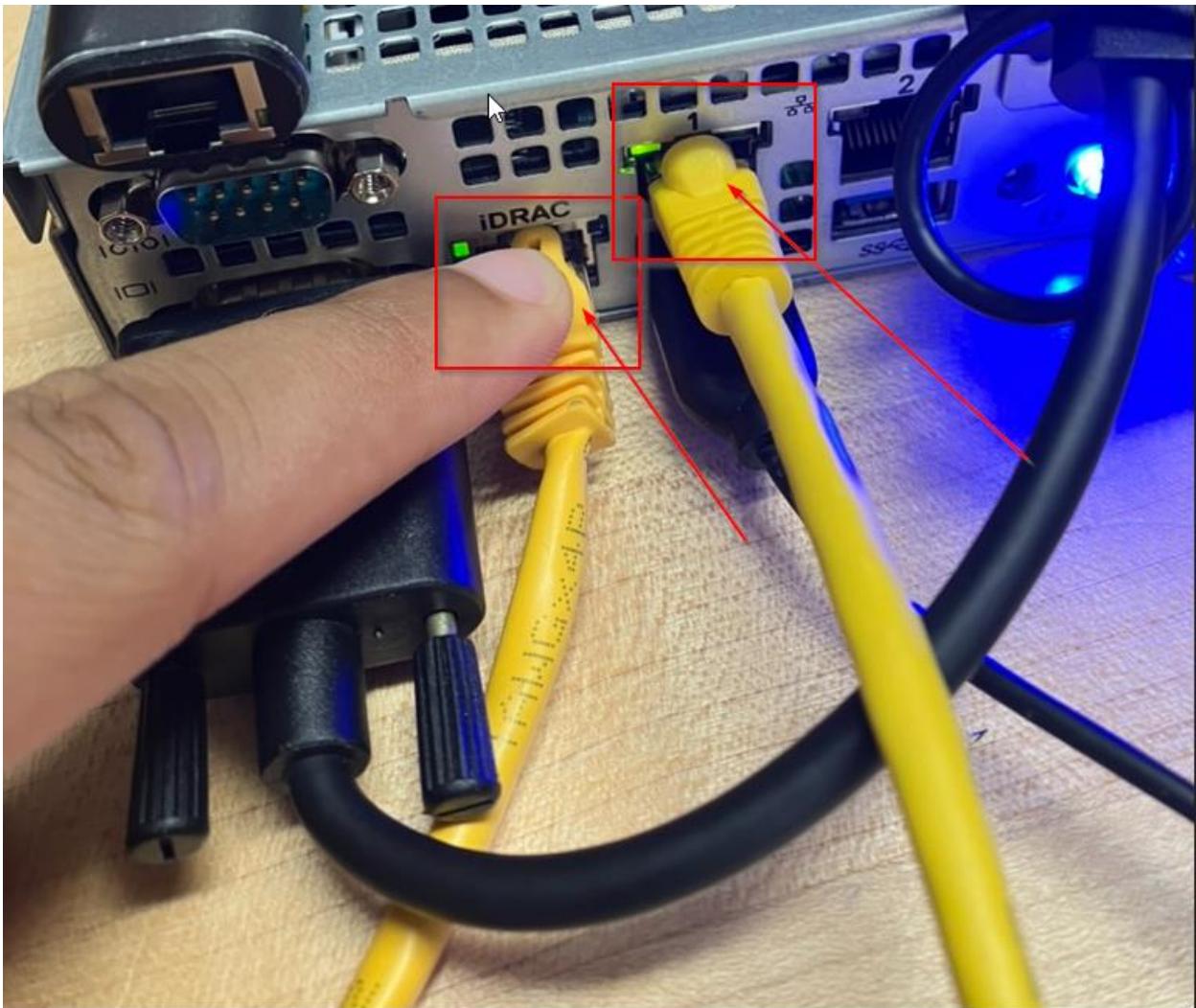


FIGURE 27 - CONNECT TO IDRAC AND NIC 1 WITH ETHERNET FROM THE ROUTER



FIGURE 28 - MAKE SURE TO REMEMBER THE BENCH NUMBER FOR IP ADDRESS

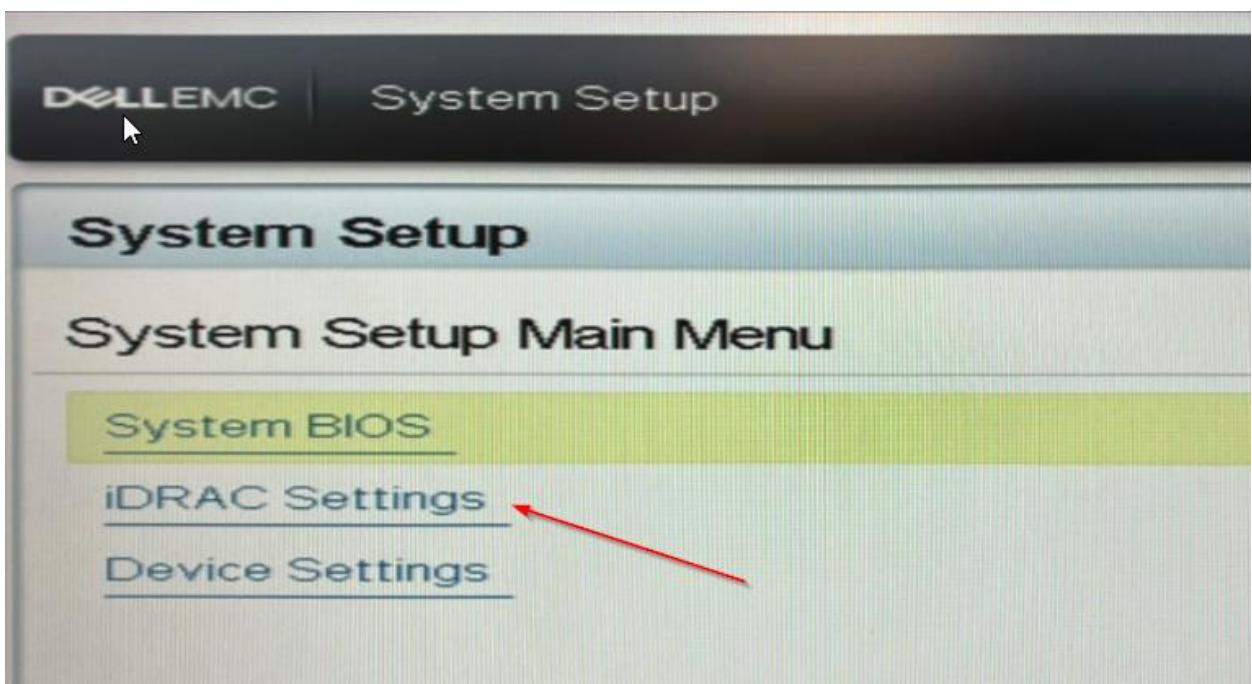


FIGURE 29 - IN IDRAC SETTING, CLICK "SYSTEM BIOS"

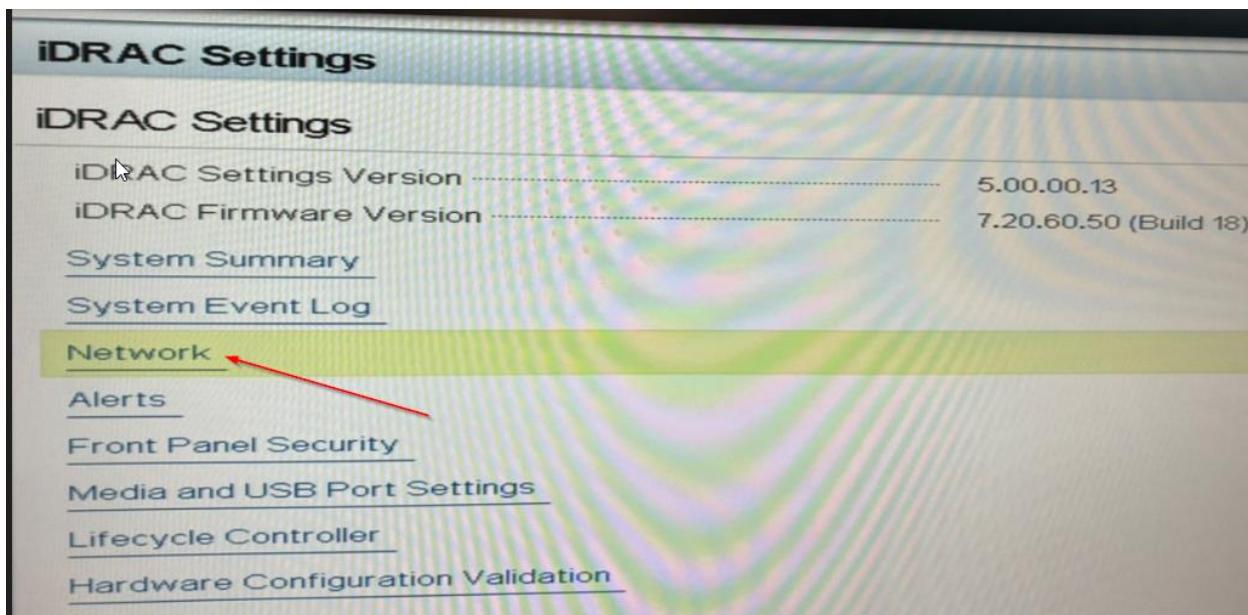


FIGURE 30 - CLICK "NETWORK"

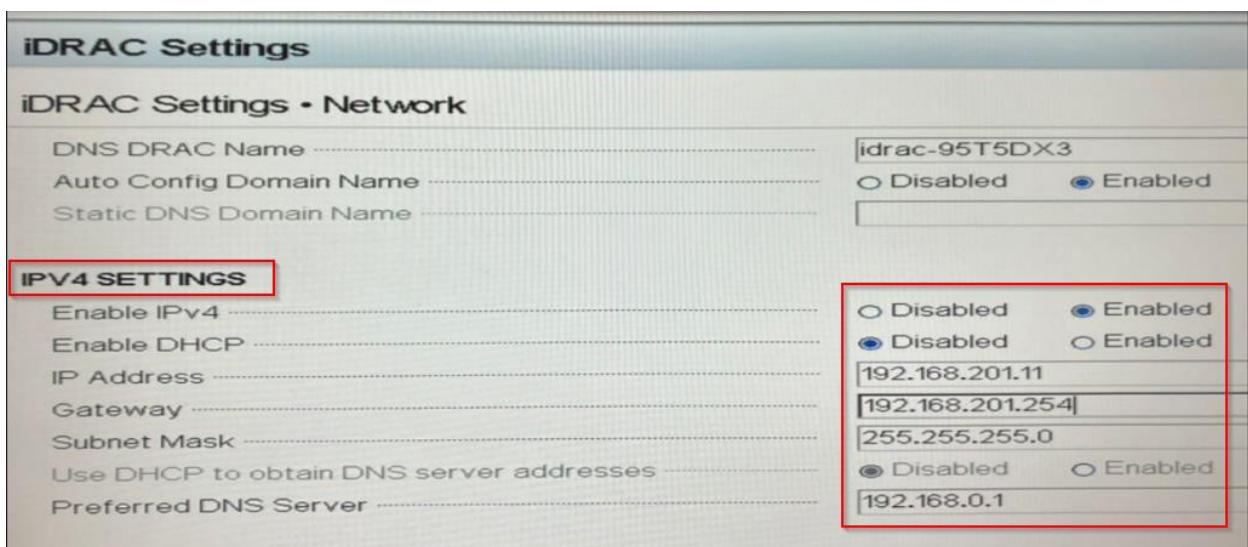


FIGURE 31 - PUT THE MANUALLY IP ADDRESS AND THE REQUIRED STUFF ON IT

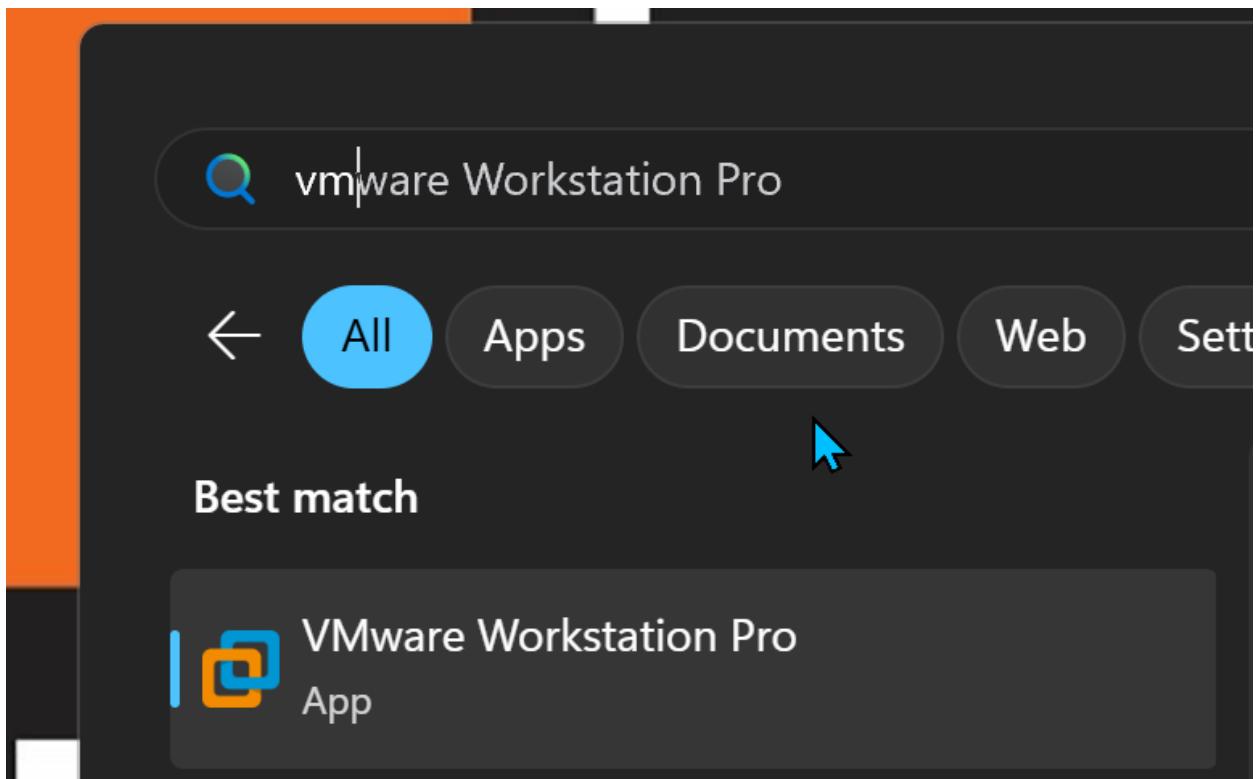


FIGURE 32 - OPEN THE VMWARE WORKSTATION PRO



FIGURE 33 – PROCCED

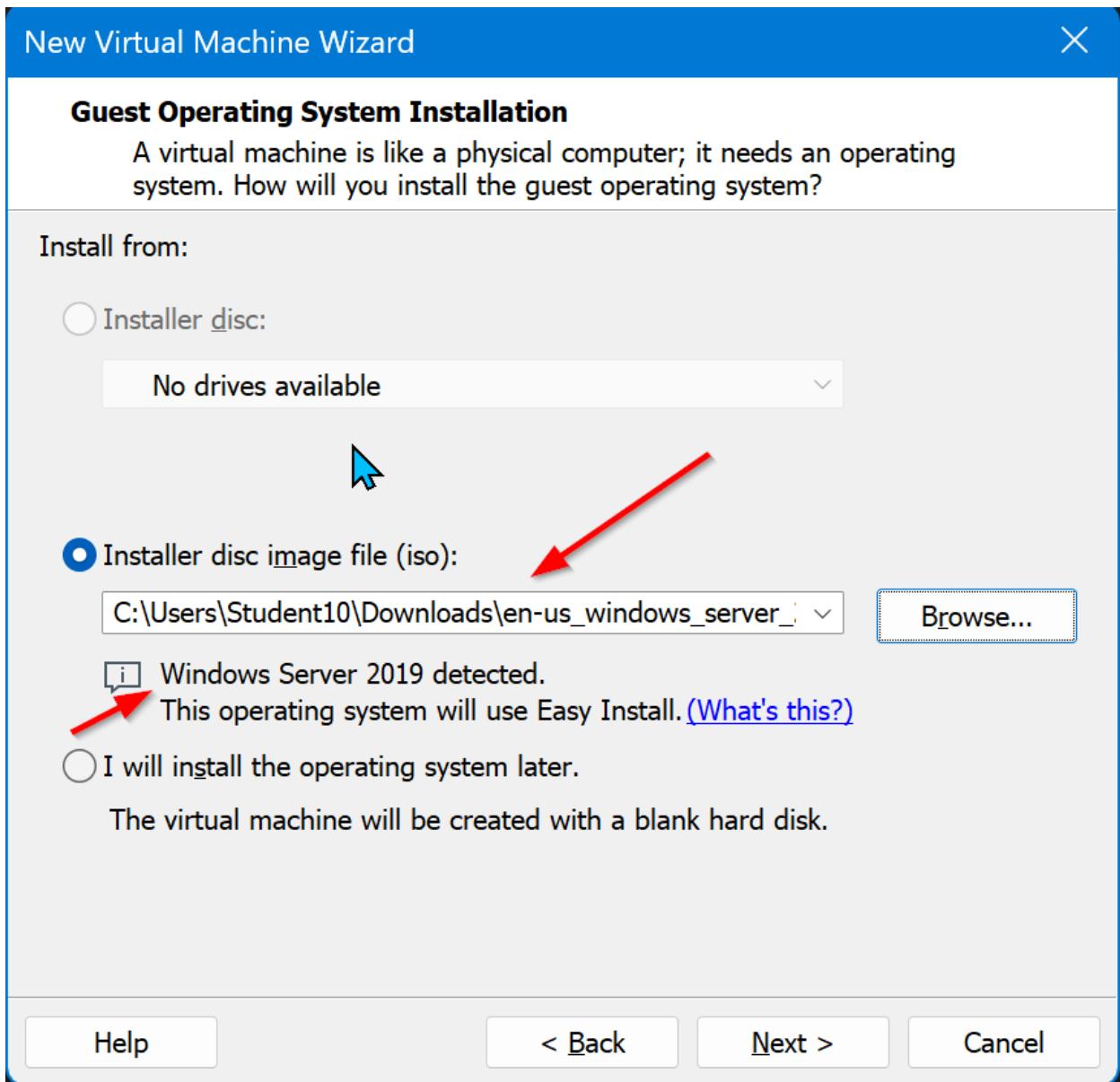


FIGURE 34 - MAKE SURE TO SELECT THE WINDOWS SERVER 2019 TO BE DETECTED

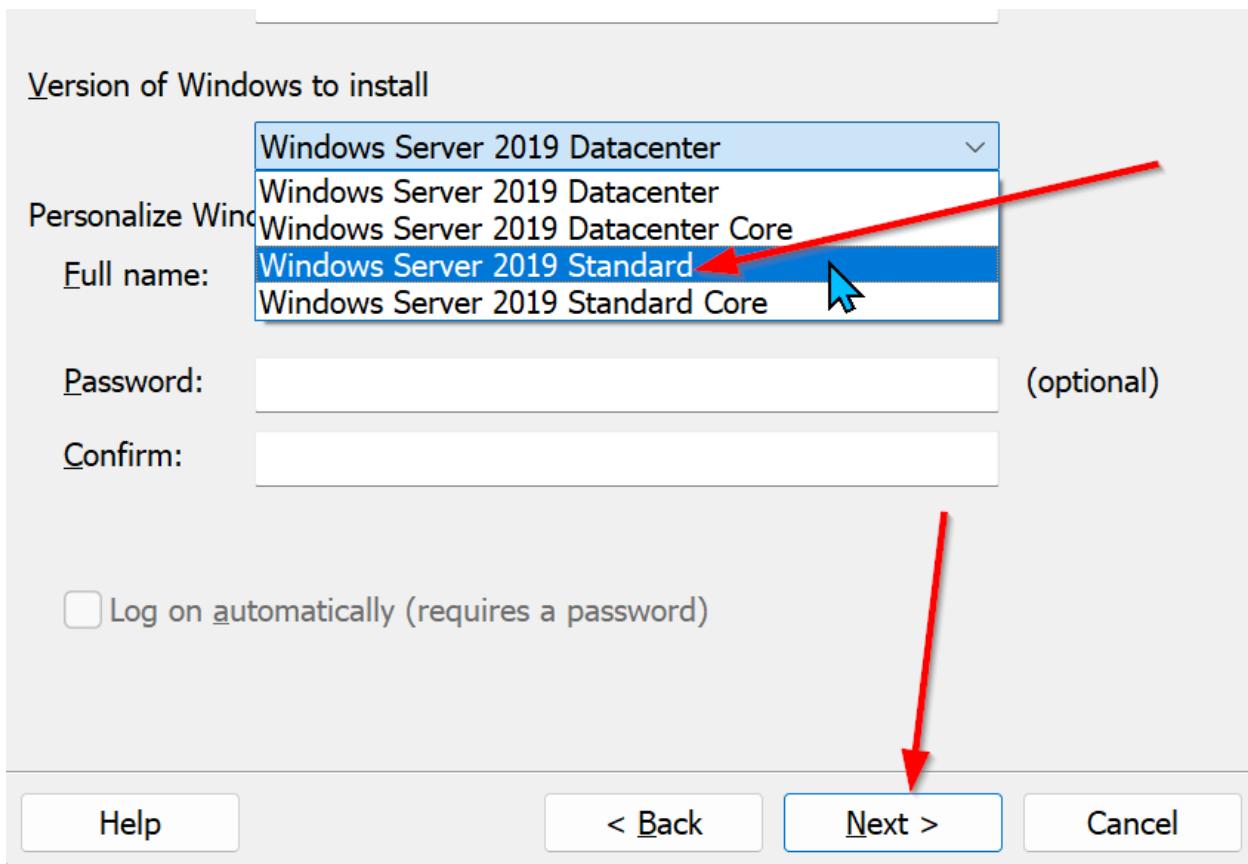


FIGURE 35 - SELECT WS 2019 STANDARD FOR VM

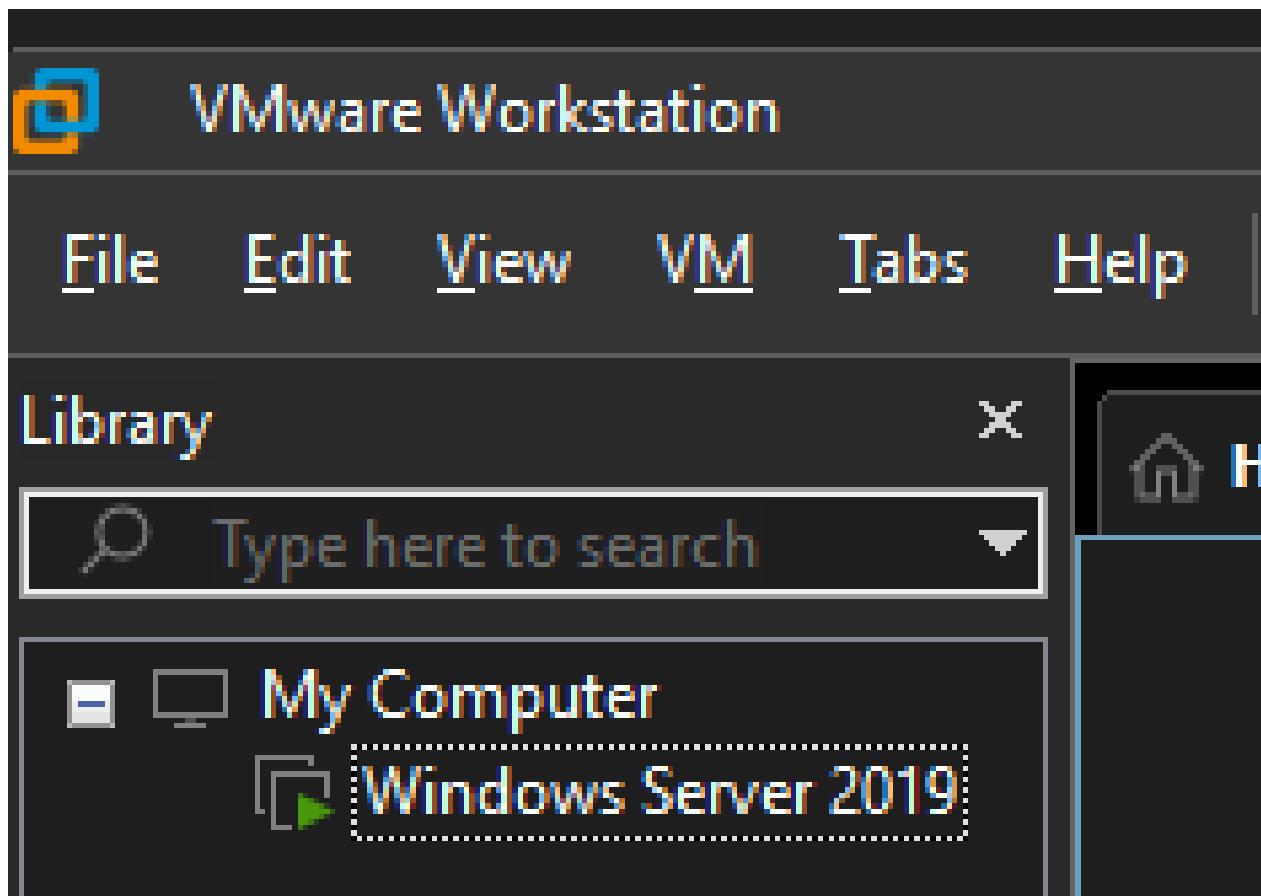


FIGURE 36 - CLICK "EDIT"

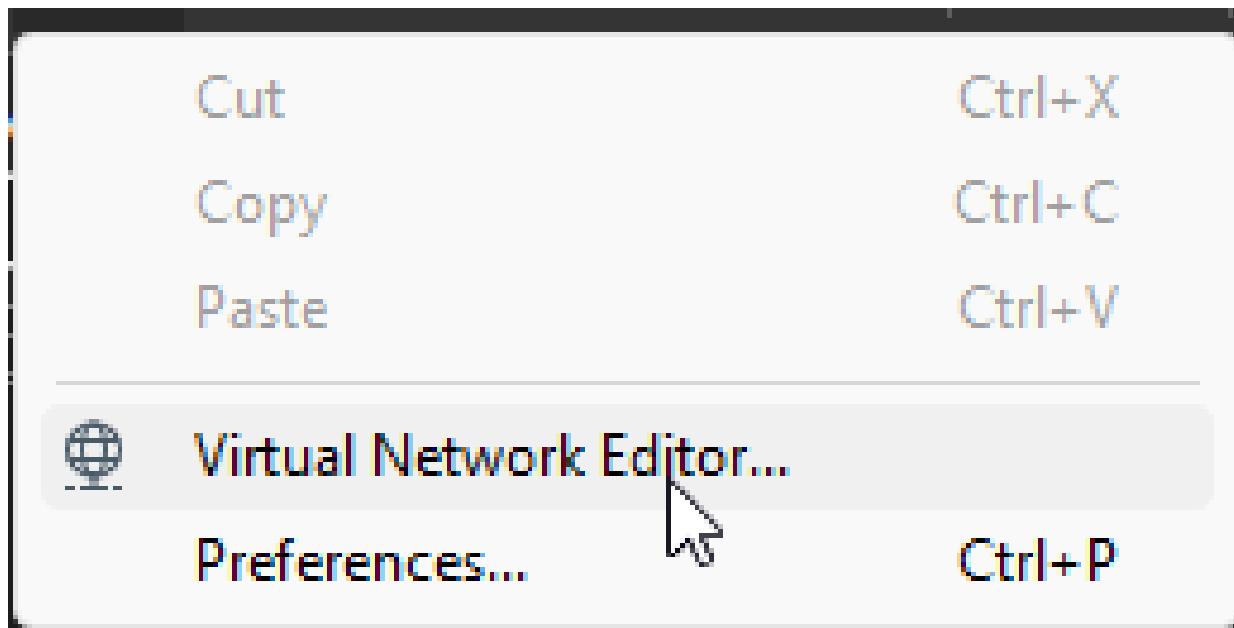


FIGURE 37 - CLICK "VIRTUAL NETWORK EDITOR"

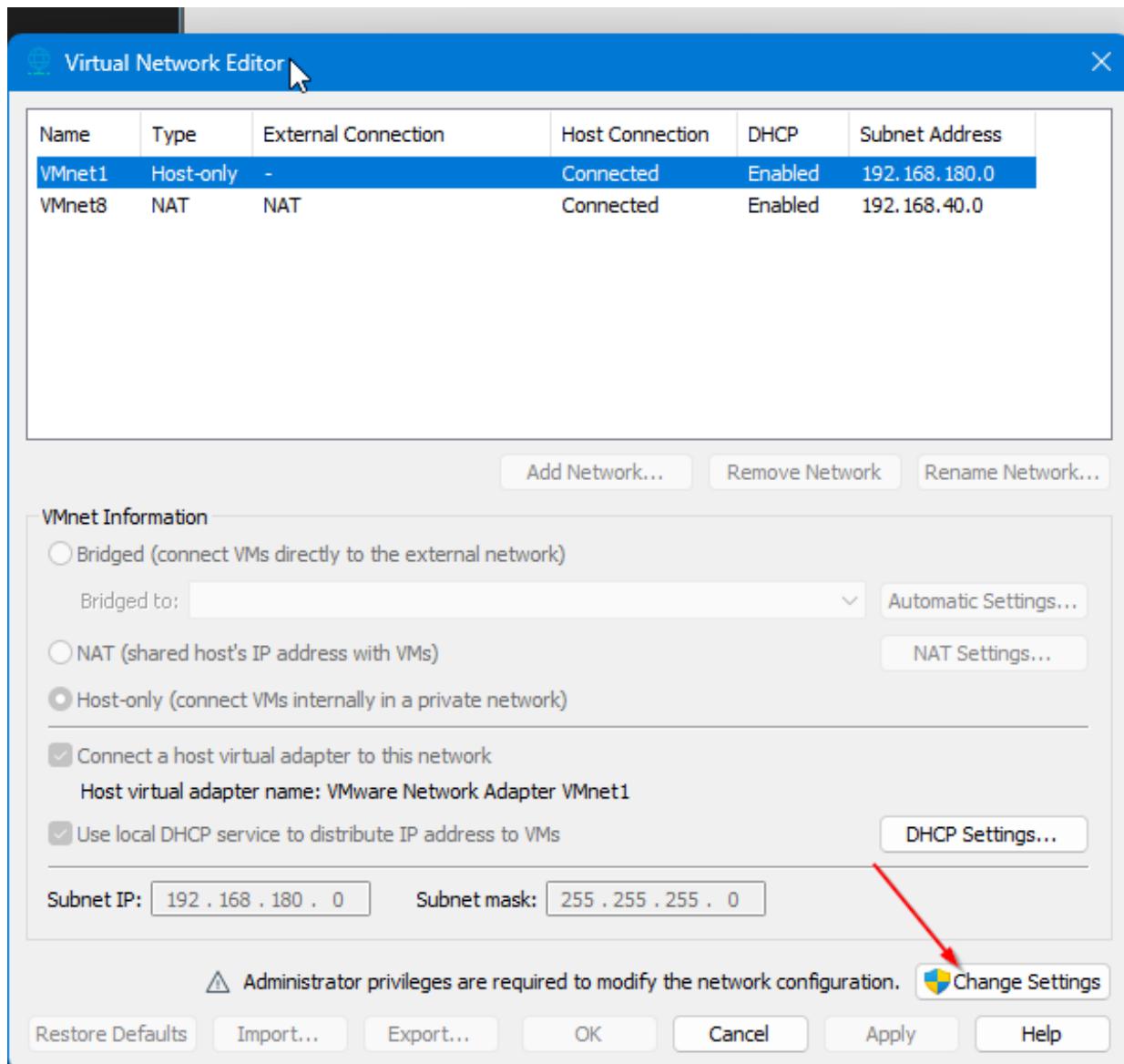


FIGURE 38 - CLICK "CHANGE SETTINGS"

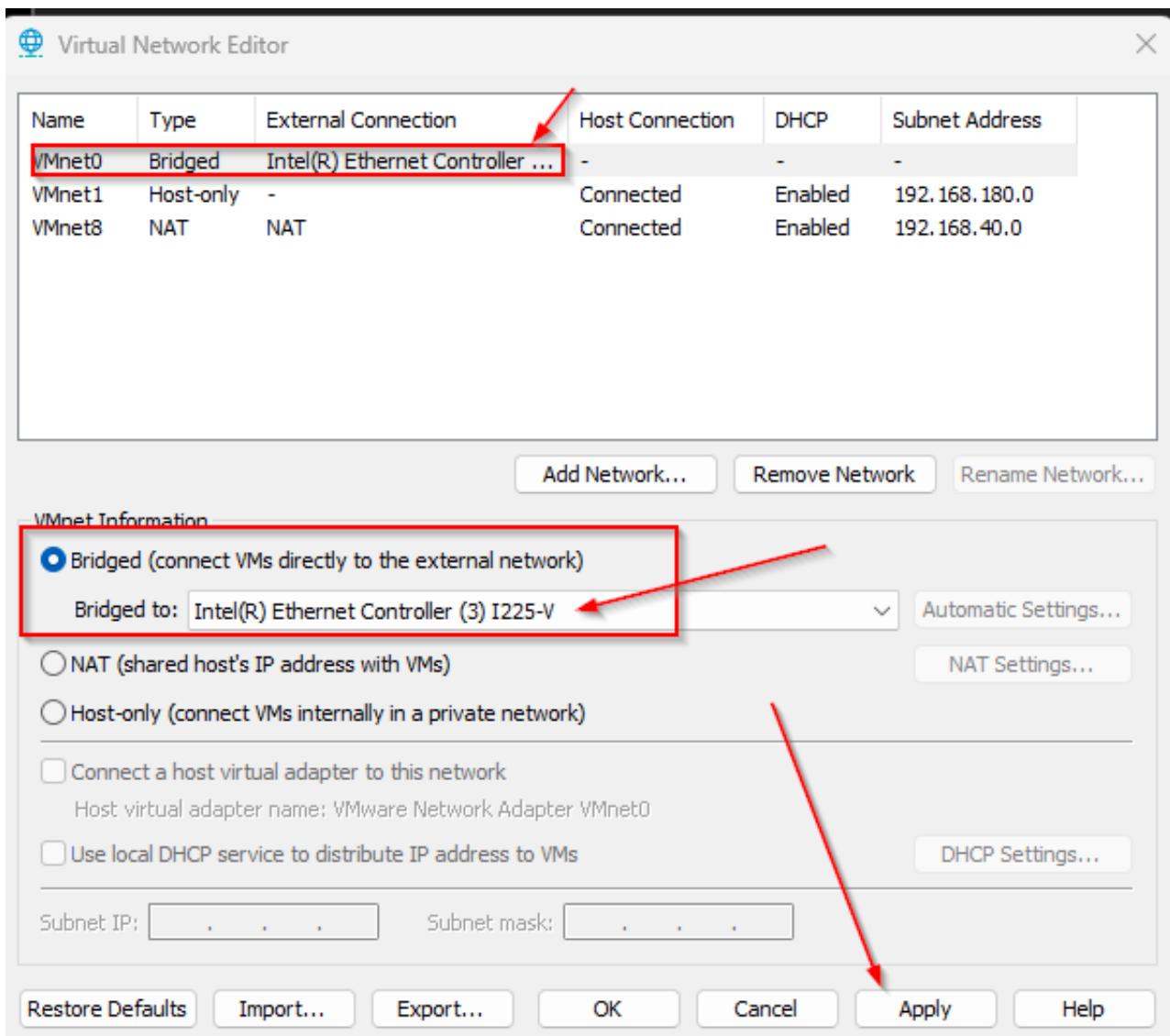


FIGURE 39 - CHANGE THE VMNET INFORMATION TO BRIDGE TO THE ETHERNET CONTROLLER

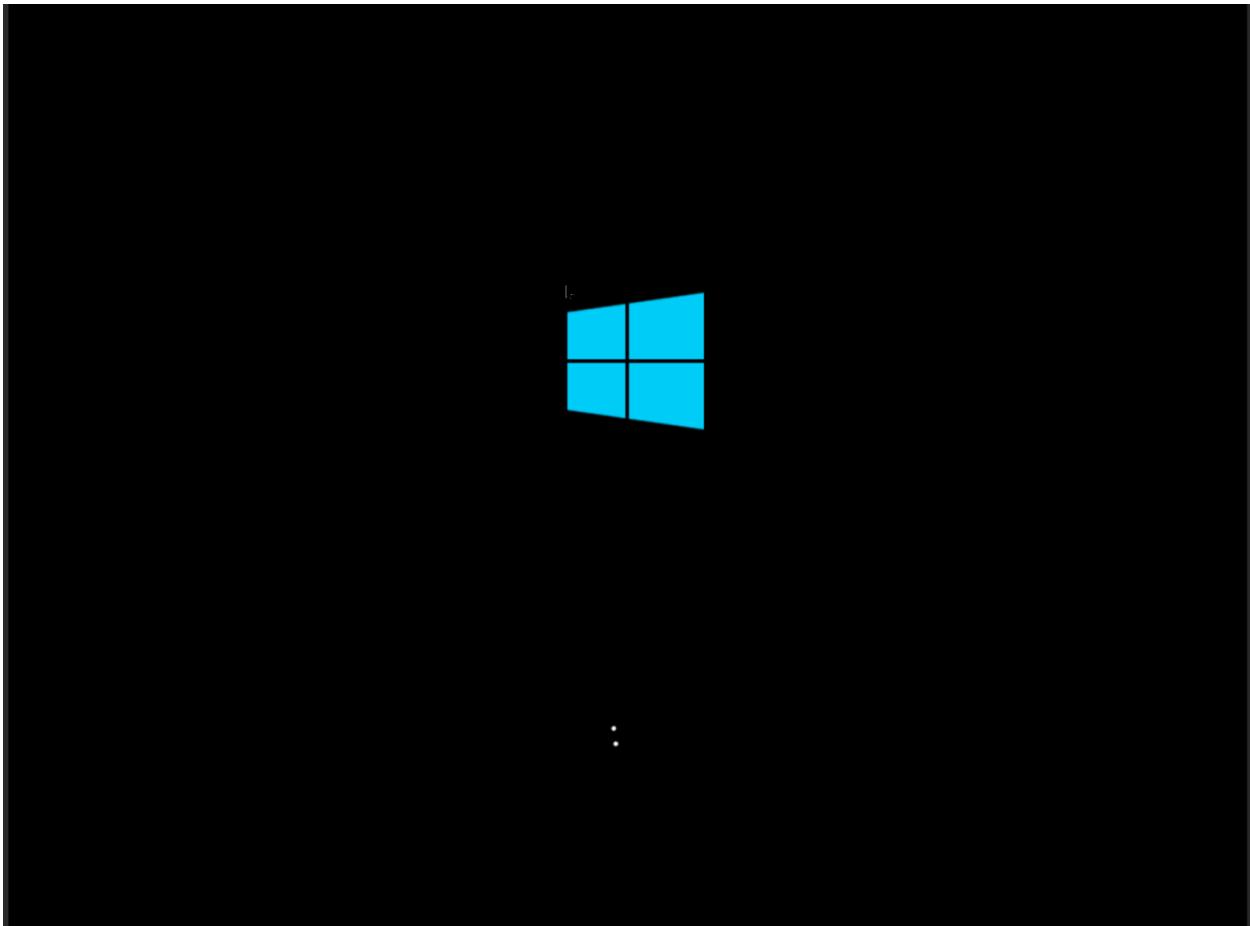


FIGURE 40 - REBOOT INTO WINDOWS SERVER 2019

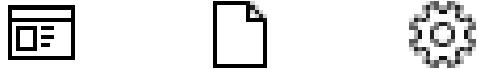


FIGURE 41 - OPEN THE CONTROL PANEL

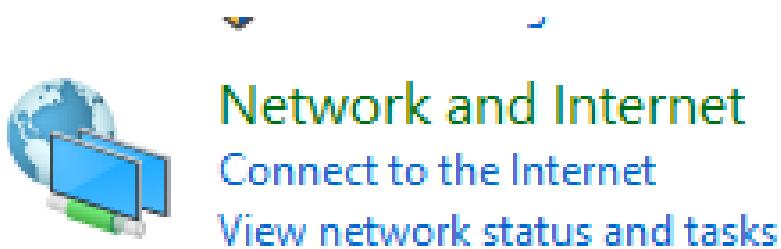


FIGURE 42 - CLICK THE "NETWORK AND INTERNET"

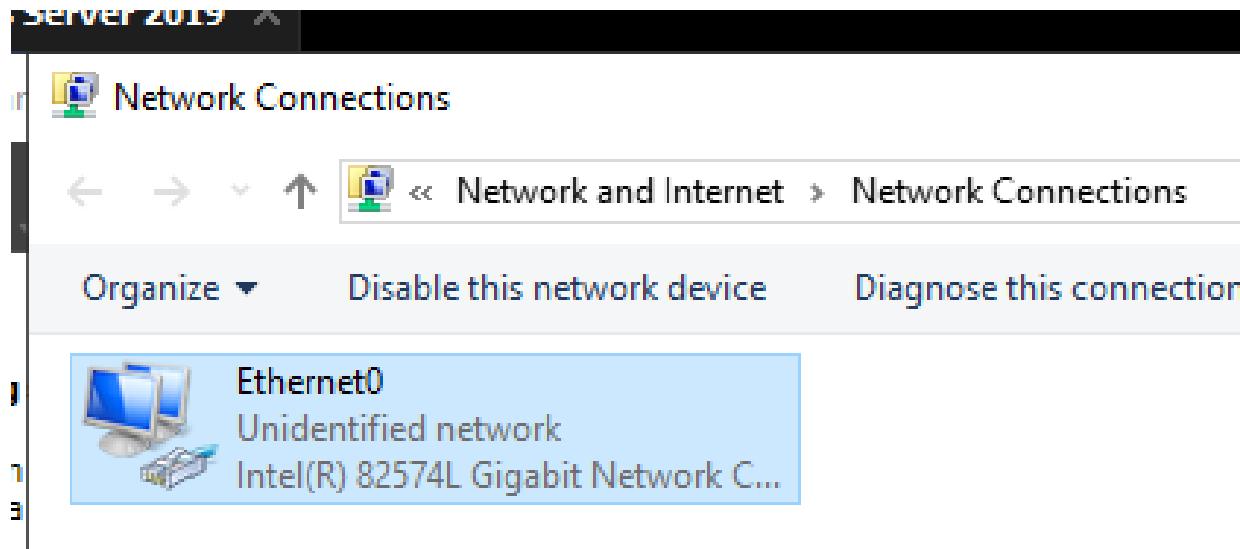


FIGURE 43 - CLICK "ETHERNET0"

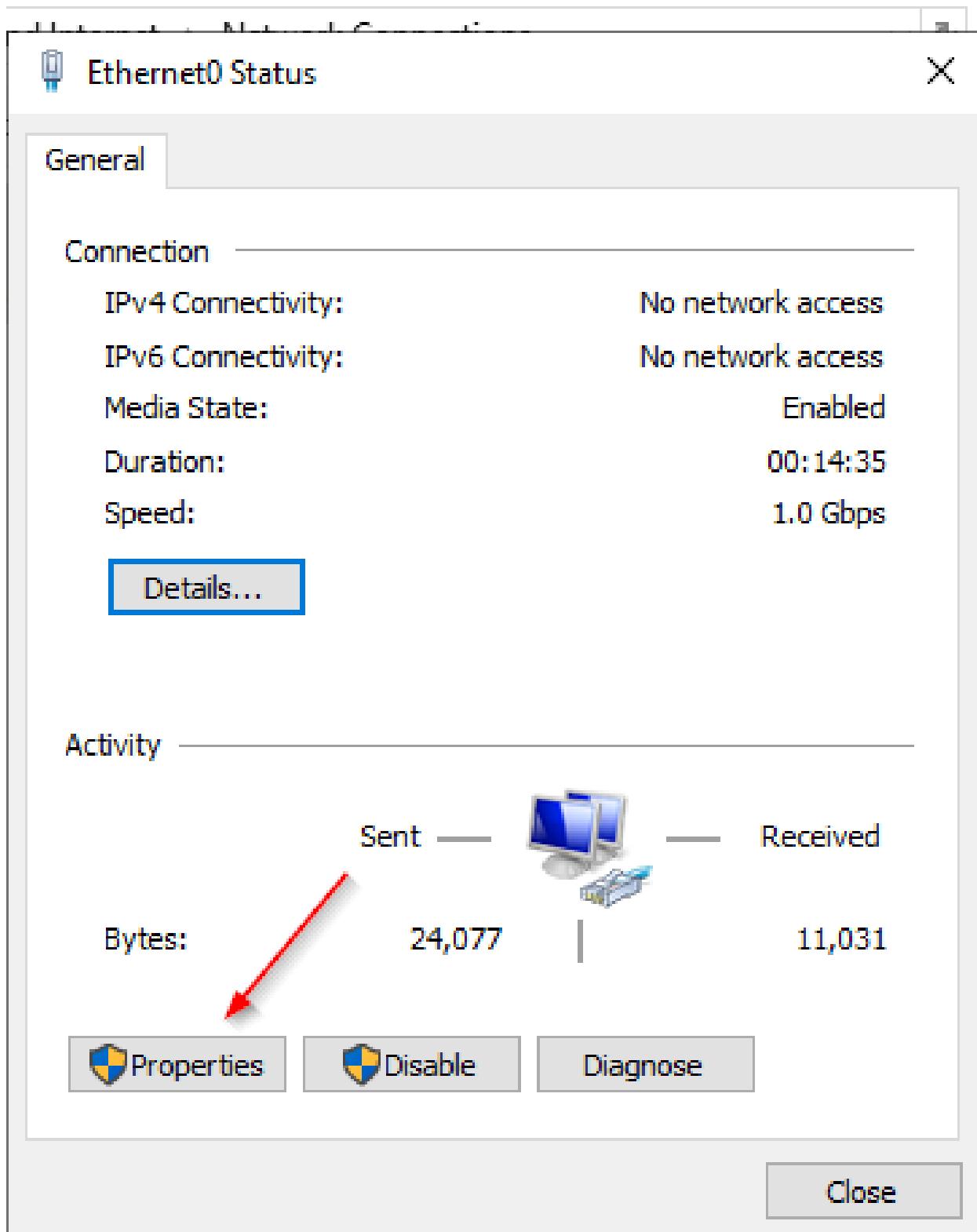


FIGURE 44 - CLICK "PROPERTIES"

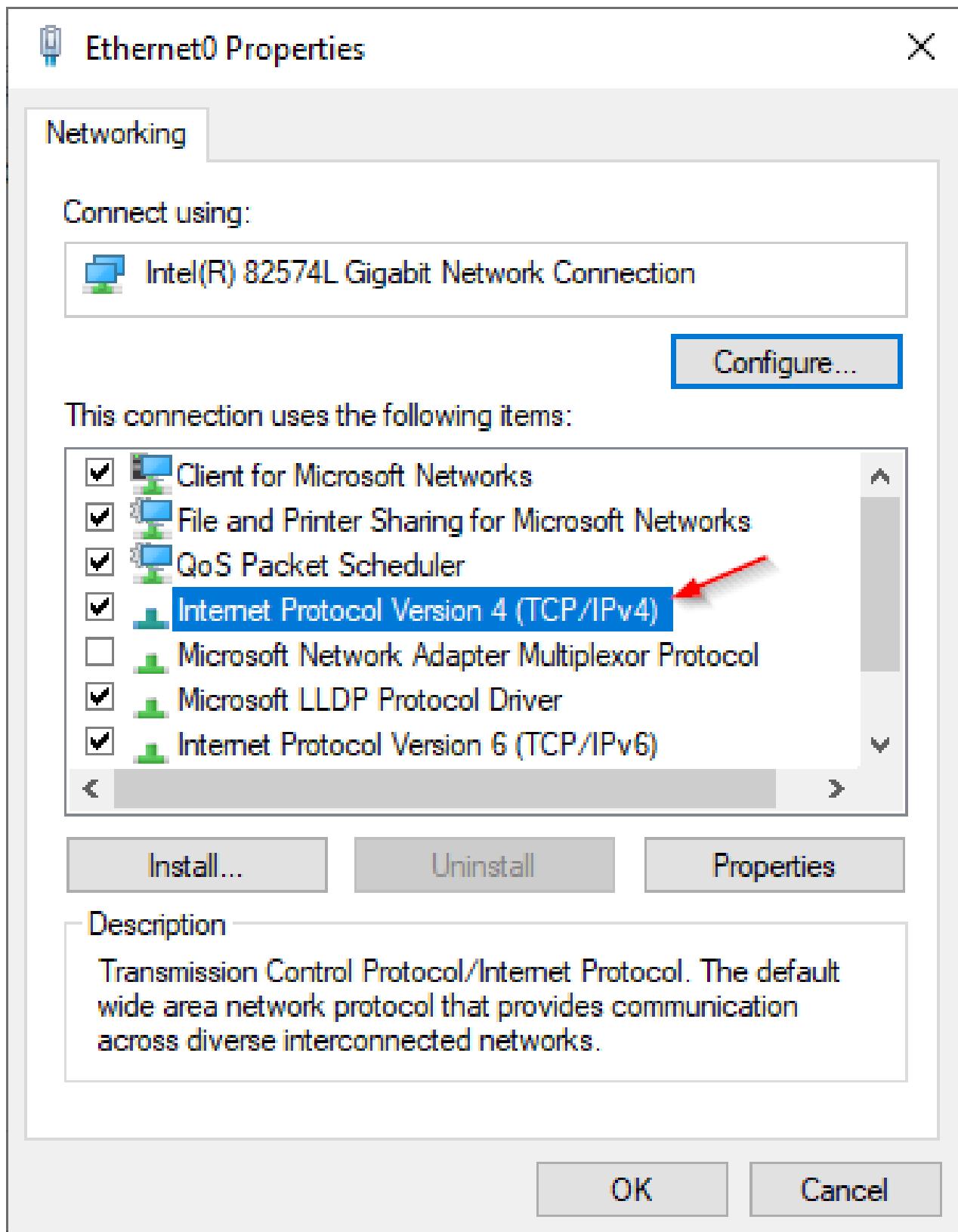


FIGURE 45 - CLICK THIS IPv4

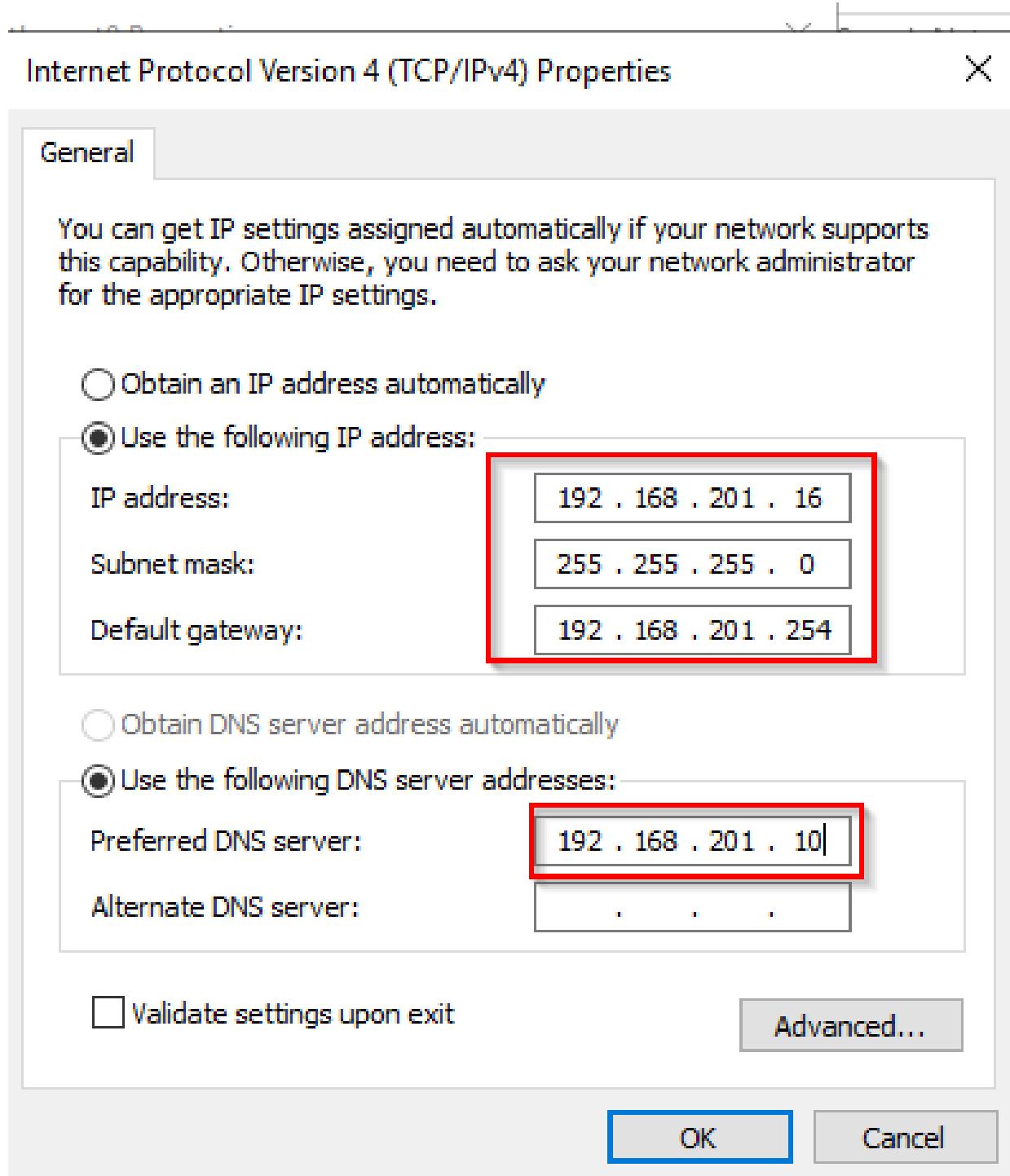


FIGURE 46 - PUT THE MANUALLY IP ADDRESS AND THE REQUIRED STUFF ON IT

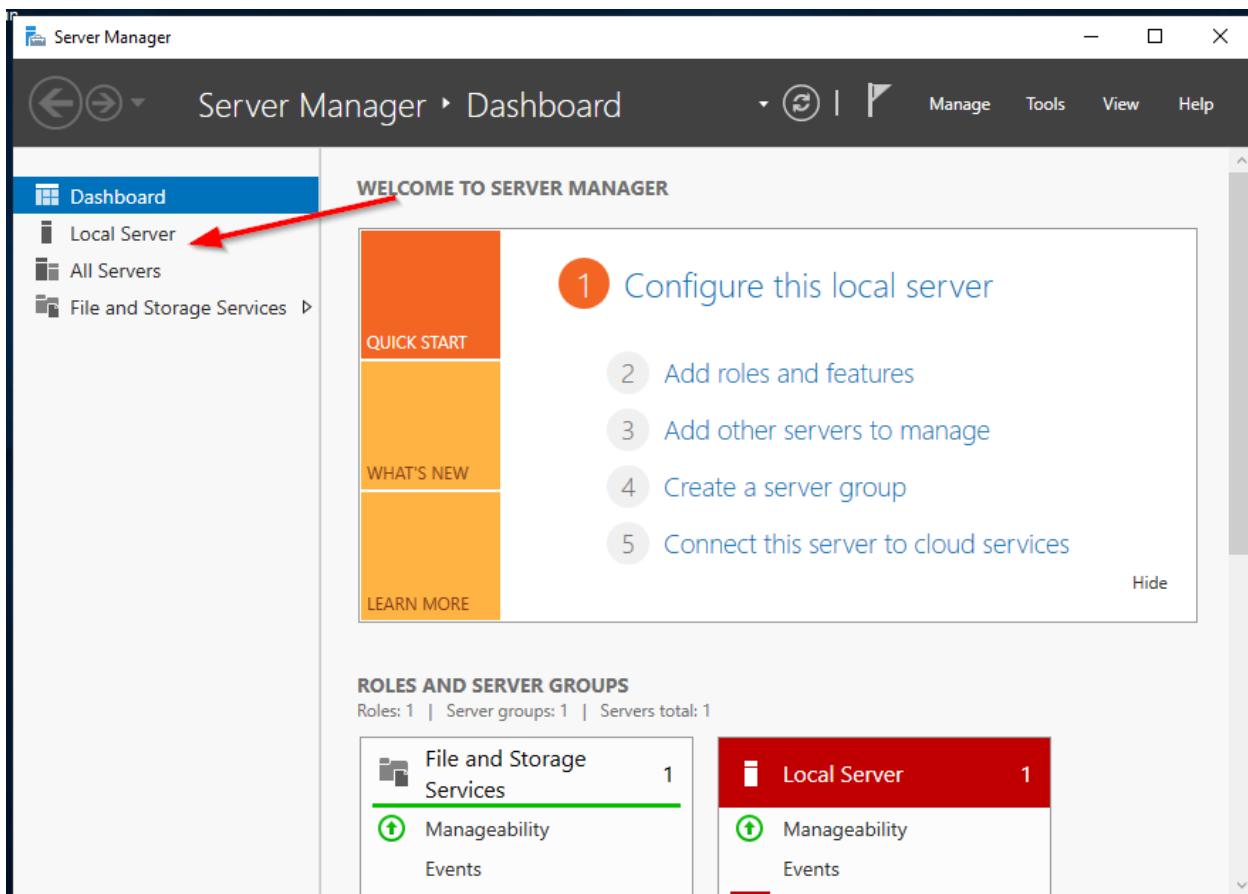


FIGURE 47 - OPEN THE SERVER MANAGER THEN CLICK "LOCAL SERVER"



FIGURE 48 - CHANGE THE COMPUTER NAME

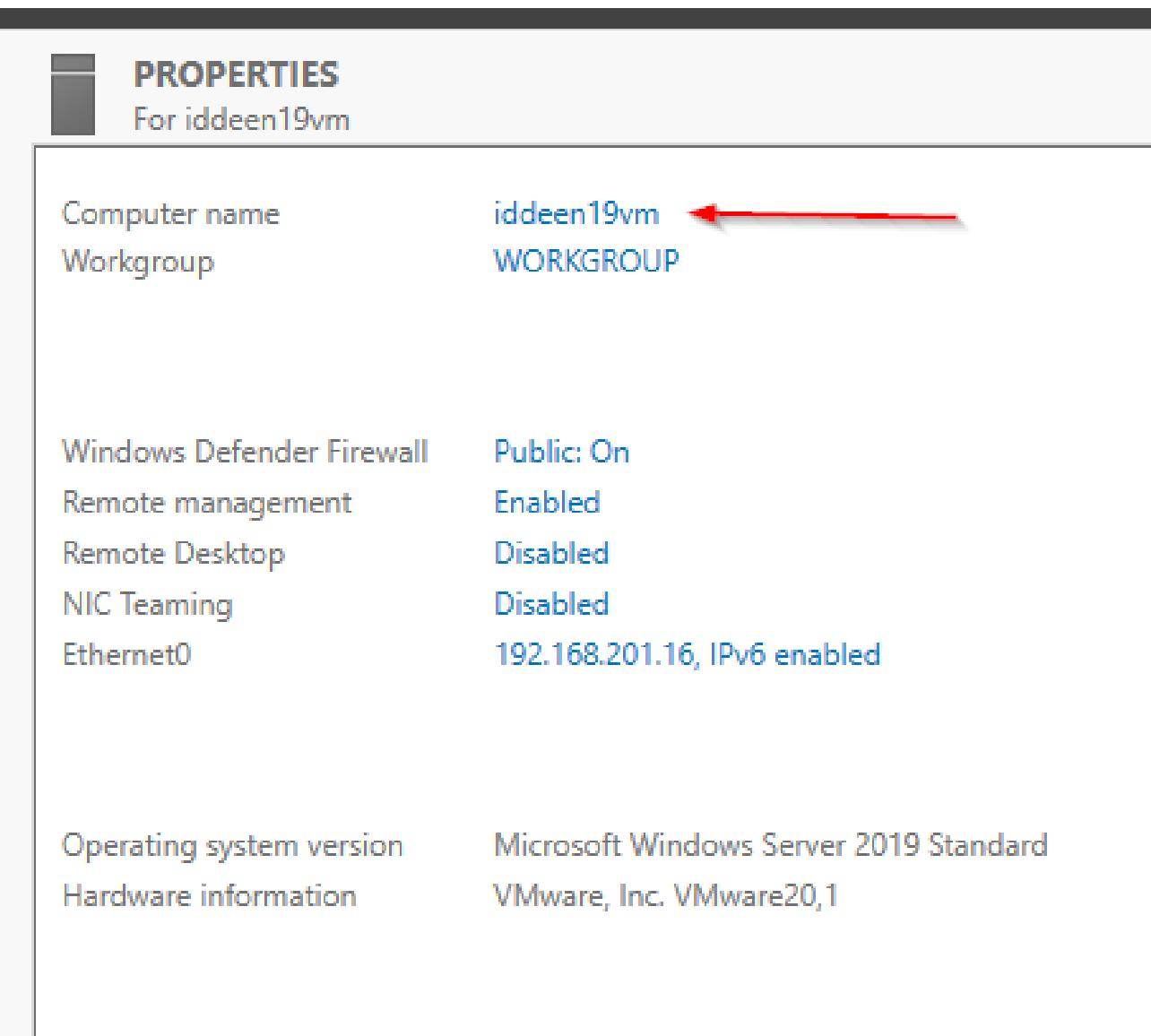


FIGURE 49 - DONE CHANGING COMPUTER NAME



FIGURE 50 - CLICK MANAGE

Add Roles and Features

FIGURE 51 - CLICK " ADD ROLES AND FEATURES"

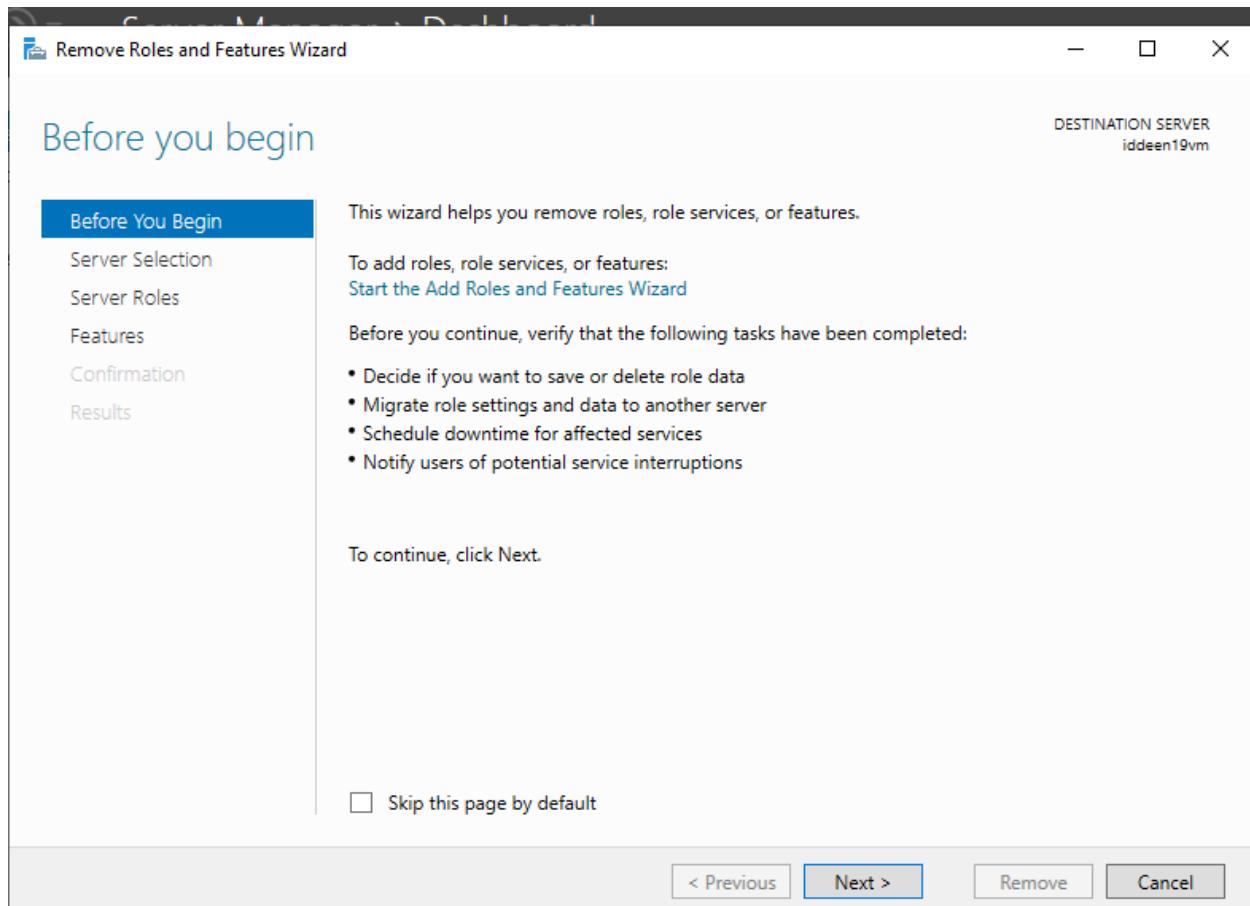


FIGURE 52 - PROCEED!

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

Roles

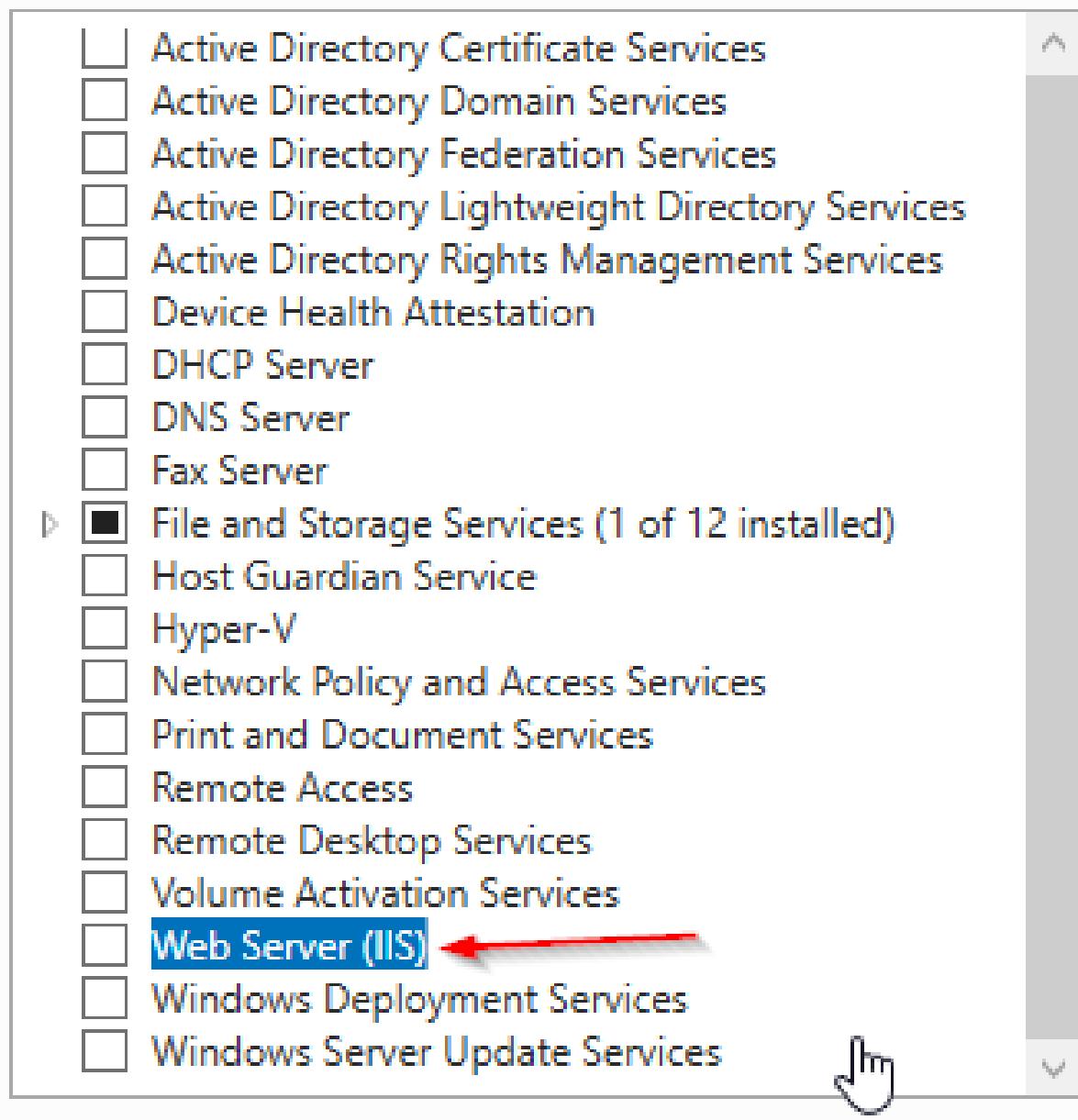


FIGURE 53 - CLICK "WEB SERVER (IIS)"

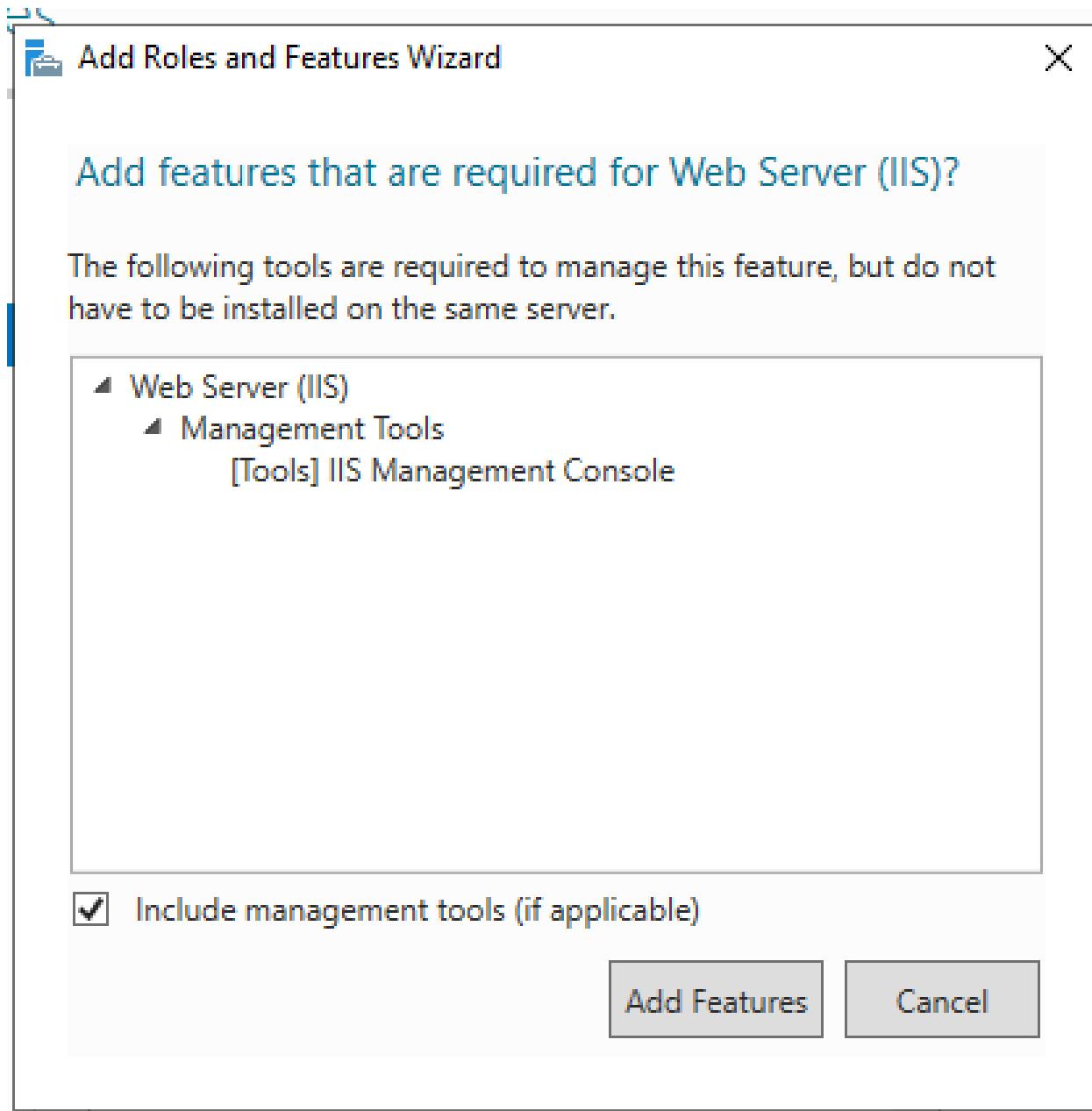


FIGURE 54 - CLICK "ADD FEATURES"

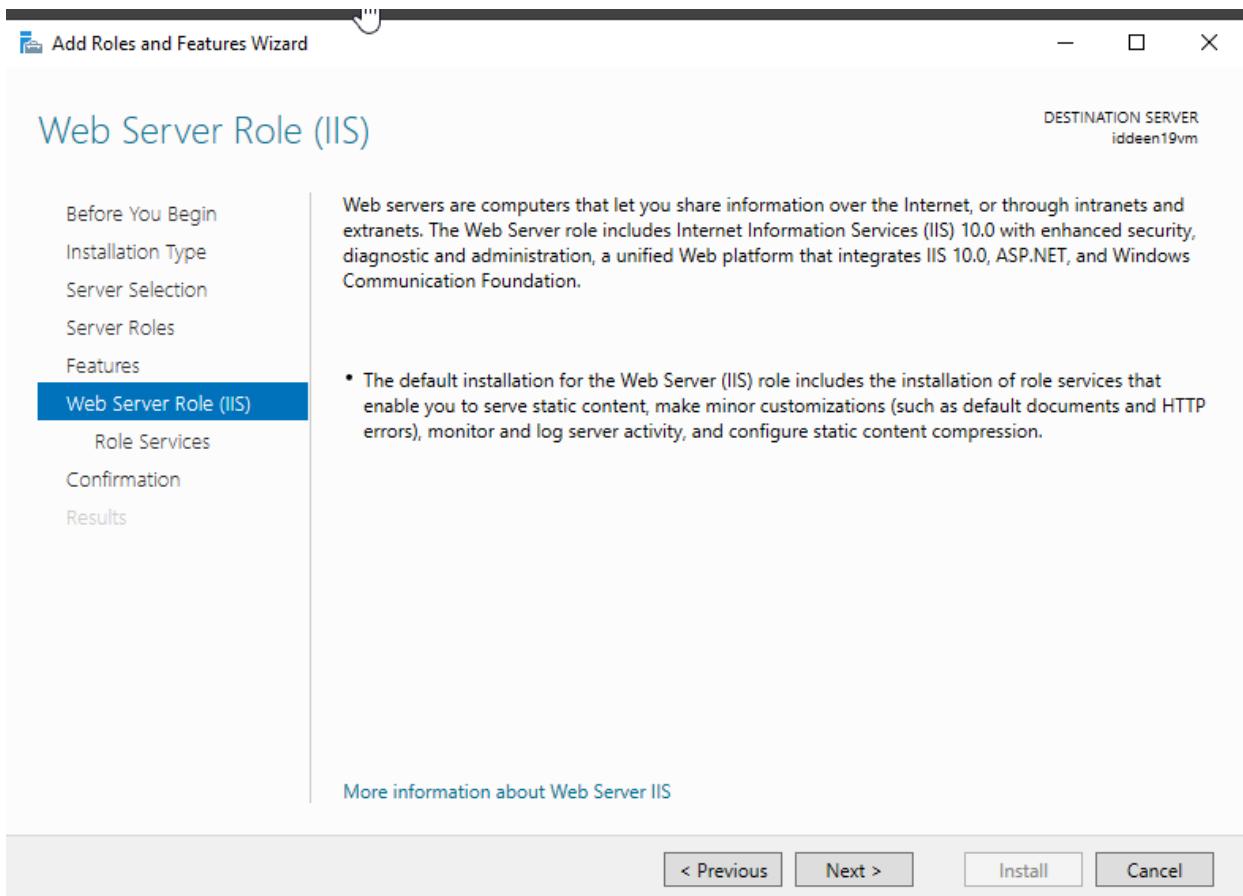


FIGURE 55 - INSTALL THE WEB SERVER ROLE

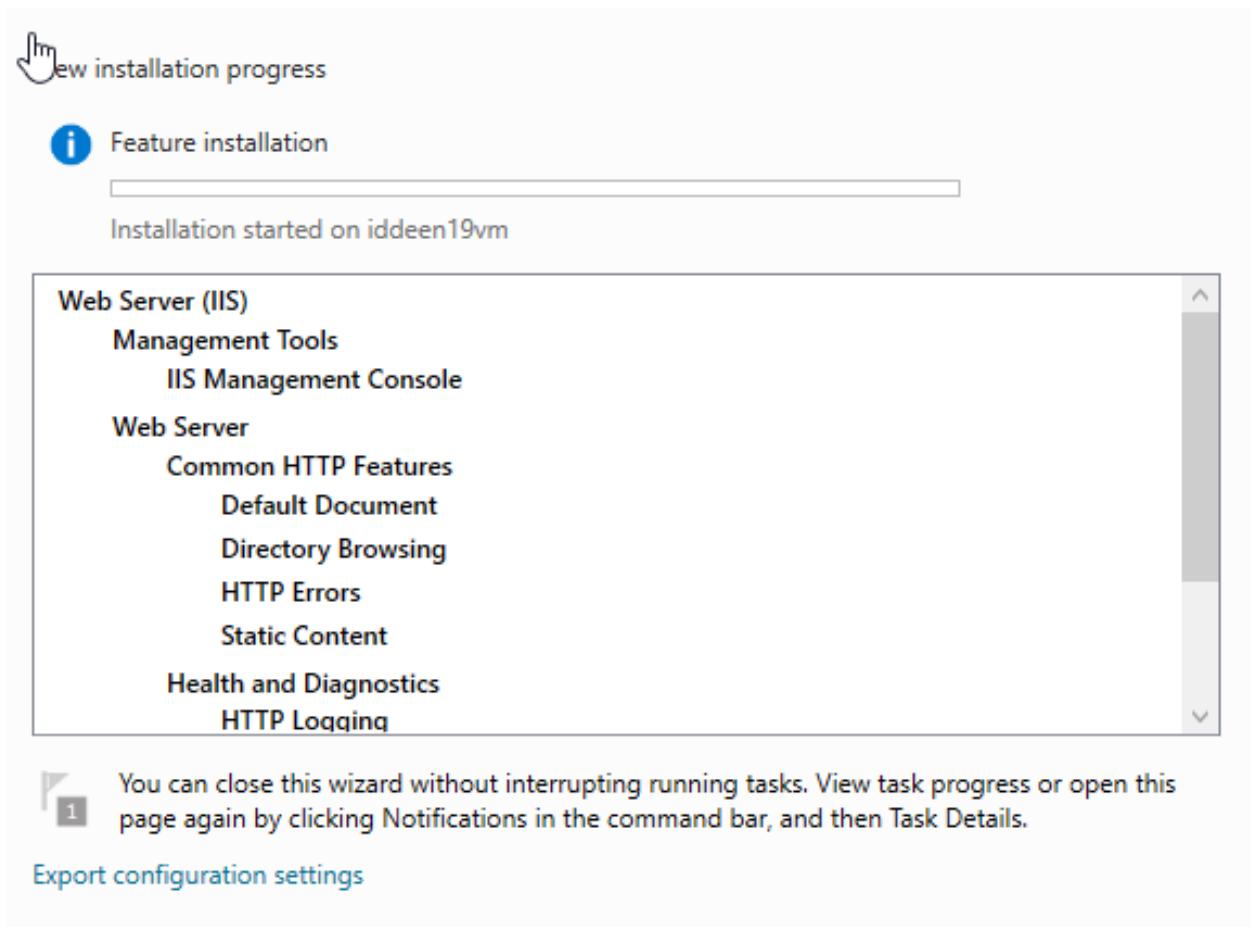


FIGURE 56 - INSTALLATION STARTED

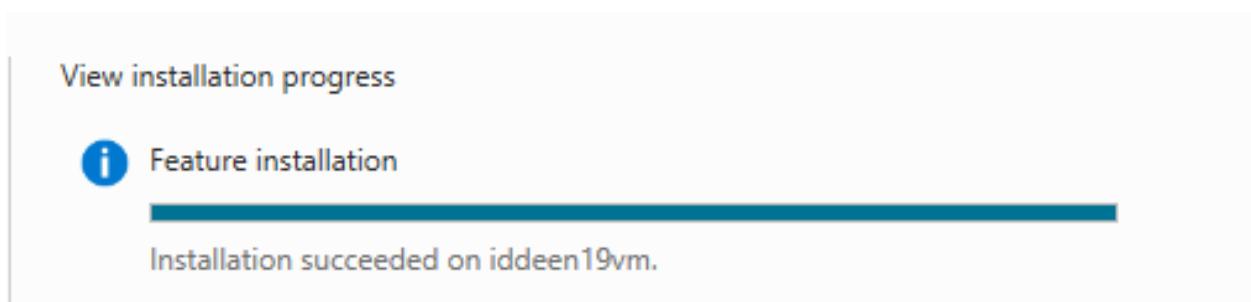


FIGURE 57 - INSTALLATION SUCCESSFULLY

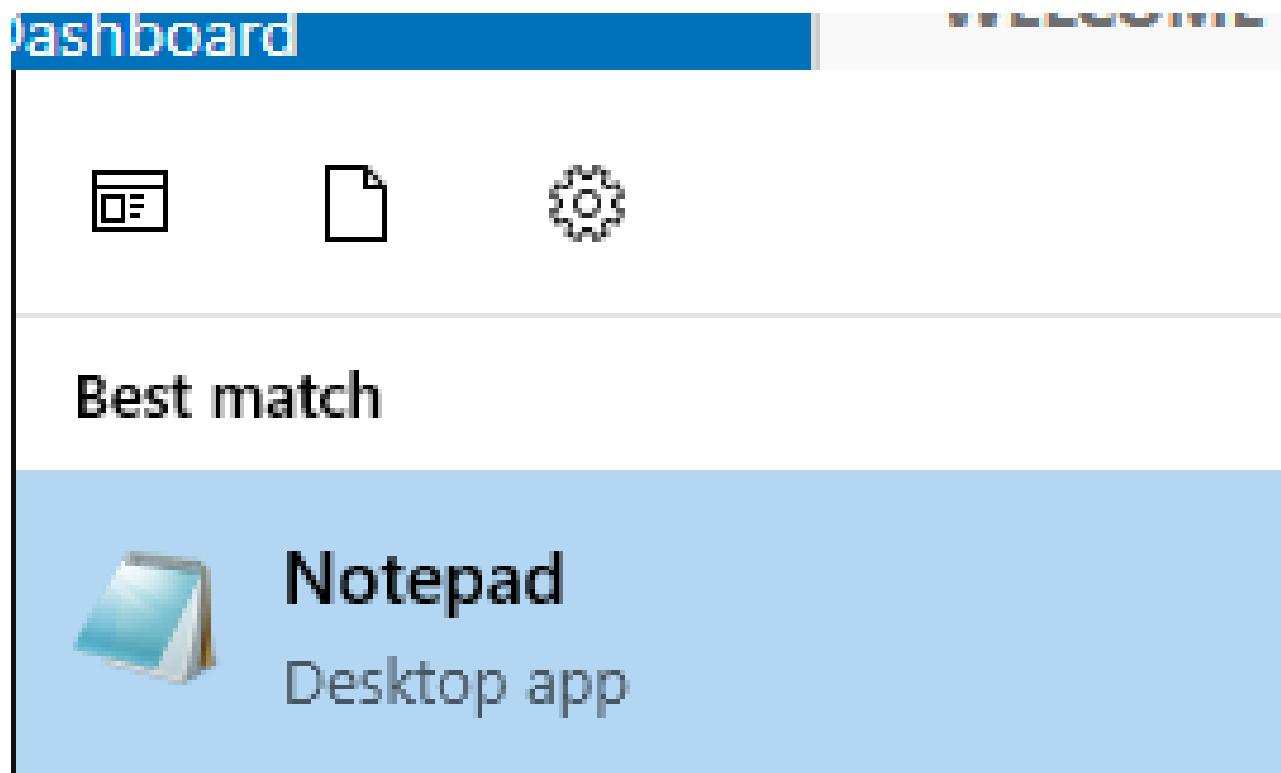


FIGURE 58 - OPEN NOTE PAD

A screenshot of a Microsoft Notepad window. The title bar says "Untitled - Notepad". The menu bar includes "File", "Edit", "Format", "View", and "Help". The main content area contains the following HTML code:

```
>h1<iddeen19vm</h1>
<p>Name: Cold Id-deen</p>
<p>Class: NACT-262</p>
<p>Professor: Professor Mark Jeremy</p>
<p>Lab: Lab 3 Setting up SOHO Network</p>
```

FIGURE 59 - MAKE AN HTML CODING ON NOTE PAD

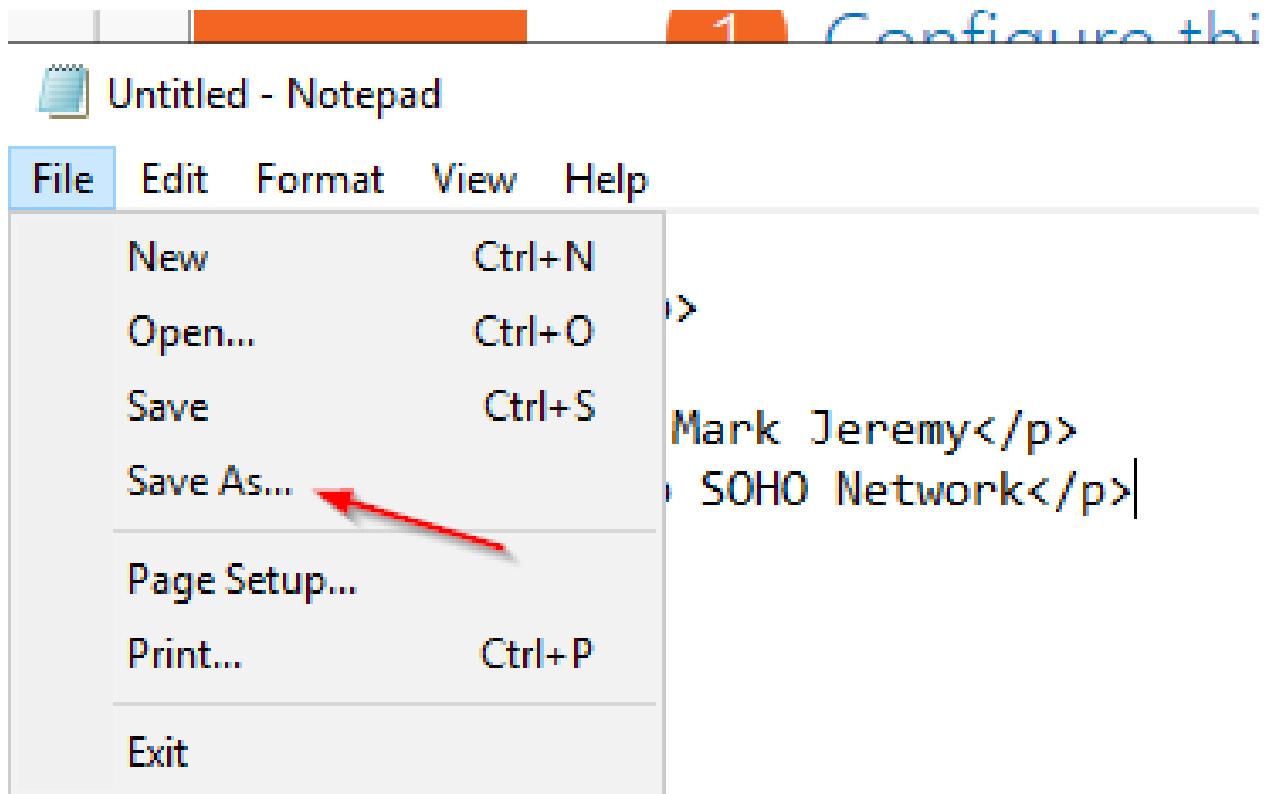


FIGURE 60 - CLICK "SAVE AS"

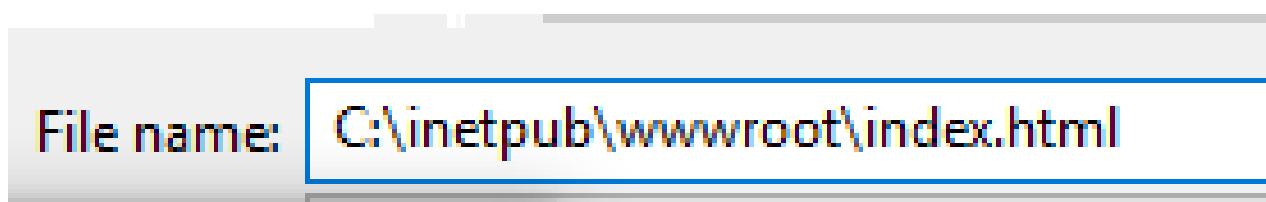


FIGURE 61 - TYPE THE REQUIRED FILE NAME TO PUT IN

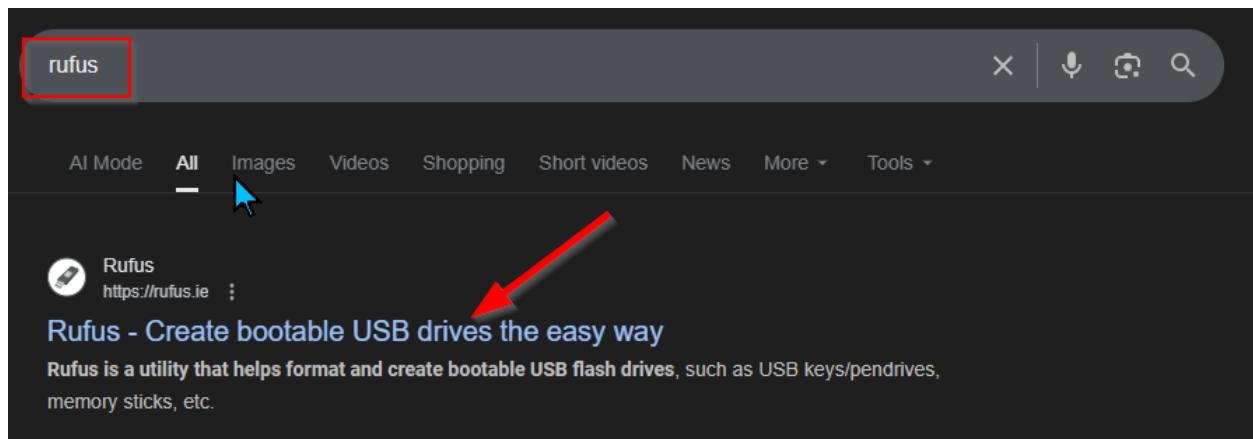


FIGURE 62 - TYPE "RUFUS" AND CLICK THIS LINK

Download				
Latest releases:				
Link	Type	Platform	Size	Date
rufus-4.9.exe	Standard	Windows x64	2 MB	2025.06.15
rufus-4.9p.exe	Portable	Windows x64	2 MB	2025.06.15
rufus-4.9_x86.exe	Standard	Windows x86	1.9 MB	2025.06.15
rufus-4.9_arm64.exe	Standard	Windows ARM64	6 MB	2025.06.15
rufus-4.10_BETA.exe	BETA	Windows x64	1.8 MB	2025.09.10

FIGURE 63 - DOWNLOAD RUFUS.EXE

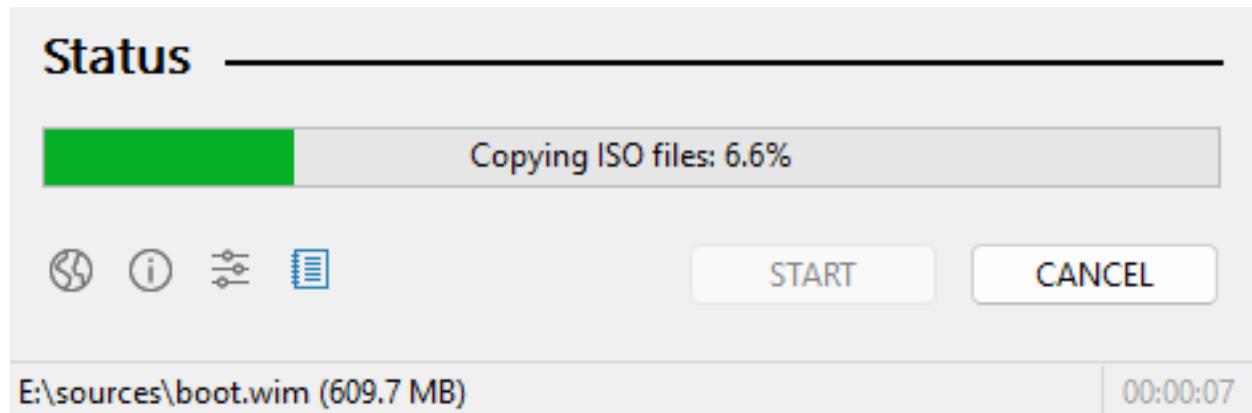


FIGURE 64 - COPYING ISO FILES

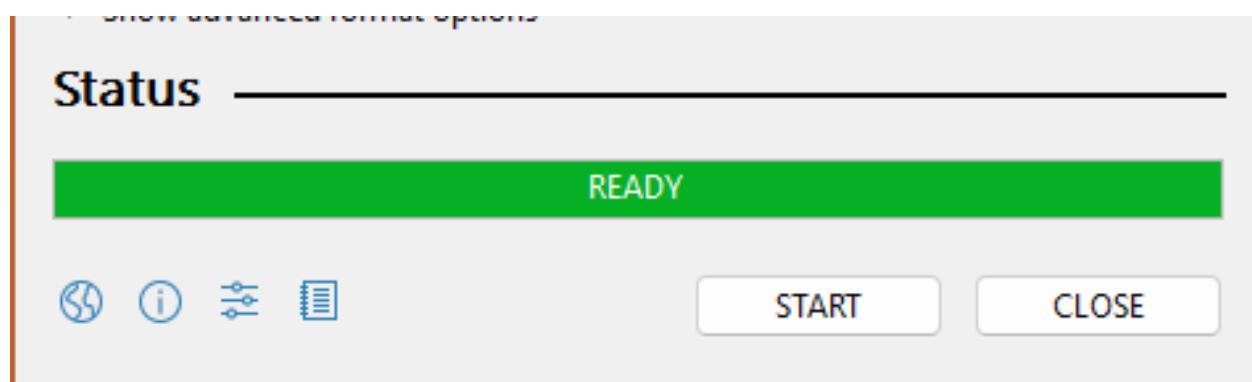


FIGURE 65 - READY TO GO!

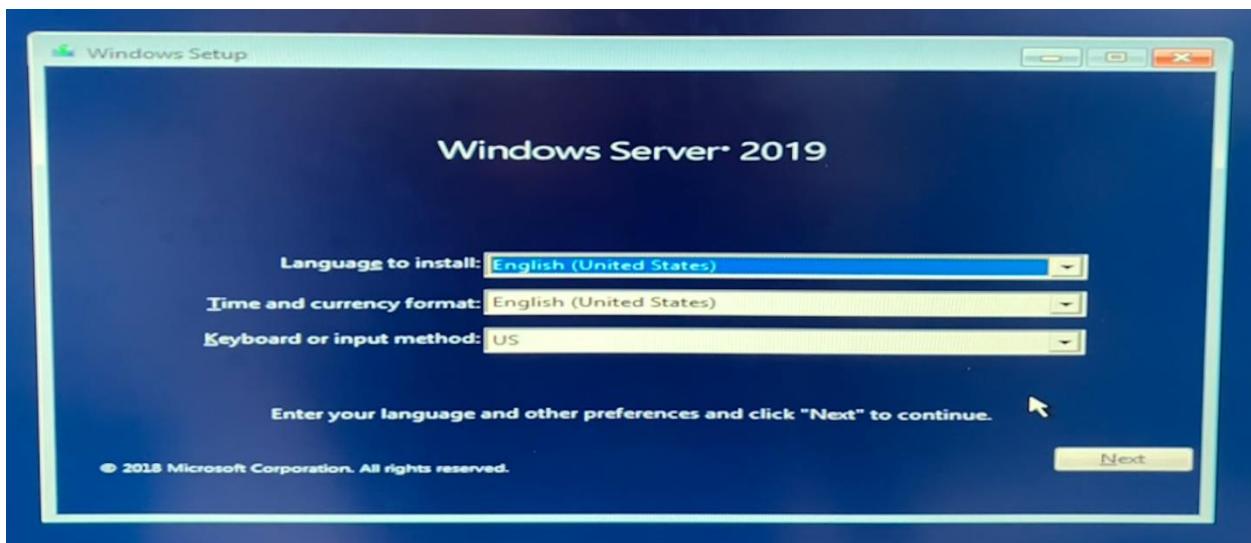


FIGURE 66 - INSTALL WINDOWS SERVER 2019 IN PC-B

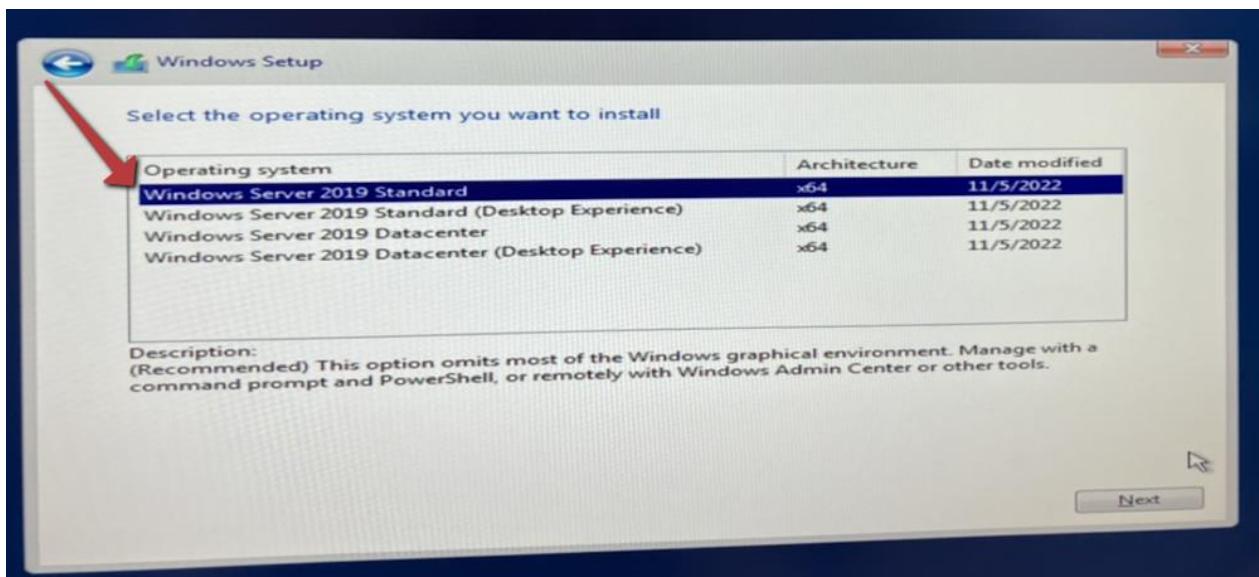


FIGURE 67 - CLICK THIS WS 2019 STANDARD

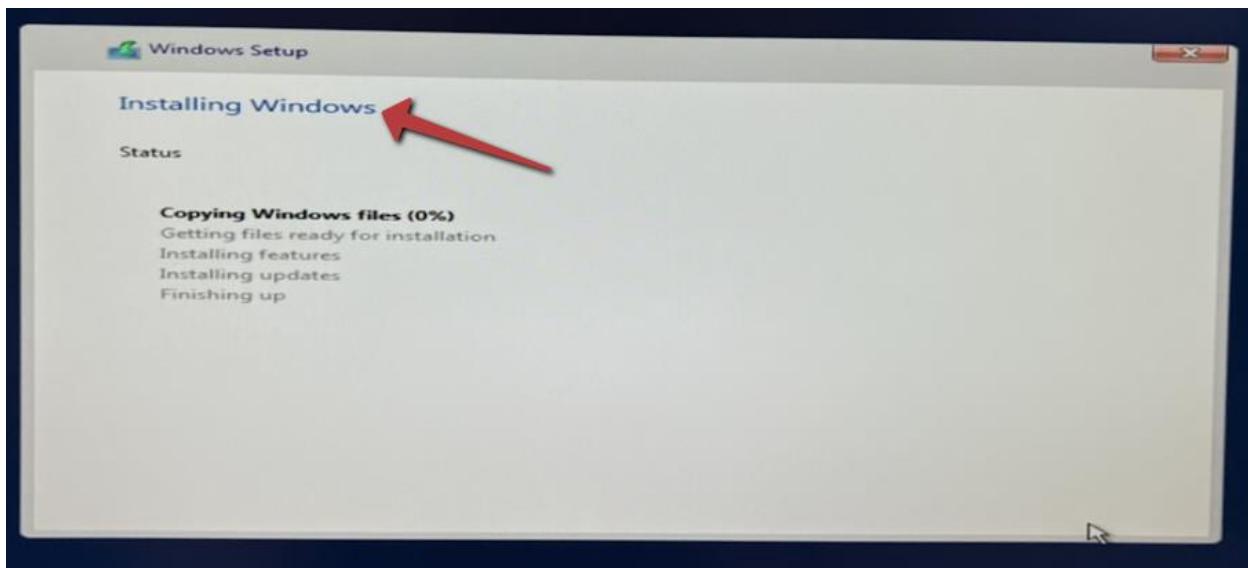


FIGURE 68 - INSTALLING WINDOWS

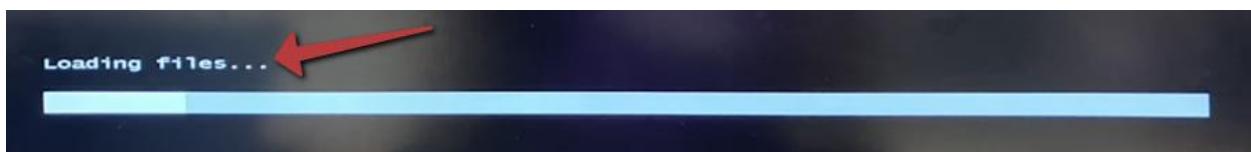


FIGURE 69 - LOADING FILES

```
Administrator: C:\Windows\system32\cmd.exe -sconfig
Microsoft (R) Windows Script Host Version 5.812
Copyright (C) Microsoft Corporation. All rights reserved.

Inspecting system...

----- Server Configuration -----
1) Domain/Workgroup: Workgroup: WORKGROUP
2) Computer Name: WIN-SCC09SPG8GR
3) Add Local Administrator
4) Configure Remote Management Enabled
5) Windows Update Settings: DownloadOnly
6) Download and Install Updates
7) Remote Desktop: Disabled
8) Network Settings
9) Date and Time
10) Telemetry settings
11) Windows Activation Unknown
12) Log Off User
13) Restart Server
14) Shut Down Server
15) Exit to Command Line

Enter number to select an option:
```

FIGURE 70 - CHANGE THE COMPUTER NAME BY PRESSING TWO NUMBER

```
----- Server Configuration -----
1) Domain/Workgroup: Workgroup: WORKGROUP
2) Computer Name: FSA-SERVER01
3) Add Local Administrator
4) Configure Remote Management Enabled
5) Windows Update Settings: DownloadOnly
6) Download and Install Updates
7) Remote Desktop: Disabled
```

FIGURE 71 - DONE CHANGING THE COMPUTER NAME

```
Administrator: C:\Windows\system32\cmd.exe
C:\Users\Administrator>sconfig
```

FIGURE 72 - TYPE "SCONFIG"

```
Administrator: C:\Windows\system32\cmd.exe
IP Address           169.254.39.48   fe80::9396:d2
C:\Windows\System32\cscript.exe

Network Adapter Settings

NIC Index          1
Description        Realtek PCIe GBE Family Controller
IP Address         169.254.39.48   fe80::9396:d2
Subnet Mask        255.255.0.0
DHCP enabled       True
Default Gateway    192.168.201.254
Preferred DNS Server 192.168.201.254
Alternate DNS Server

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

Select option: 1

Select (D)HCP, (S)tatic IP (Blank=Cancel): S

Set Static IP
Enter static IP address: 192.168.201.21
Enter subnet mask (Blank = Default 255.255.255.0):
Enter default gateway: 192.168.201.254
```

FIGURE 73 - CHANGE THE IP ADDRESS AND PUT THE REQUIRED STUFFS ON IT

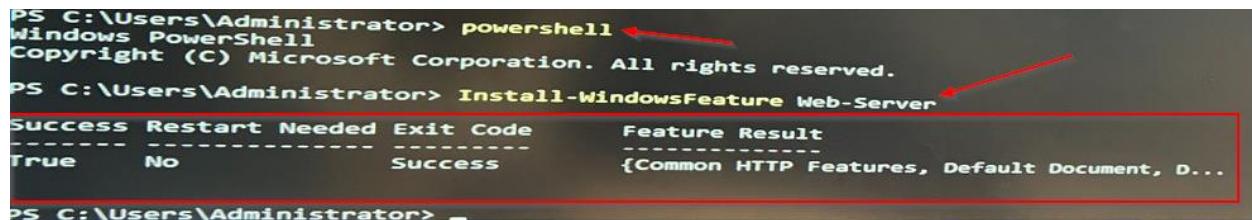
```
NIC Index          1
Description        Realtek PCIe GBE Family Controller
IP Address         192.168.201.21   fe80::9396:d2f4:959f:3d69
Subnet Mask        255.255.255.0
DHCP enabled       False
Default Gateway   192.168.201.254
Preferred DNS Server
Alternate DNS Server

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

Select option: 2
DNS Servers

Enter new preferred DNS server (Blank=Cancel): 192.168.201.10
```

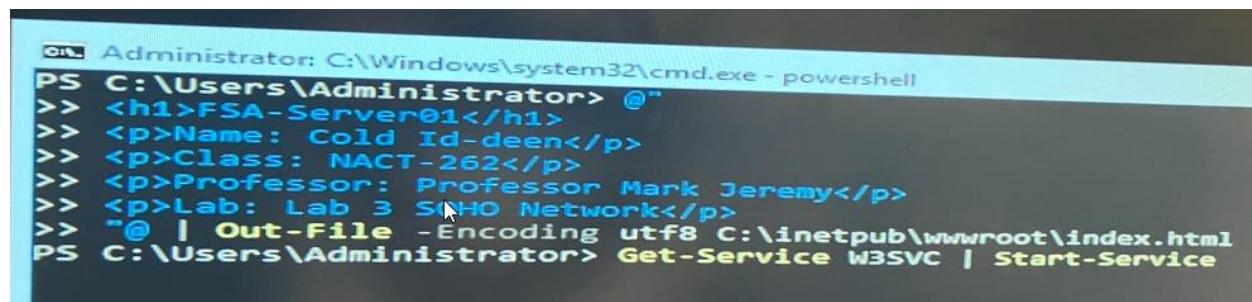
FIGURE 74 - SET THE NEW DNS SERVER



```
PS C:\Users\Administrator> powershell
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

PS C:\Users\Administrator> Install-WindowsFeature Web-Server
Success Restart Needed Exit Code      Feature Result
----- ----- ----- ----- {Common HTTP Features, Default Document, D...
True    No        Success           {Common HTTP Features, Default Document, D...
```

FIGURE 75 - USE POWERSHELL AS COMMAND THEN TYPE THE REQUIRED COMMAND



```
Administrator: C:\Windows\system32\cmd.exe - powershell
PS C:\Users\Administrator> @"
>> <h1>FSA-Server01</h1>
>> <p>Name: Cold Id-deen</p>
>> <p>Class: NACT-262</p>
>> <p>Professor: Professor Mark Jeremy</p>
>> <p>Lab: Lab 3 SNAO Network</p>
>> @" | Out-File -Encoding utf8 C:\inetpub\wwwroot\index.html
PS C:\Users\Administrator> Get-Service W3SVC | Start-Service
```

FIGURE 76 - TYPE THE HTML LANGUAGE AS CODING TO CREATE A WEBSITE AND START THE WEB SERVICE

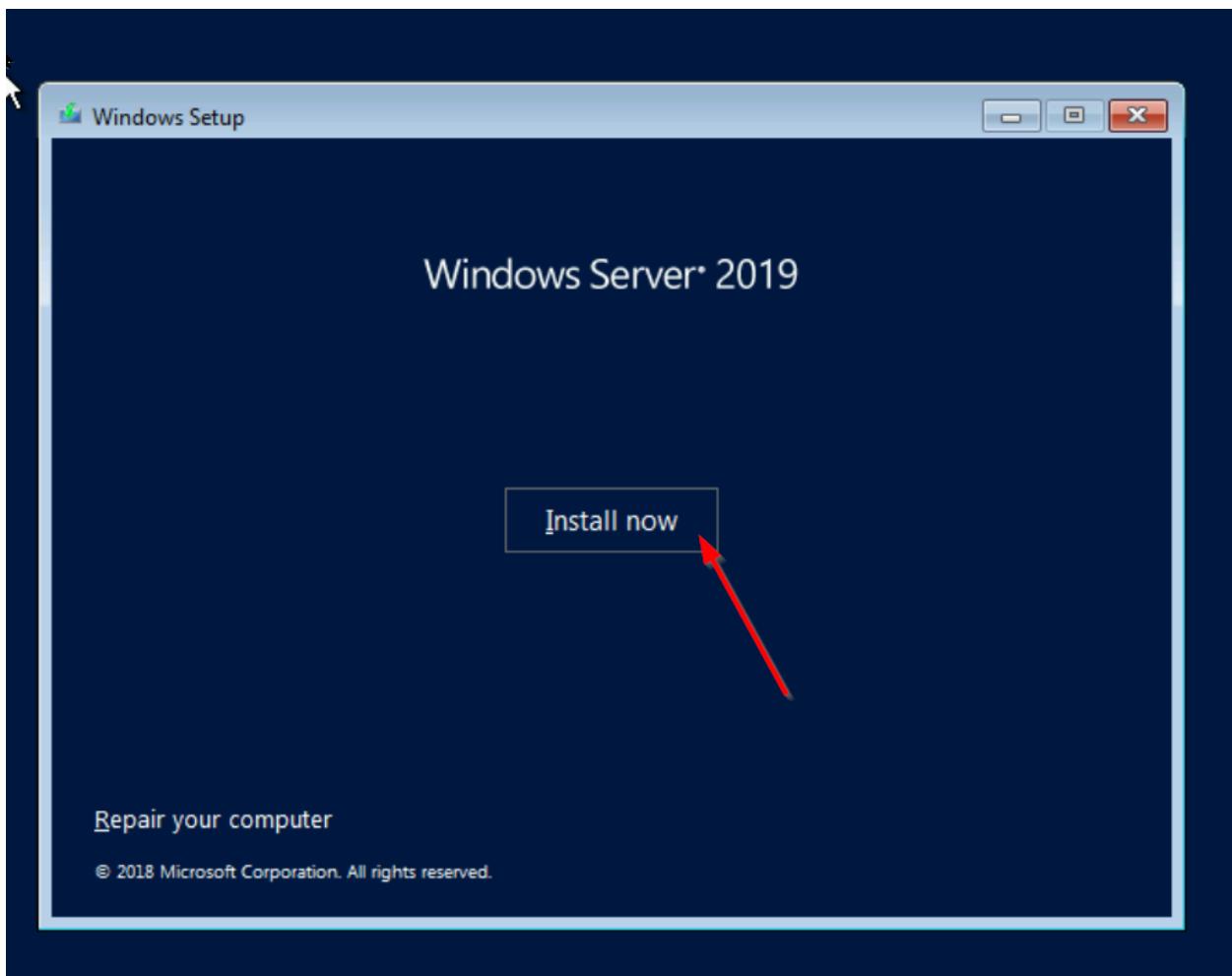


FIGURE 77 - INSTALL WS 2019 IN THE DELL SERVER

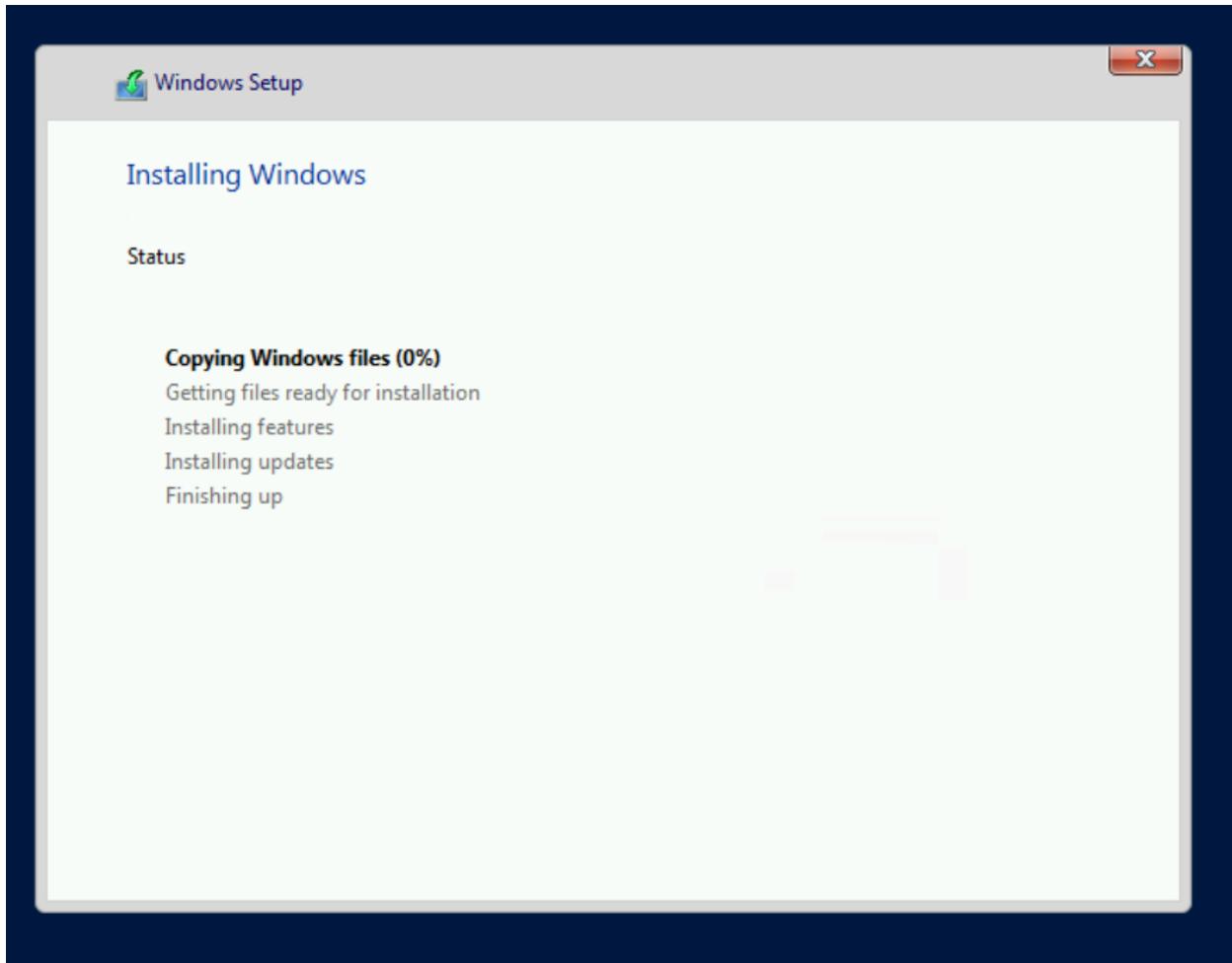


FIGURE 78 - INSTALLING WINDOWS

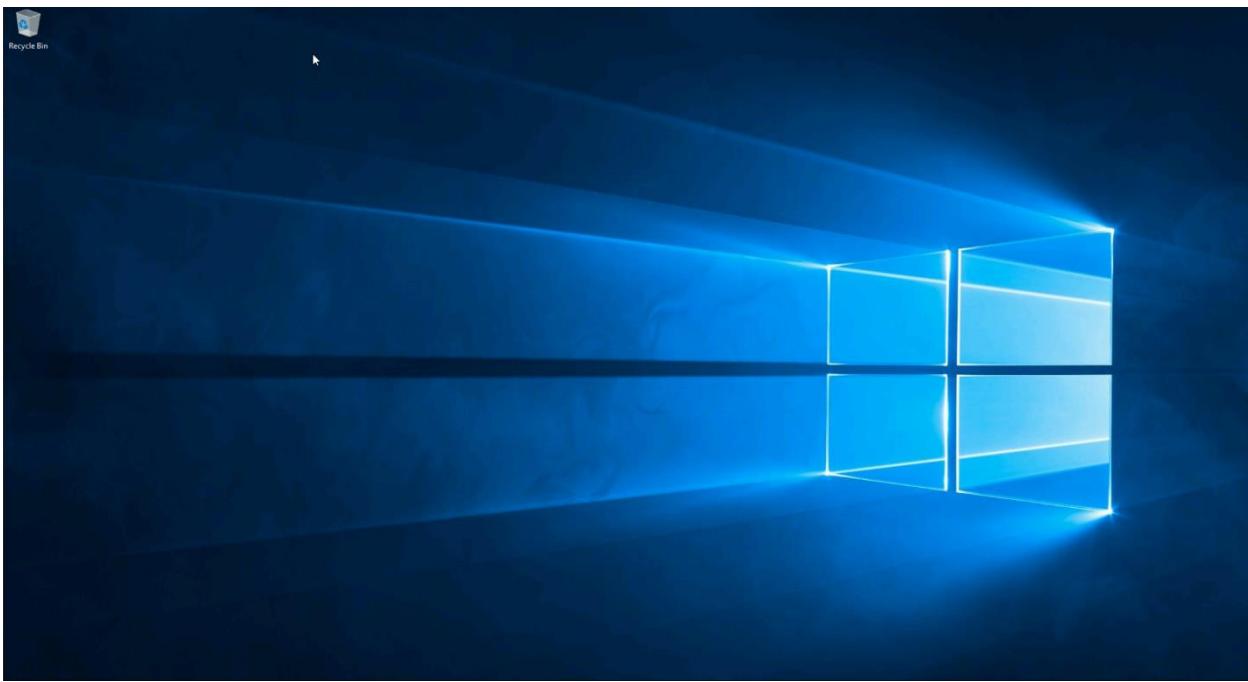


FIGURE 79 - THE OVERVIEW OF THE WS 2019 IN DELL SERVER

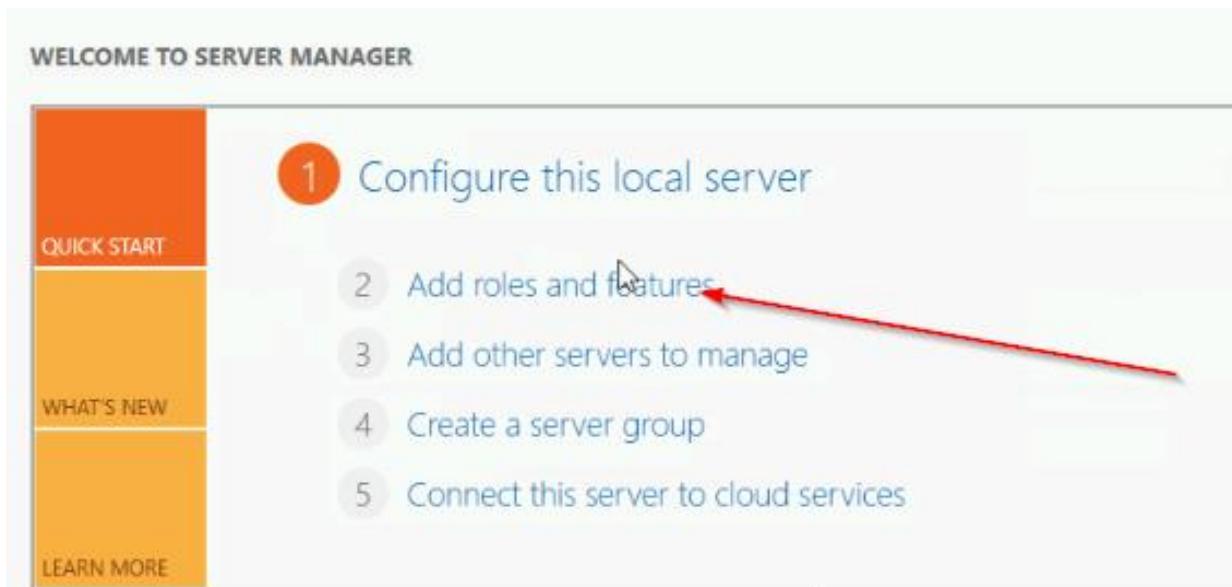


FIGURE 80 - CLICK "ADD ROLES AND FEATURES"

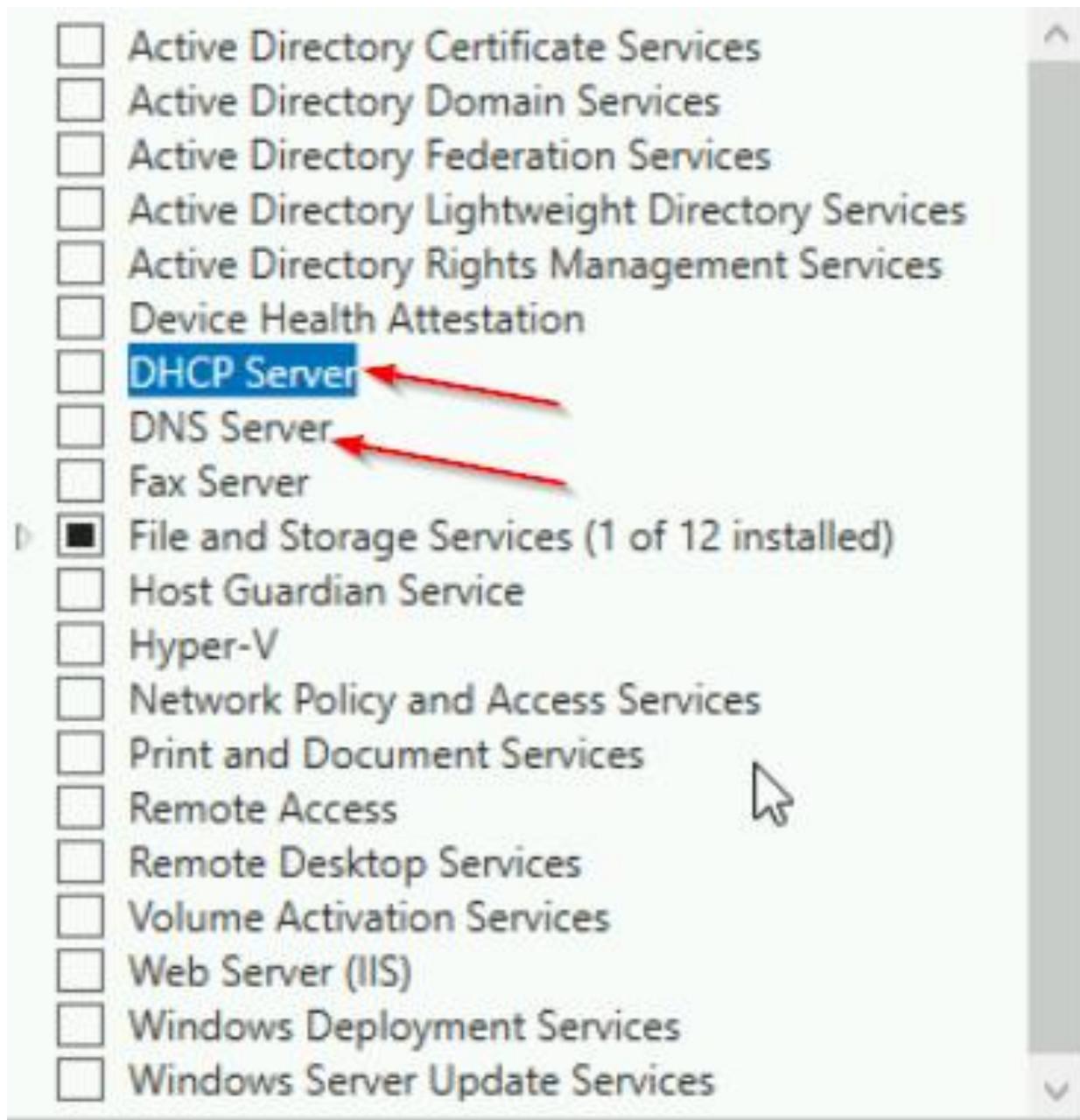


FIGURE 81 - SELECT DHCP AND DNS SERVER



Add features that are required for DHCP Server?

The following tools are required to manage this feature, but do not have to be installed on the same server.

- ◀ Remote Server Administration Tools
 - ◀ Role Administration Tools
 - [Tools] DHCP Server Tools



- Include management tools (if applicable)

Add Features

Cancel

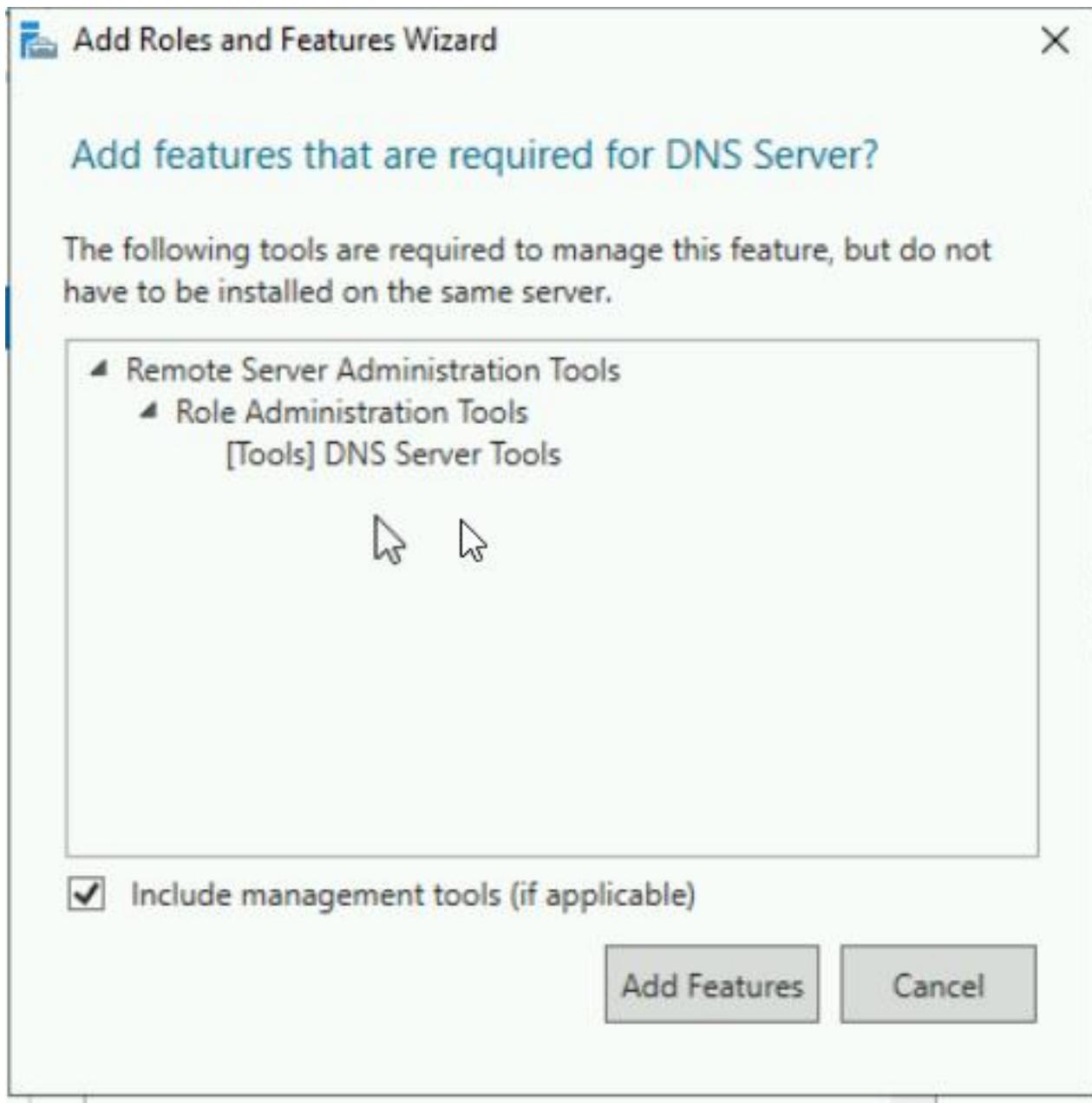


FIGURE 82 - ADD FEATURES FOR DHCP AND DNS

To install the following roles, role services, or features on selected server, click Install.

Restart the destination server automatically if required

Optional features (such as administration tools) might be displayed on this page because they have been selected automatically. If you do not want to install these optional features, click Previous to clear their check boxes. 

- DHCP Server
- DNS Server
- Remote Server Administration Tools
 - Role Administration Tools
 - DHCP Server Tools
 - DNS Server Tools

Export configuration settings
Specify an alternate source path

< Previous

Next >

Install

Cancel

FIGURE 83 - INSTALL BOTH OF IT

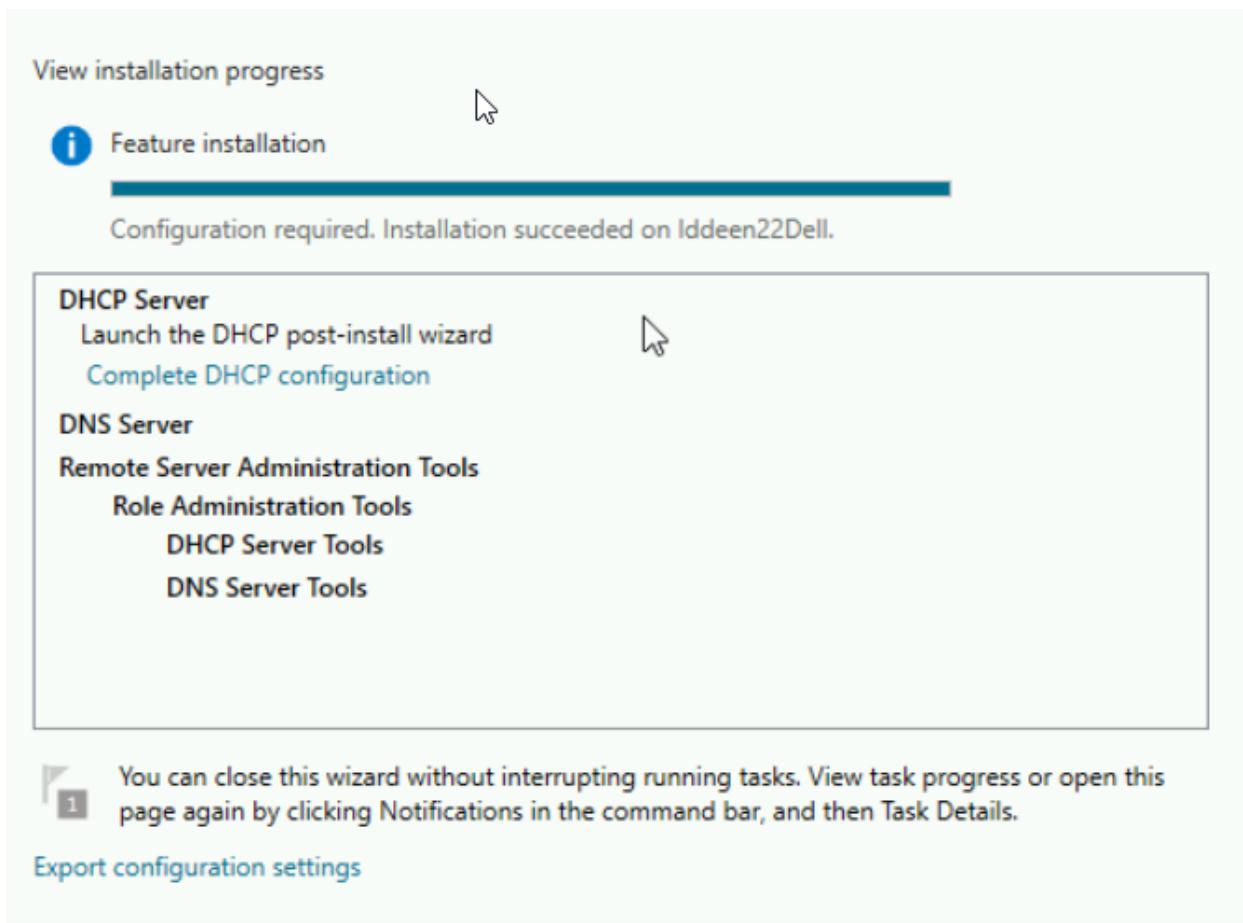


FIGURE 84 - INSTALLATION COMPLETED



FIGURE 85 - CLICK "TOOLS"

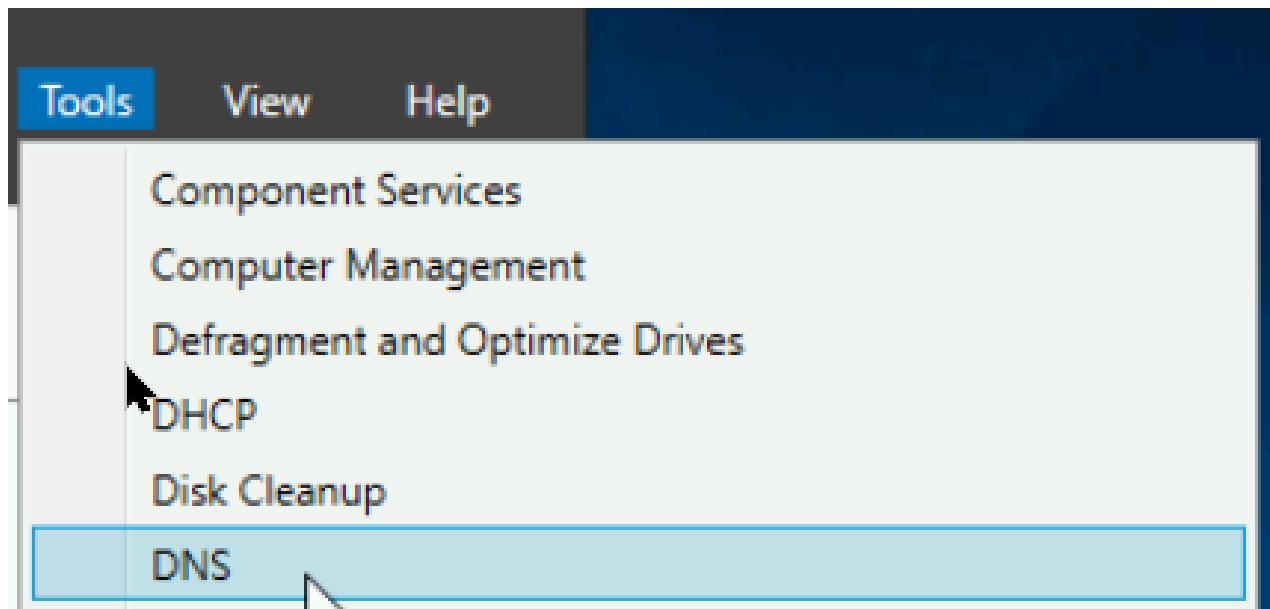


FIGURE 86 - CLICK "DNS"



FIGURE 87 - SEE THE OVERVIEW OF THE DNS MANAGER

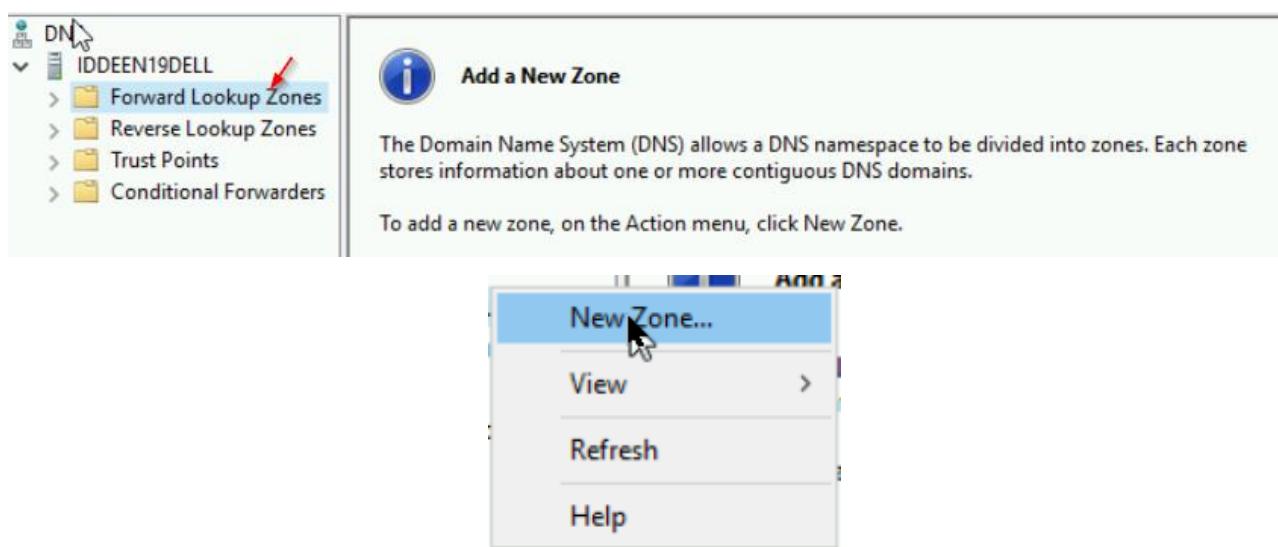


FIGURE 88 - ADD A NEW ZONE



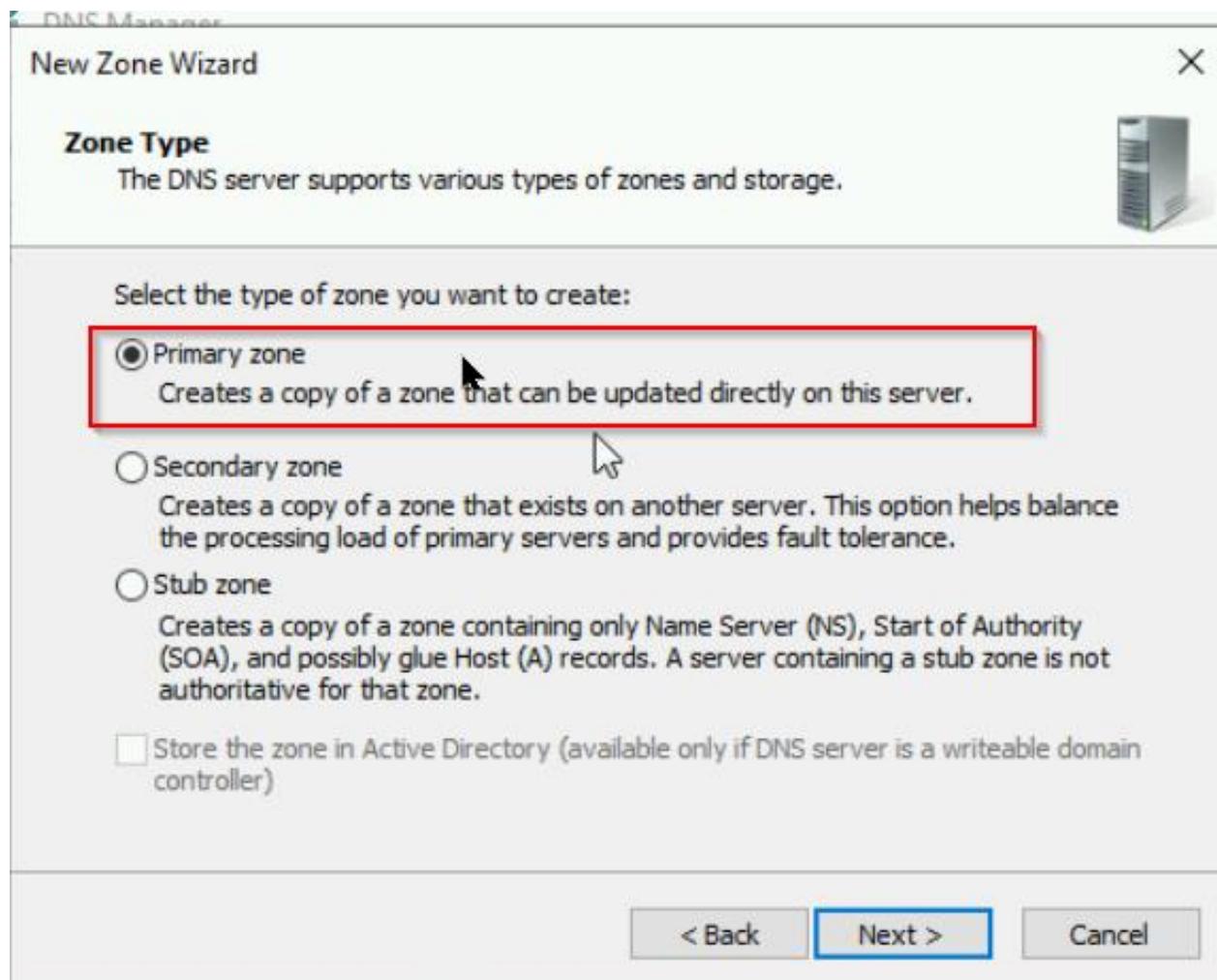


FIGURE 89 - PROCED THE ZONE WIZARD

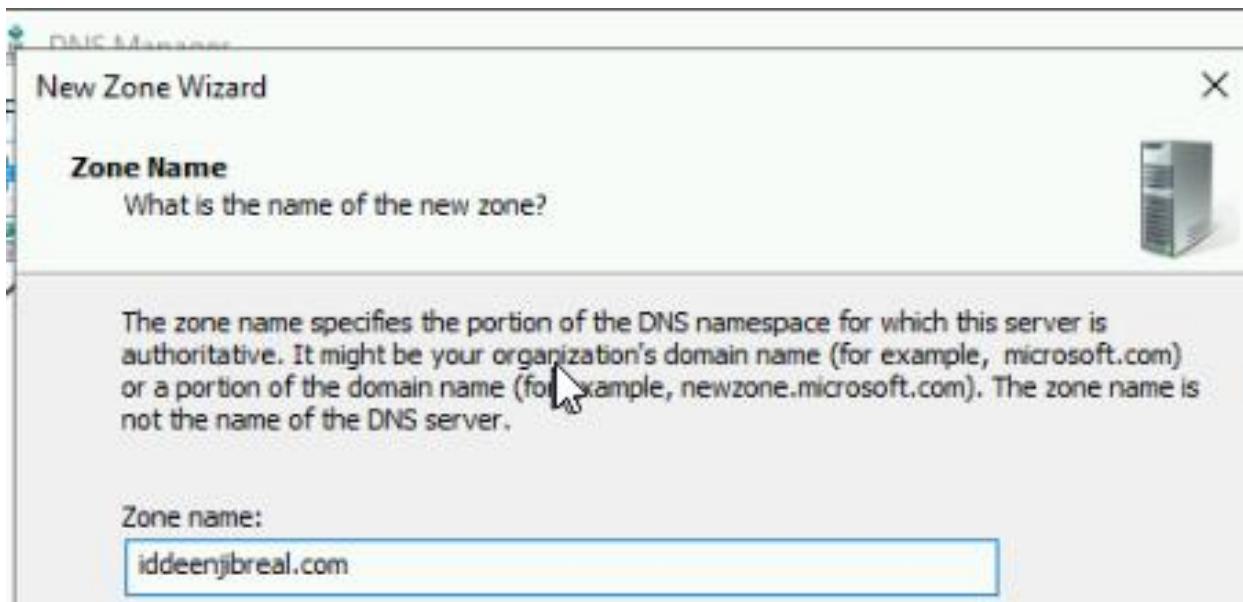


FIGURE 90 - TYPE THE REQUIRED TEXT ON ZONE NAME

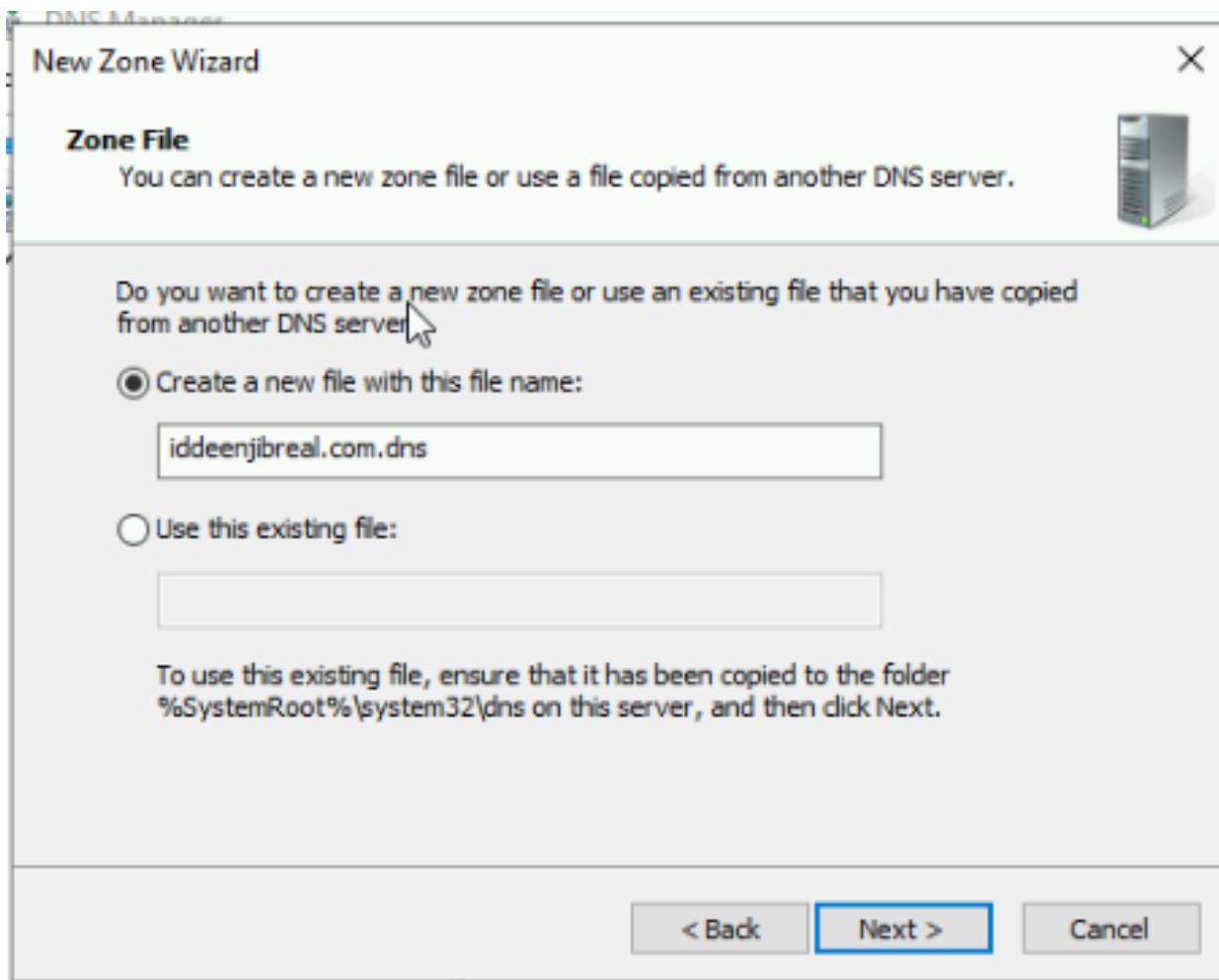


FIGURE 91 - CREATE A NEW FILE WITH THIS FILE NAME

DNS Manager

New Zone Wizard

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

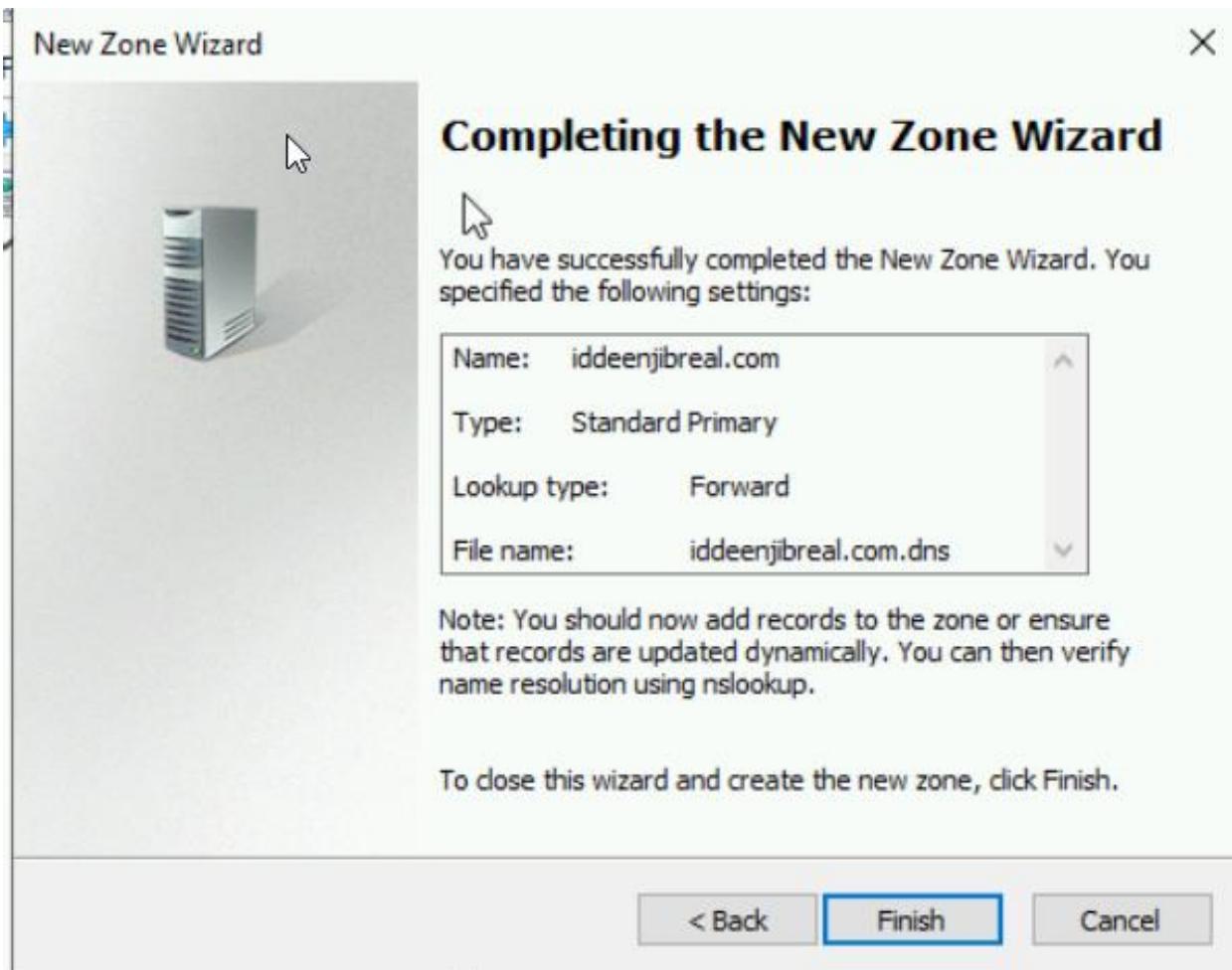


FIGURE 92 - PROCED TO COMPLETE THE NEW ZONE WIZARD

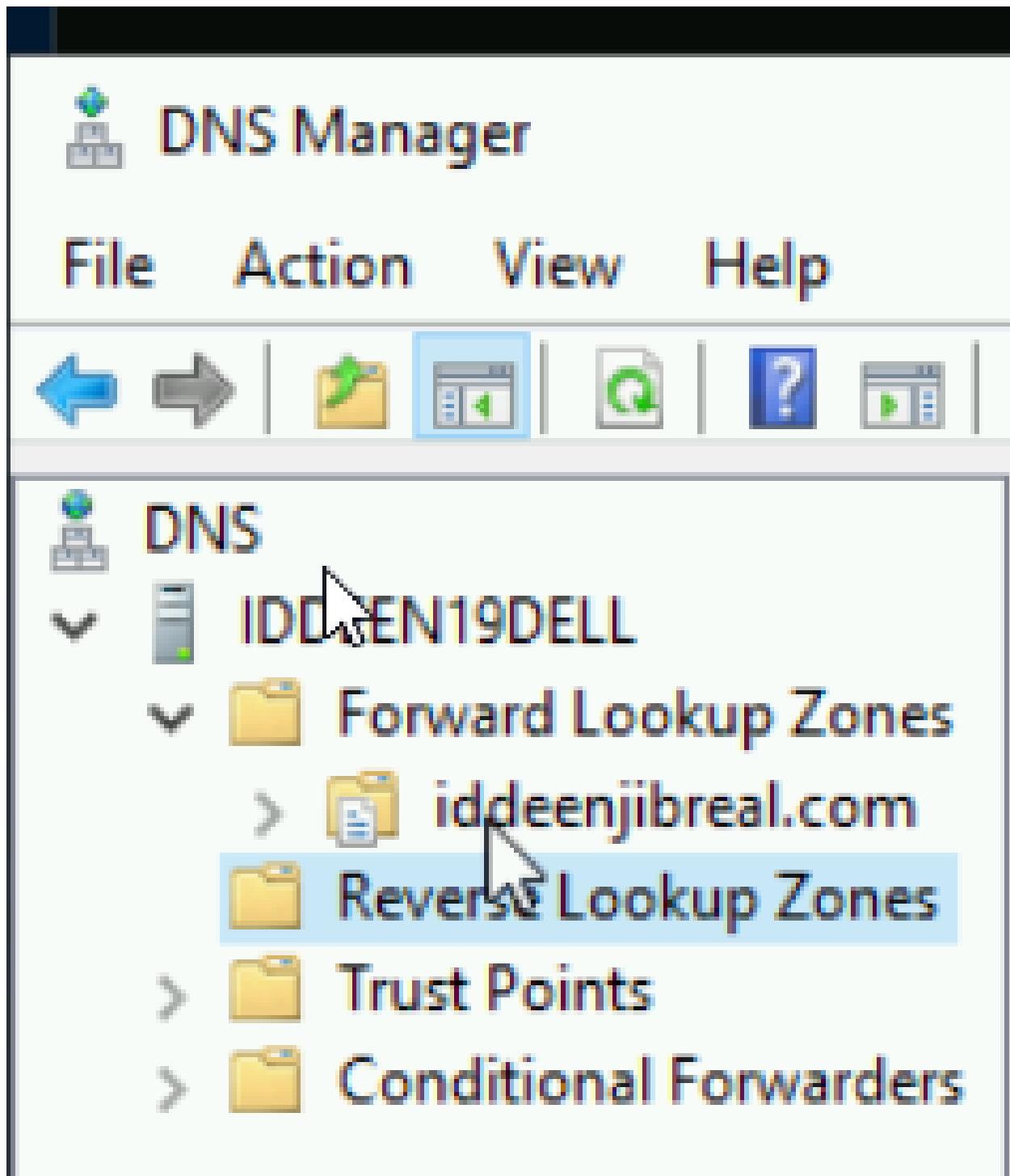


FIGURE 93 - CLICK "REVERSE LOOKUP ZONES" TO CREATE ANOTHER ZONE

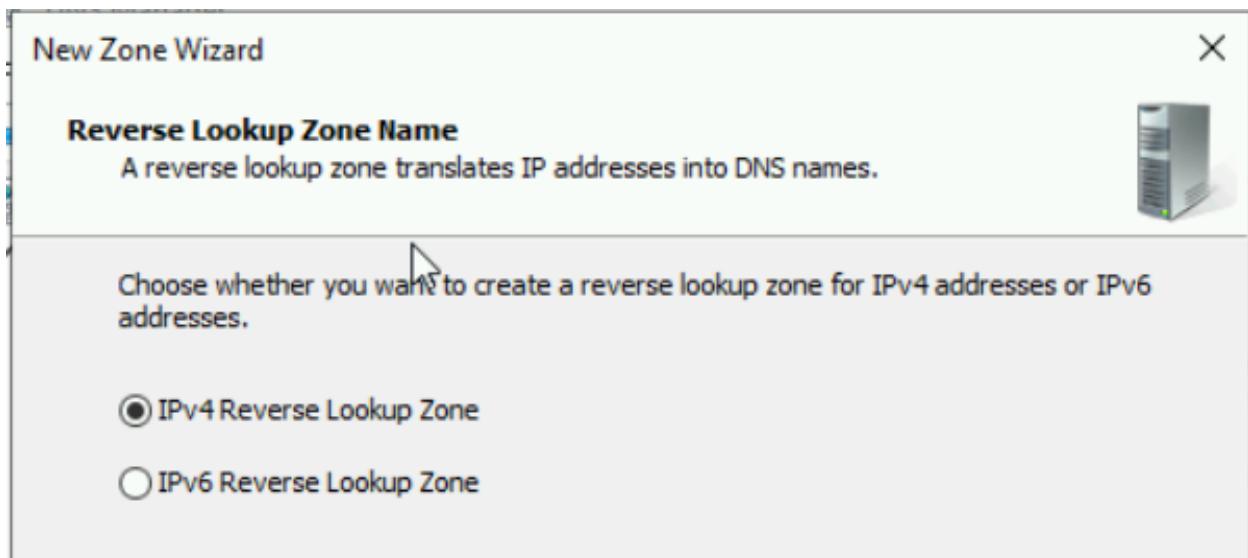


FIGURE 94 - PROCCED UNTIL CLICK "IPv4 REVERSE LOOKUP ZONE"

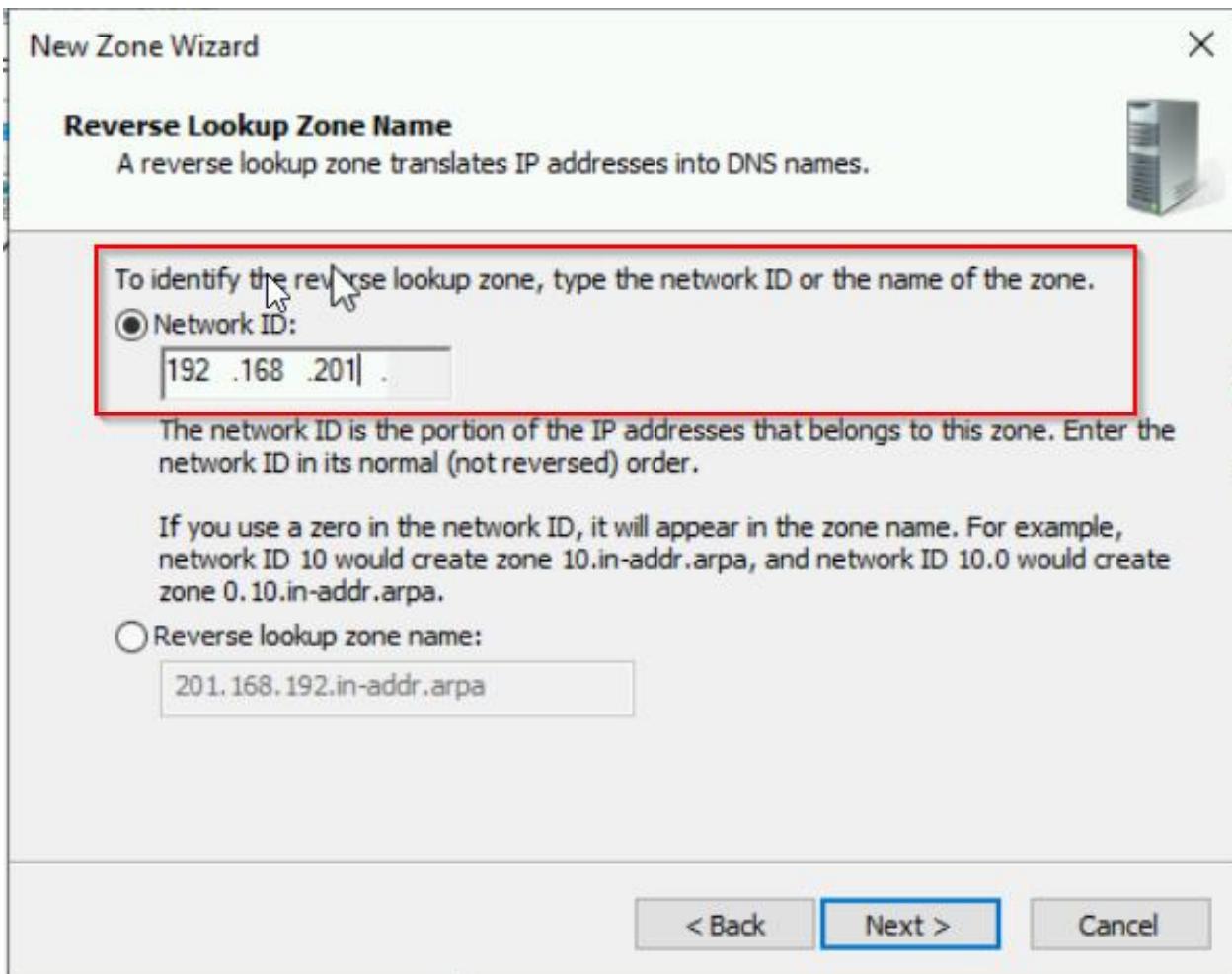
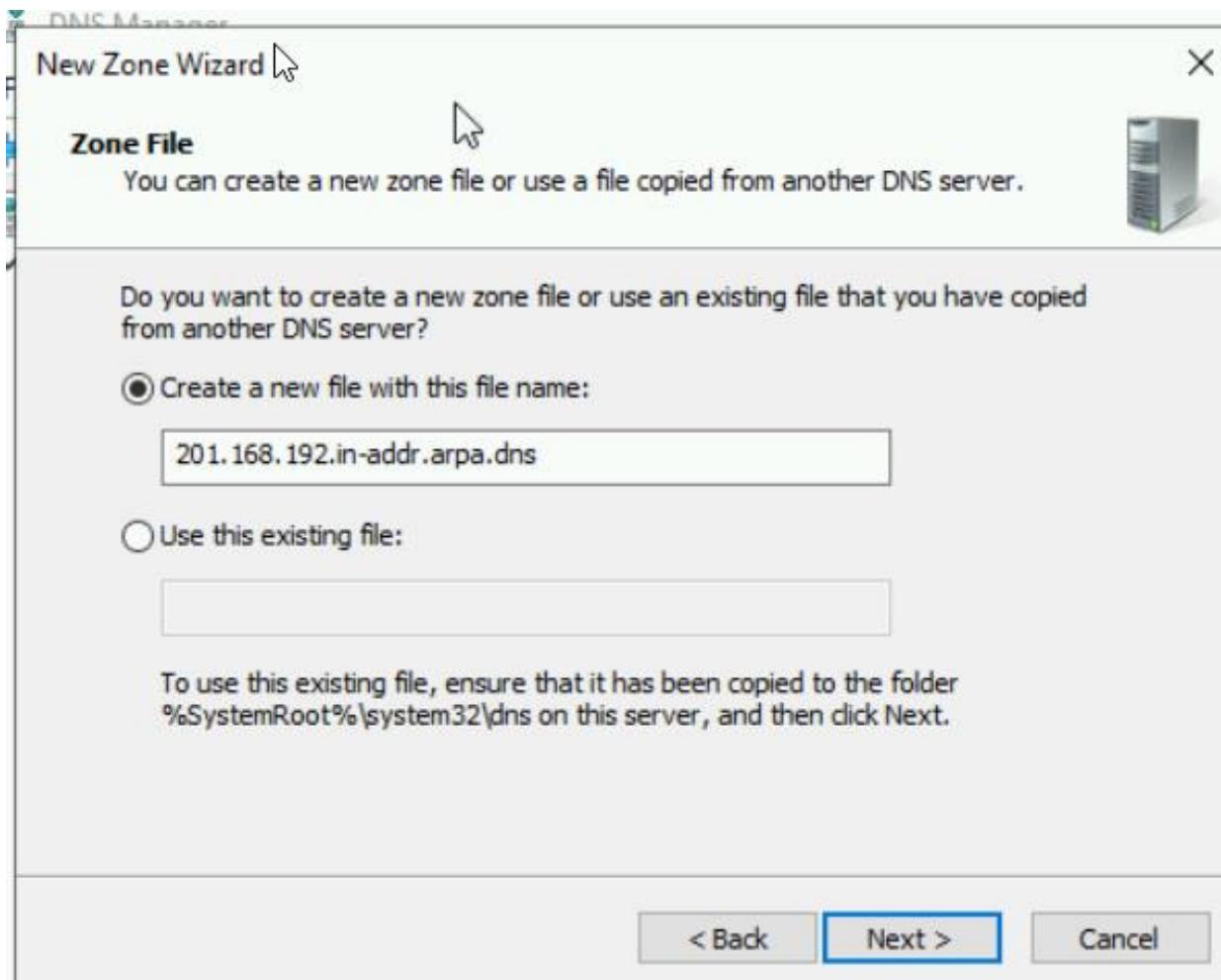


FIGURE 95 - TYPE THE REQUIRED NETWORK ID TO PROCCED



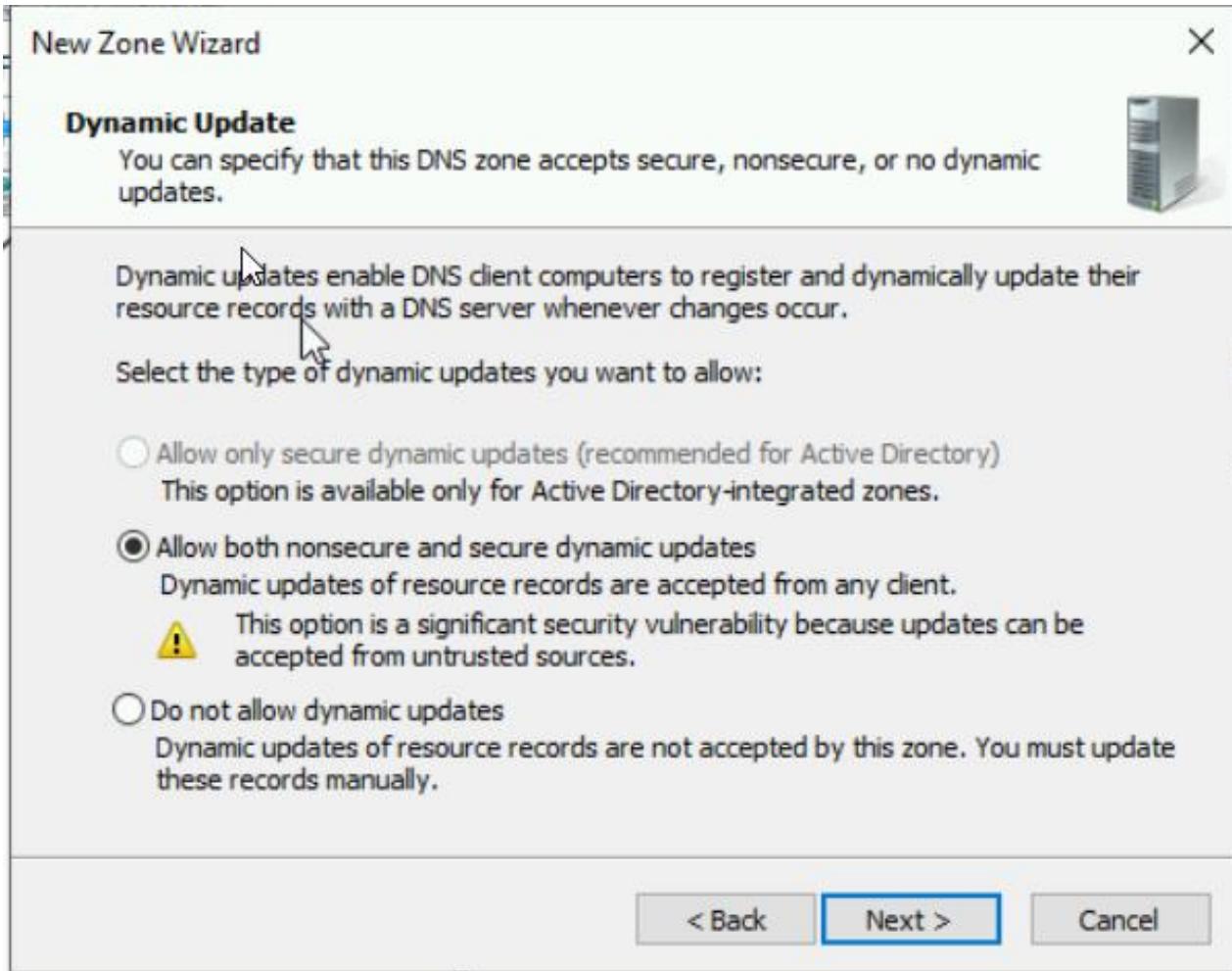


FIGURE 96 - PROCED TO DO THE SAME THING AS FOR FORWARD ZONE

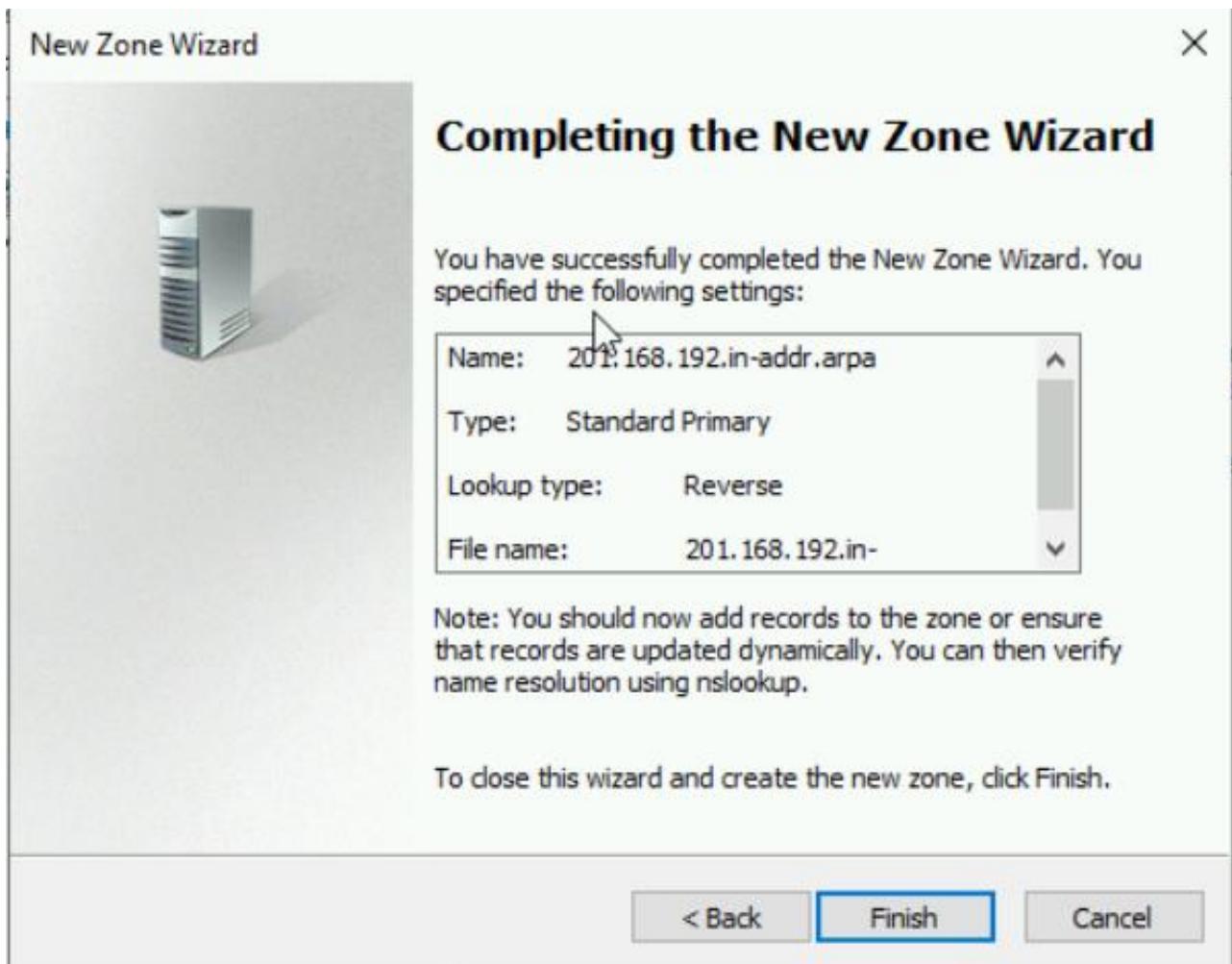


FIGURE 97 - CLICK "FINISH"

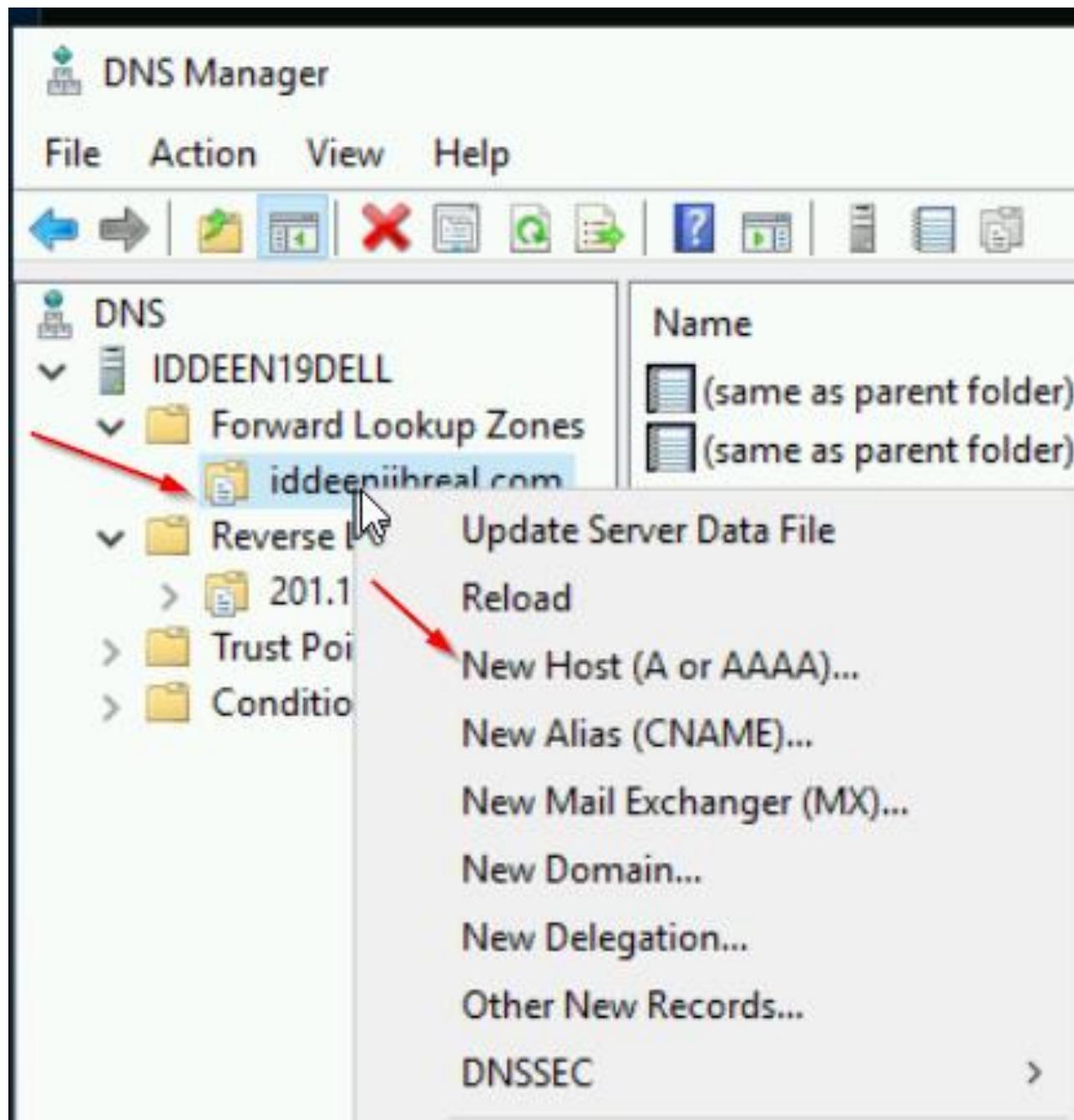


FIGURE 98 - CLICK "NEW HOST (A OR AAAA)"

New Host

Name (uses parent domain name if blank):
router01

Fully qualified domain name (FQDN):
router01.iddeenjibreal.com.

IP address:
192.168.201.254

Create associated pointer (PTR) record

Add Host **Cancel**

New Host X

Name (Uses parent domain name if blank):

Fully qualified domain name (FQDN):

IP address:

Create associated pointer (PTR) record

Add Host Done

New Host X

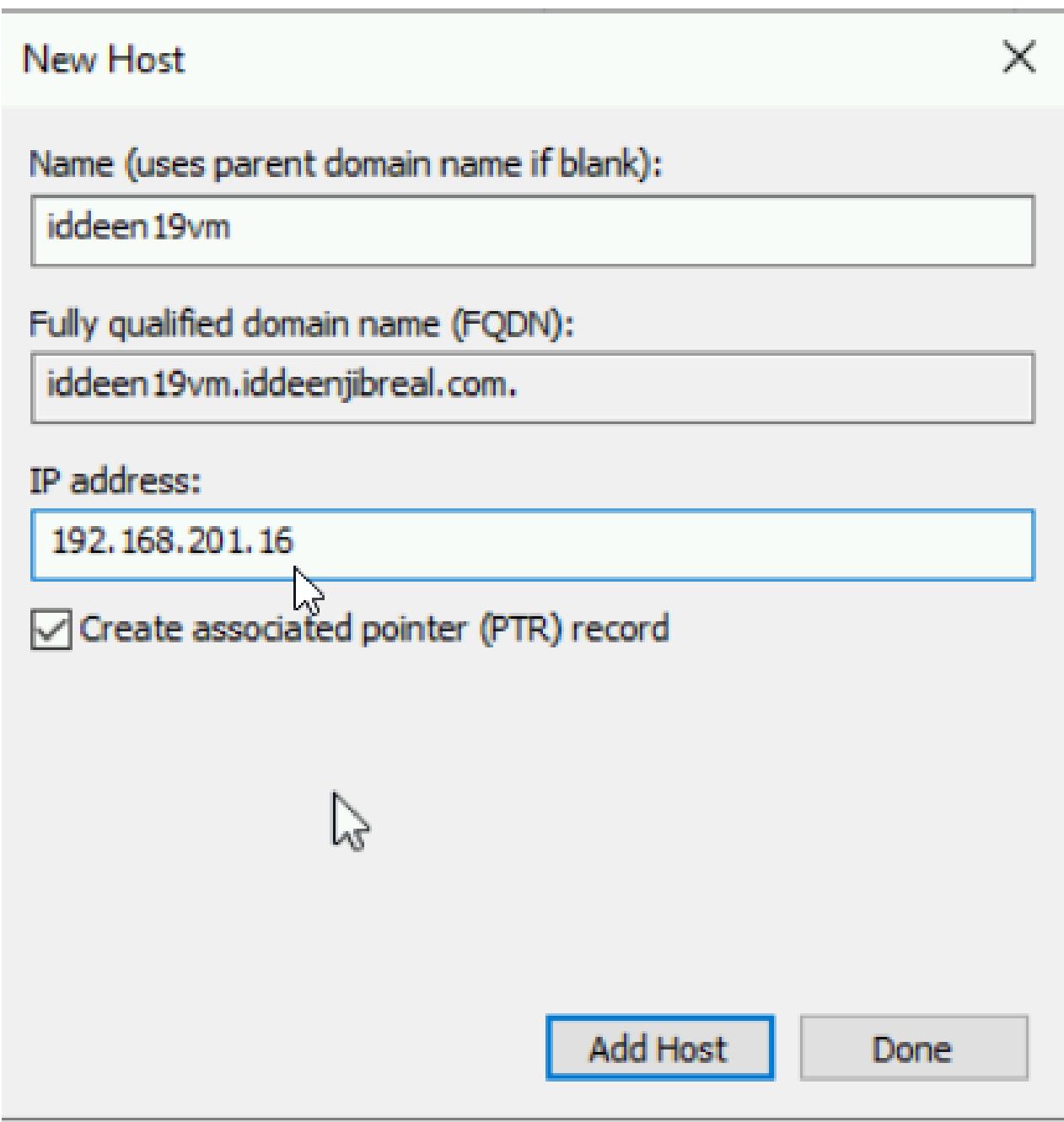
Name (uses parent domain name if blank):
idrac01

Fully qualified domain name (FQDN):
idrac01.iddeenjibreal.com.

IP address:
192.168.201.11

Create associated pointer (PTR) record

Add Host Done



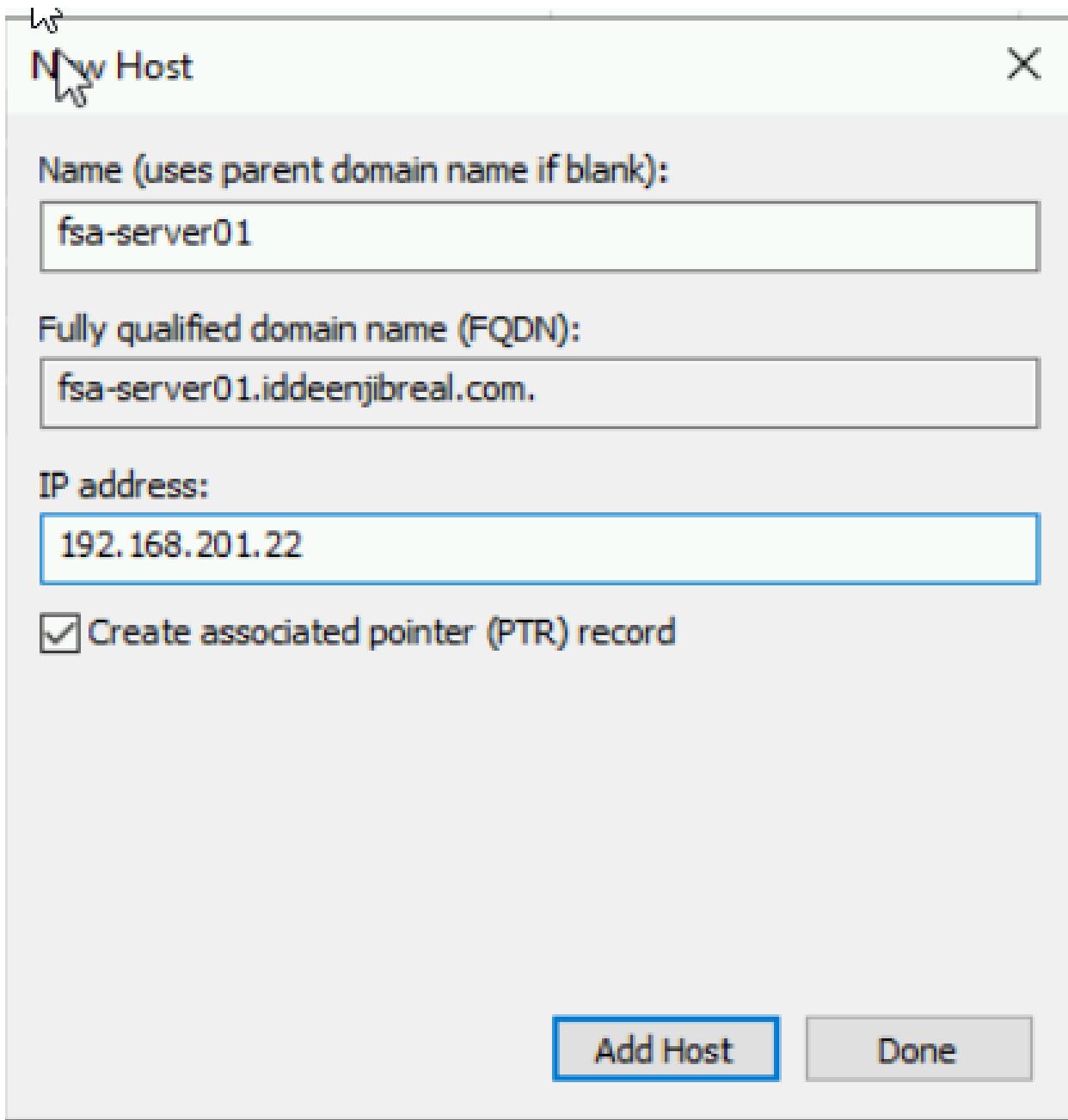


FIGURE 99 - ASSIGN DNS A RECORD FOR ALL OF THE DEVICES

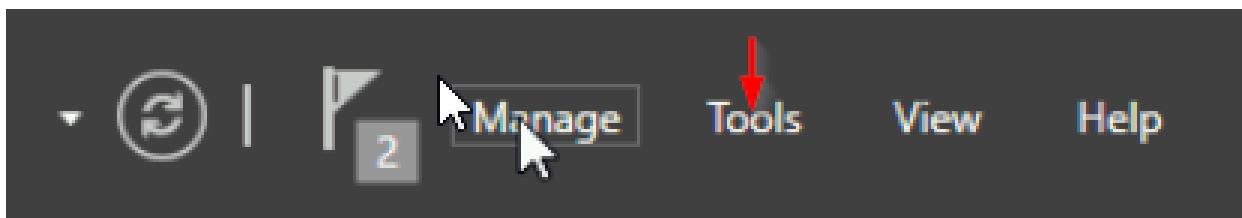


FIGURE 100 - GO BACK TO THE DASHBOARD, AND CLICK "TOOLS"

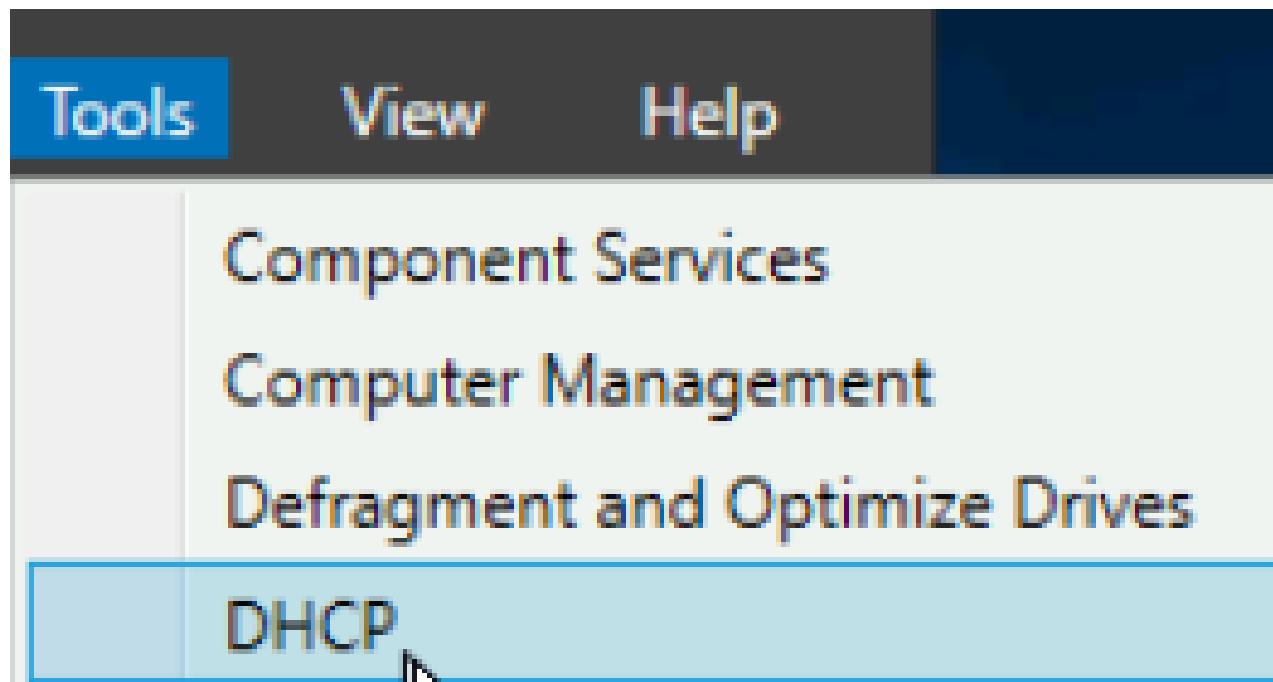


FIGURE 101 - CLICK "DHCP"

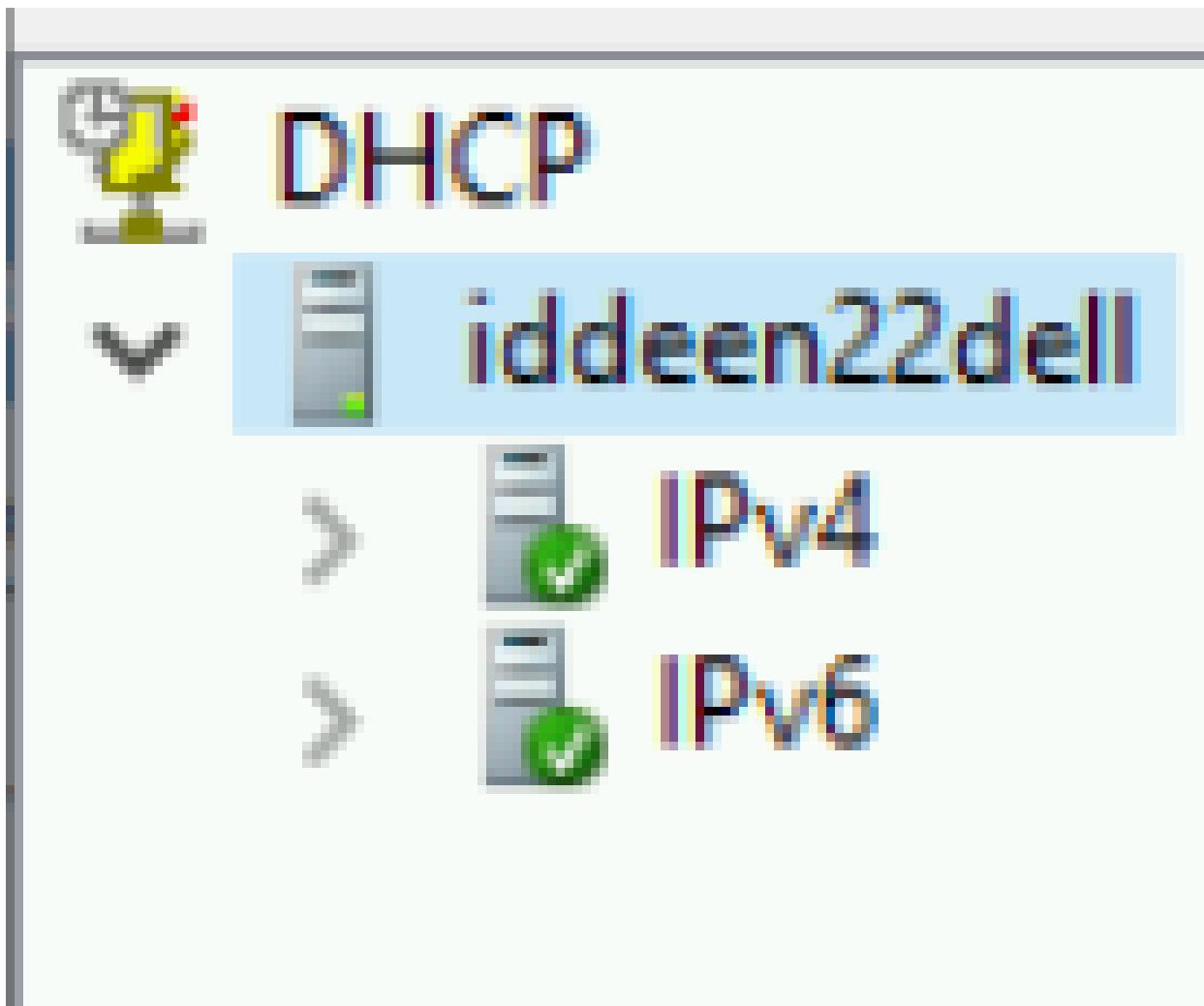


FIGURE 102 - SEE THE OVERVIEW OF THE DHCP MENU

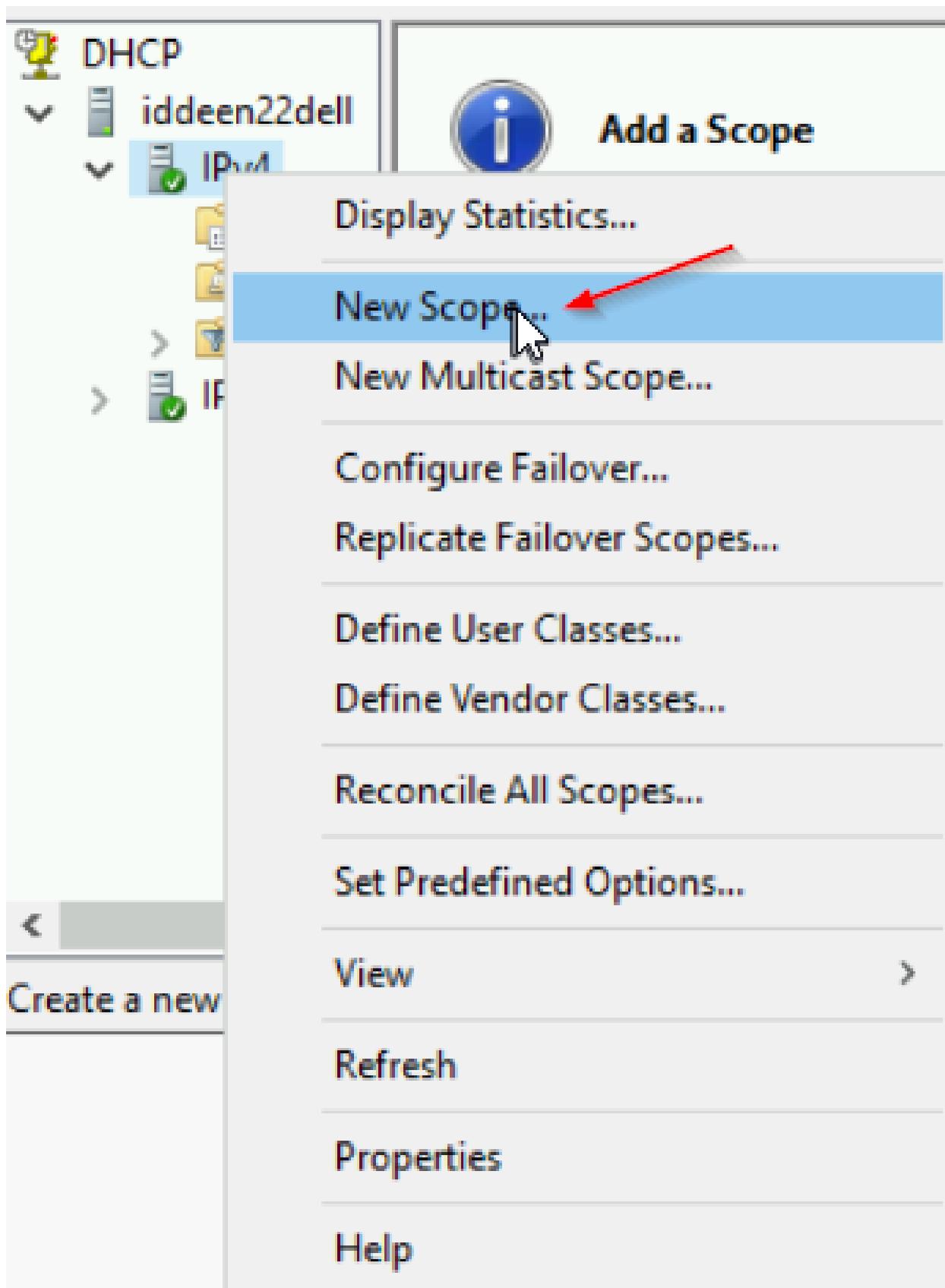


FIGURE 103 - CLICK "NEW SCOPE"

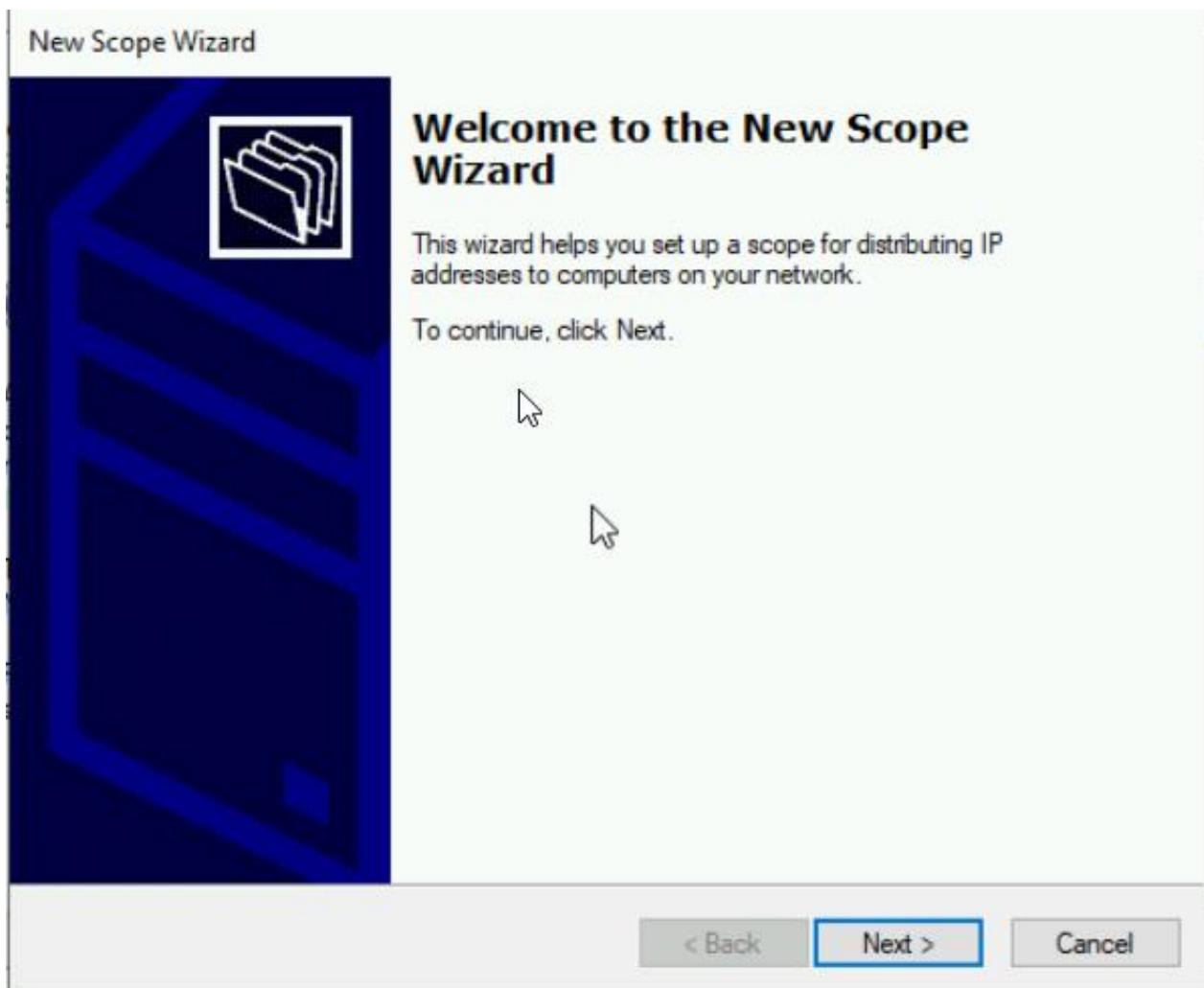


FIGURE 104 - "CLICK NEXT"

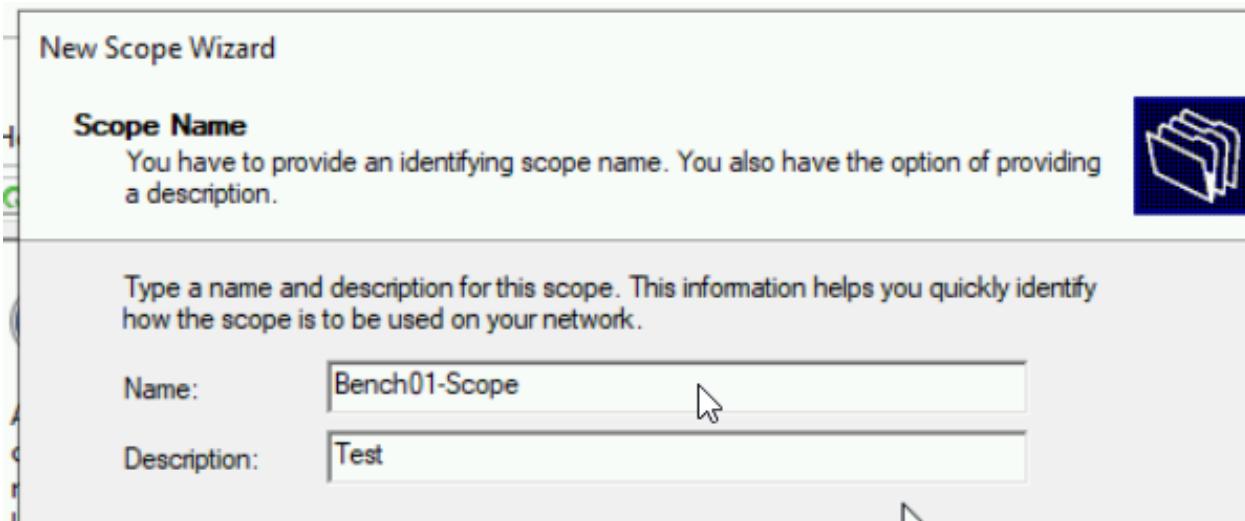


FIGURE 105 – PROCCED

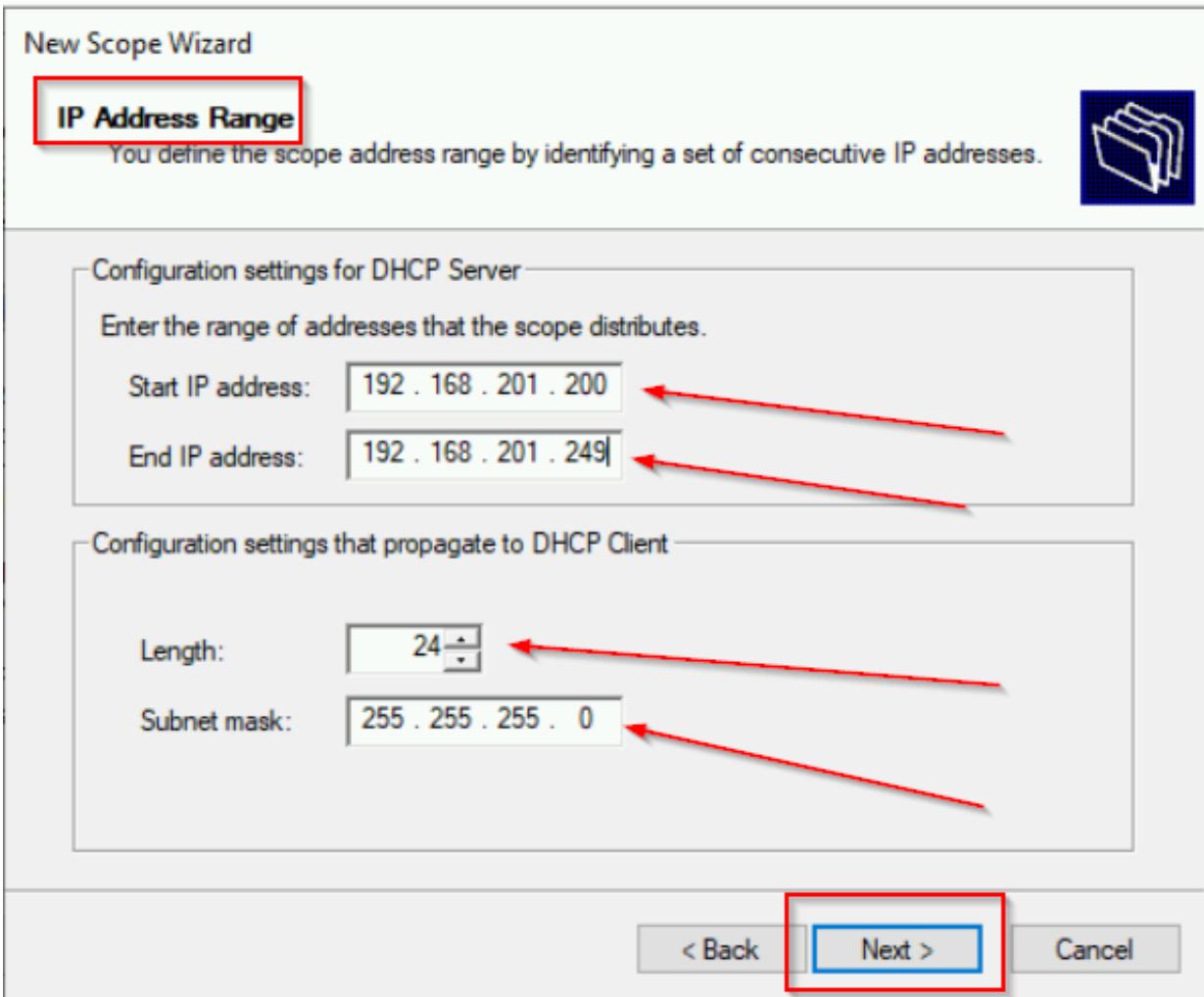


FIGURE 106 - PUT THE STARTING IP ADDRESS AND THE END TO CLICK "NEXT"

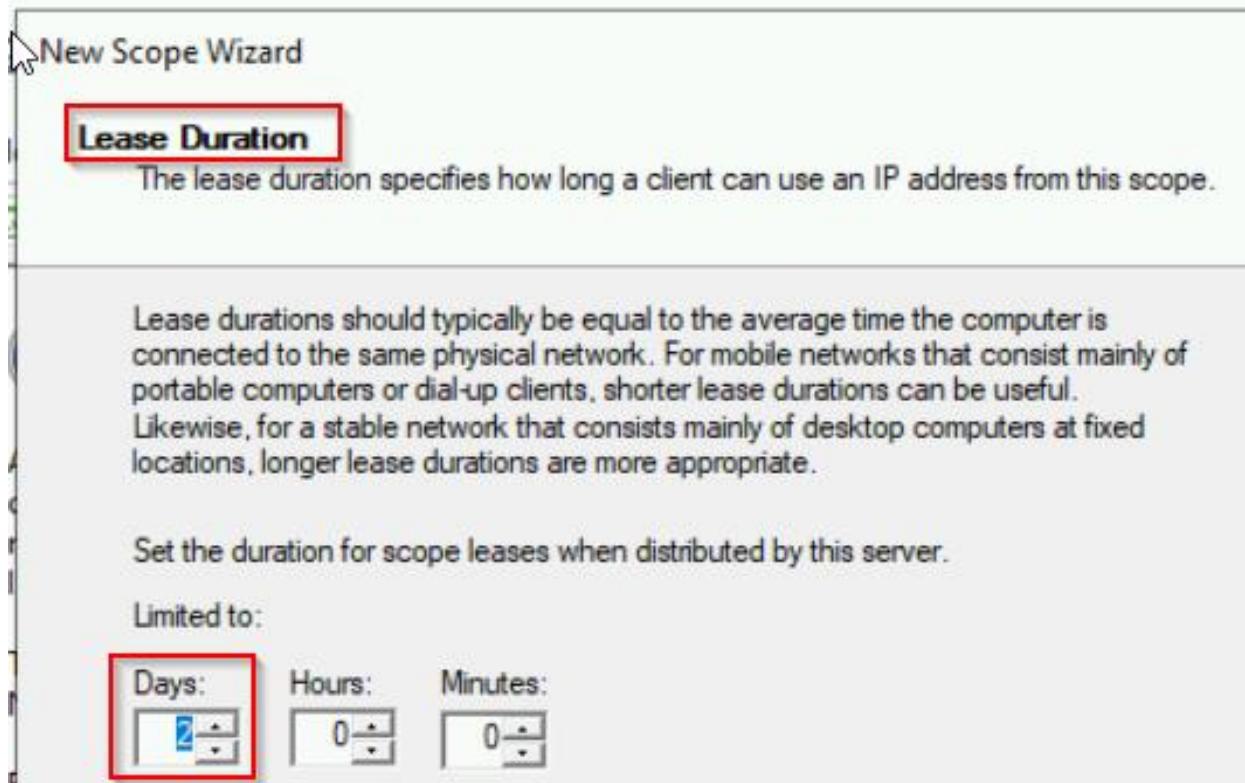


FIGURE 107 - SET THE LEASE DURATION

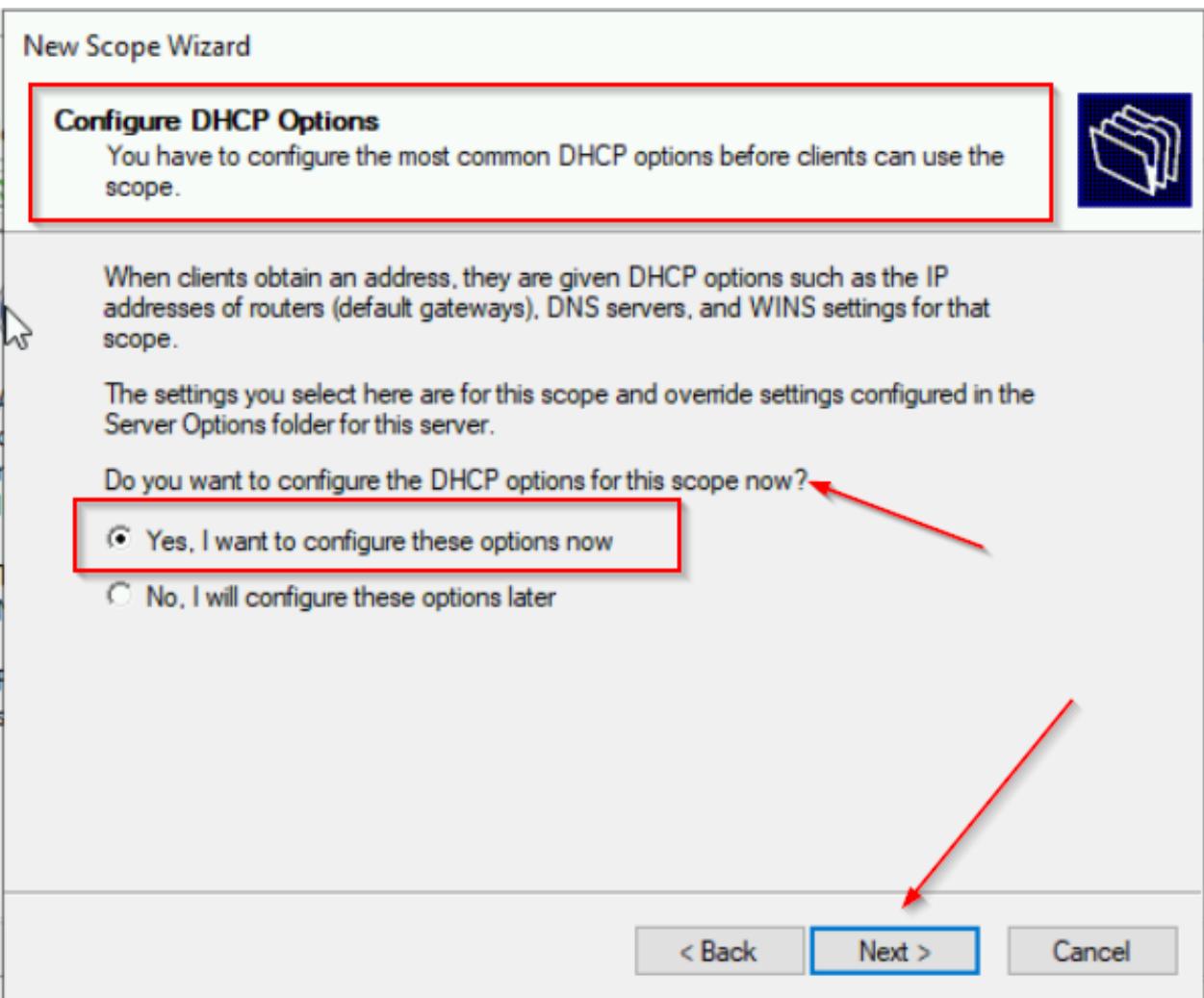


FIGURE 108 - CONFIGURE DHCP OPTIONS

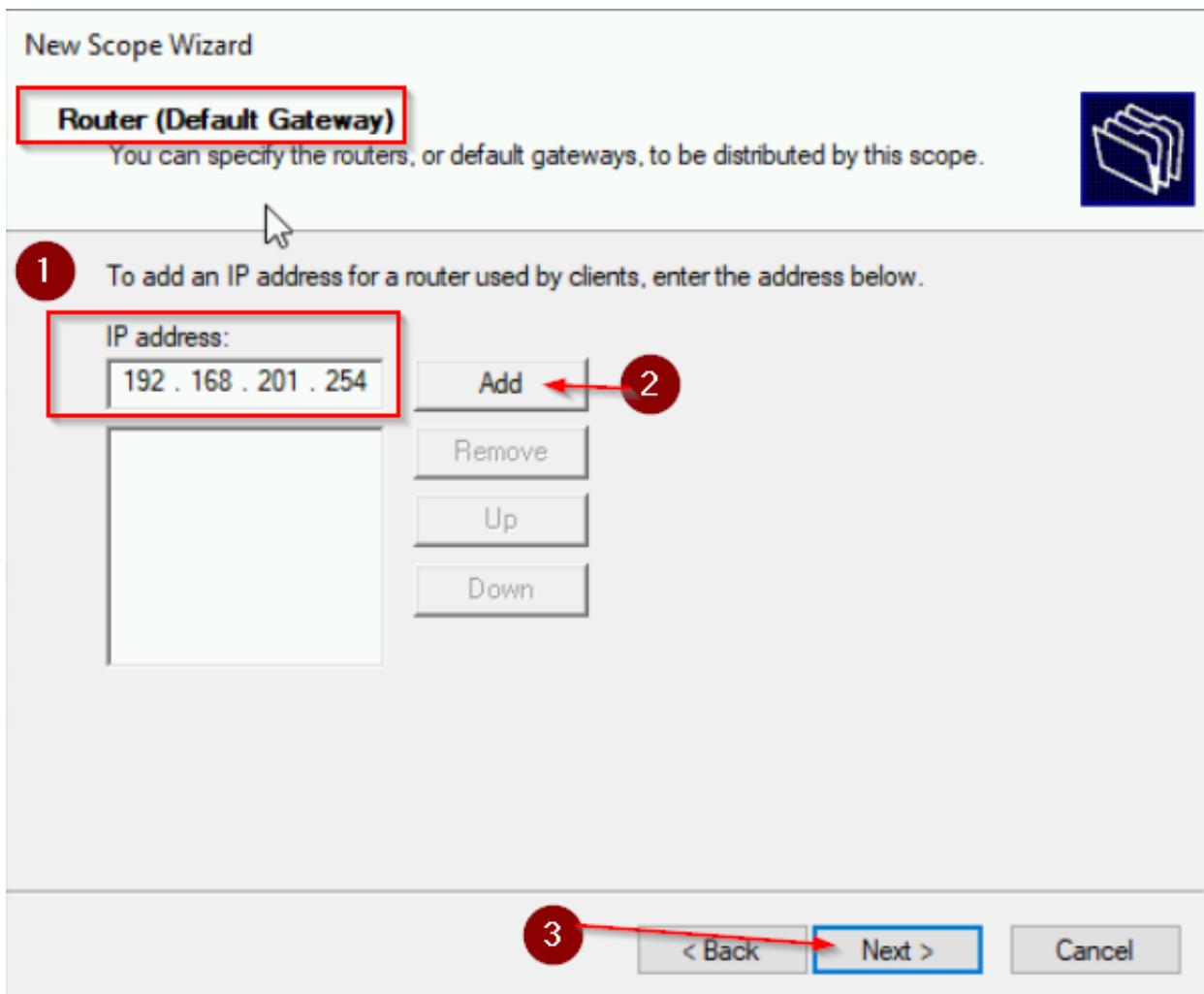


FIGURE 109 - ADD THE ROUTER DEFAULT GATEWAY

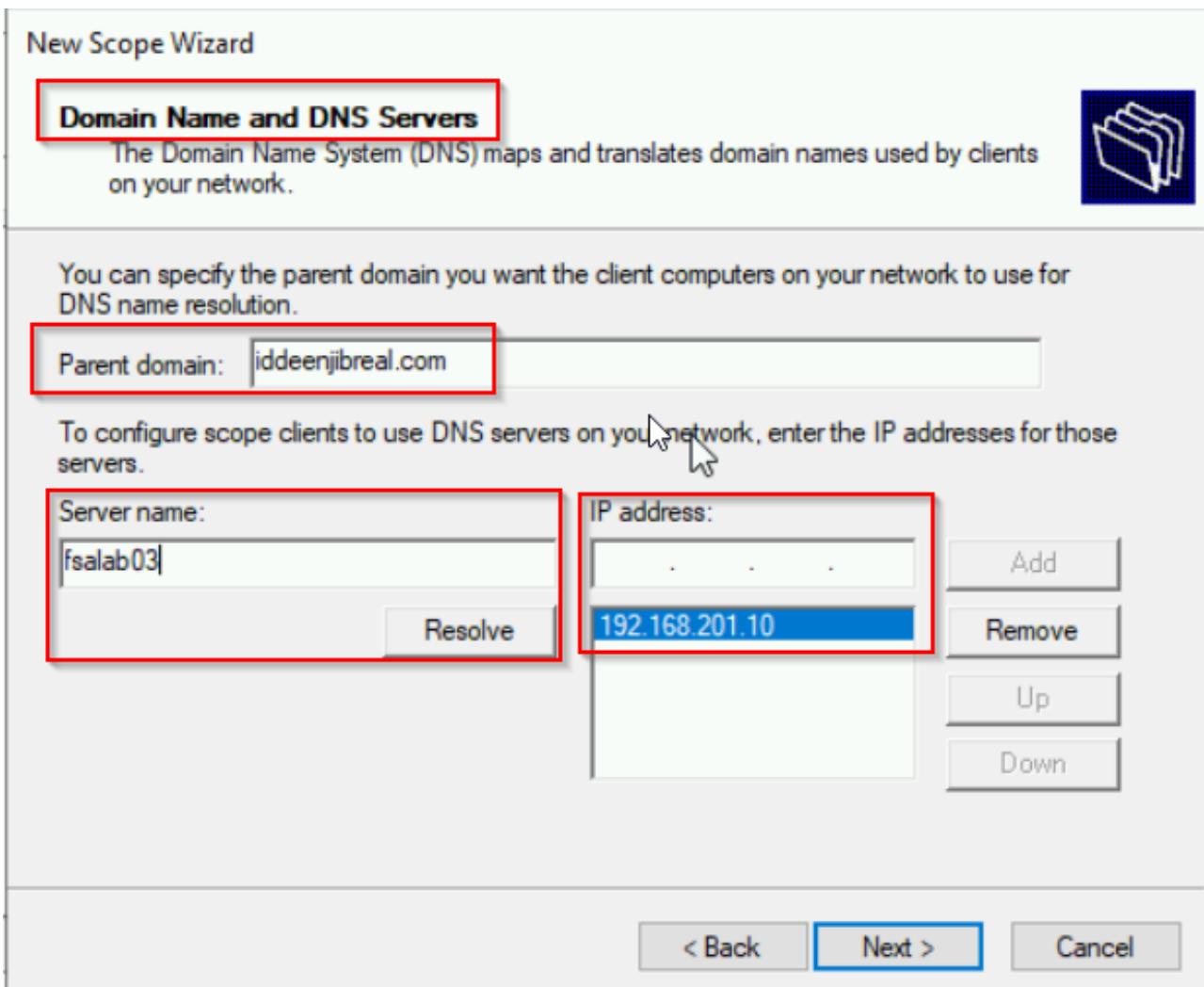


FIGURE 110 - SET THE PARENT DOMAIN AND EDIT THE STUFF, THEN CLICK "NEXT"

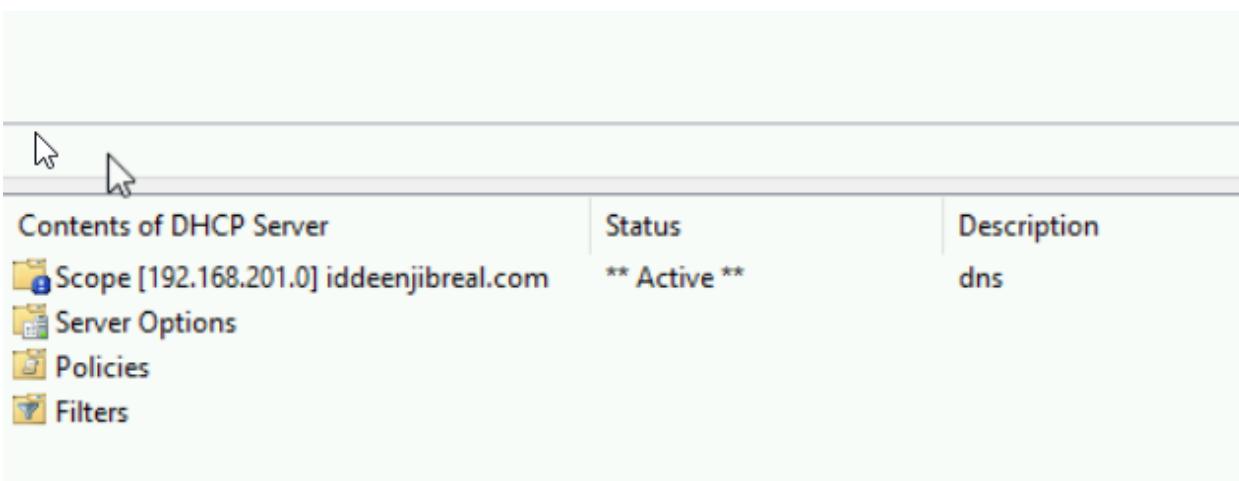


FIGURE 111 - SEE THE SCOPE BEING ACTIVE!

```
C:\Users\Student24>ipconfig /all
```

Windows IP Configuration

```
Host Name . . . . . : 00LAPTOP24
Primary Dns Suffix . . . . . :
Node Type . . . . . : Hybrid
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No
DNS Suffix Search List. . . . . : iddeenjibreal.com
```

Ethernet adapter Ethernet:

```
Connection-specific DNS Suffix . : iddeenjibreal.com
Description . . . . . : Realtek USB GbE Family Controller
Physical Address. . . . . : 00-E0-4C-68-17-59
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . . : Yes
IPv4 Address. . . . . : 192.168.201.200(Preferred) ←
Subnet Mask . . . . . : 255.255.255.0 ←
Lease Obtained. . . . . : Friday, September 19, 2025 11:31:08 AM ←
Lease Expires . . . . . : Monday, September 29, 2025 11:31:07 AM ←
Default Gateway . . . . . : 192.168.201.254
DHCP Server . . . . . : 192.168.201.10
DNS Servers . . . . . : 192.168.201.10 ←
```

FIGURE 112 - SEE THE LAPTOP GETTING IP ADDRESS FROM DHCP SERVER

⚠ Not secure

iddeen19vm.iddeenjibreal.com

FIGURE 113 - TYPE THE IIS WEBSITE ON LAPTOP

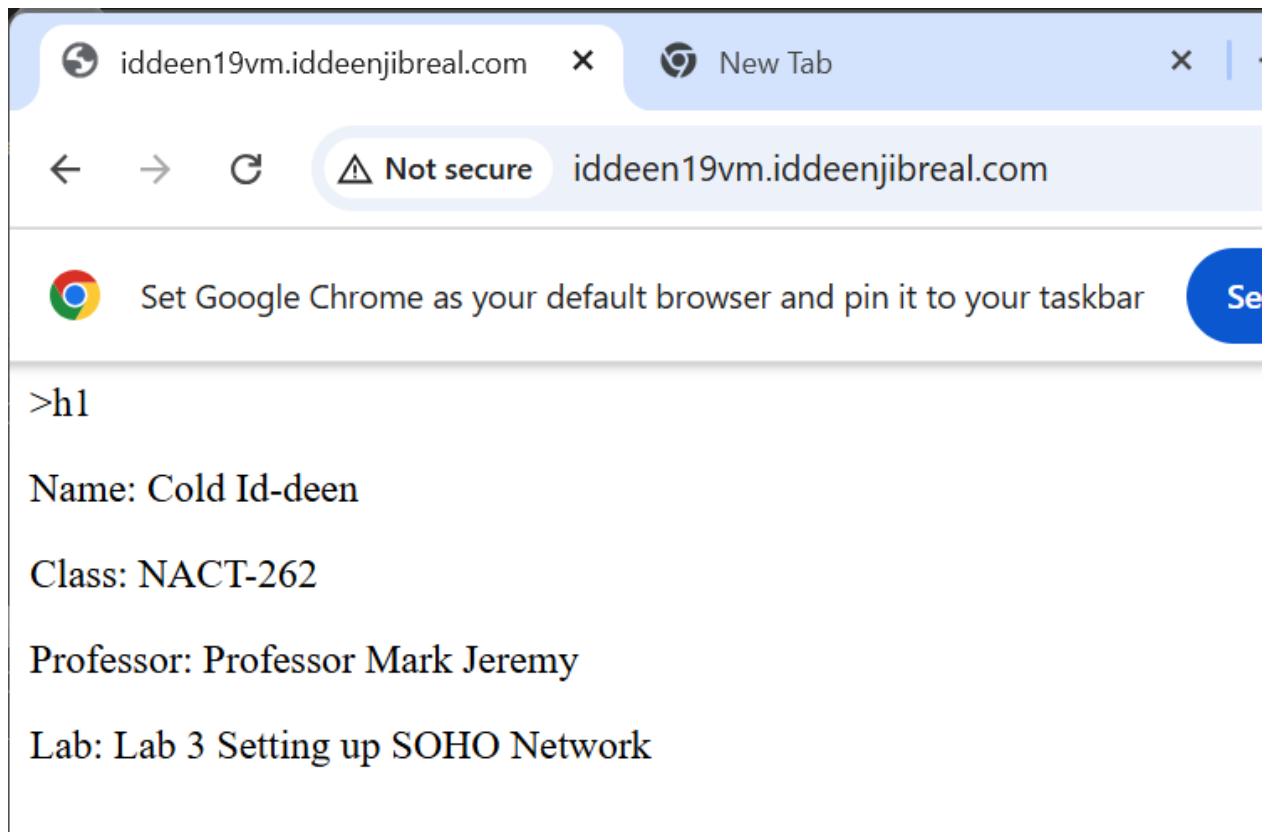


FIGURE 114 - SEE YOUR OWN IIS WEBSITE FROM THE PCA

⚠ Not secure fsa-server01.iddeenjibreal.com

FIGURE 115 - TYPE ANOTHER IIS WEBSITE ON THE LAPTOP

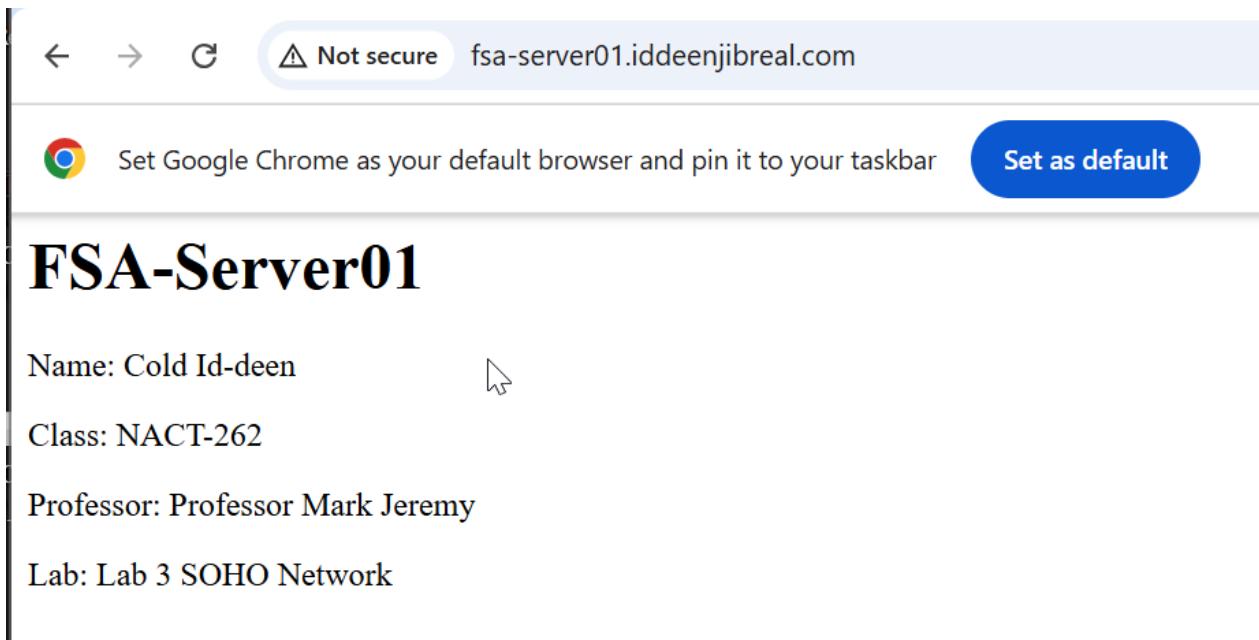


FIGURE 116 - SEE YOUR OWN IIS WEBSITE FROM THE PCB CORE!

```
C:\Users\Student24>nslookup router01.iddeenjibreal.com
Server: dell01.iddeenjibreal.com
Address: 192.168.201.10

Name: router01.iddeenjibreal.com
Address: 192.168.201.254
```

```
C:\Users\Student24>nslookup 192.168.201.254
Server: dell01.iddeenjibreal.com
Address: 192.168.201.10

Name: router01.iddeenjibreal.com
Address: 192.168.201.254
```

FIGURE 117- NSLOOKUP ON DNS A AND REVERSE IP RECORDS FOR ROUTER

```
C:\Users\Student24>nslookup iddeen19vm.iddeenjibreal.com
Server: dell01.iddeenjibreal.com
Address: 192.168.201.10

Name:    iddeen19vm.iddeenjibreal.com
Address: 192.168.201.16
```

```
C:\Users\Student24>nslookup 192.168.201.16
Server: dell01.iddeenjibreal.com
Address: 192.168.201.10

Name:    iddeen19vm.iddeenjibreal.com
Address: 192.168.201.16
```

FIGURE 118 - NSLOOKUP ON DNS A AND REVERSE IP RECORDS FOR PCA VM

```
C:\Users\Student24>nslookup fsa-server01.iddeenjibreal.com
Server: dell01.iddeenjibreal.com
Address: 192.168.201.10

Name:    fsa-server01.iddeenjibreal.com
Address: 192.168.201.21
```

```
C:\Users\Student24>nslookup 192.168.201.21
Server: dell01.iddeenjibreal.com
Address: 192.168.201.10

Name:    fsa-server01.iddeenjibreal.com
Address: 192.168.201.21
```

FIGURE 119 - NSLOOKUP ON DNS A AND REVERSE IP RECORDS FOR PCB CORE

```
C:\Users\Student24>nslookup dell01.iddeenjibreal.com
Server: dell01.iddeenjibreal.com
Address: 192.168.201.10

Name: dell01.iddeenjibreal.com
Address: 192.168.201.10
```

```
C:\Users\Student24>nslookup 192.168.201.10
Server: dell01.iddeenjibreal.com
Address: 192.168.201.10

Name: dell01.iddeenjibreal.com
Address: 192.168.201.10
```

FIGURE 120 - NSLOOKUP ON DNS A AND REVERSE IP RECORDS FOR DELL SERVER

QUESTIONS AND ANSWERS

- In which part of the lab activity did you find the most challenging?
 - Getting the VM truly bridged to the wired LAN while chasing the rogue router DHCP and fixing DNS/forwarders was the most painful part I struggled with.

OBSERVATIONS

Well, it was excellent learning for me to do this type of stuff, it was really cool. I made big mistake that I added the “Excluded and Delay” to block any incoming DHCP IP Address while it was not supposed to happen! Good experience.