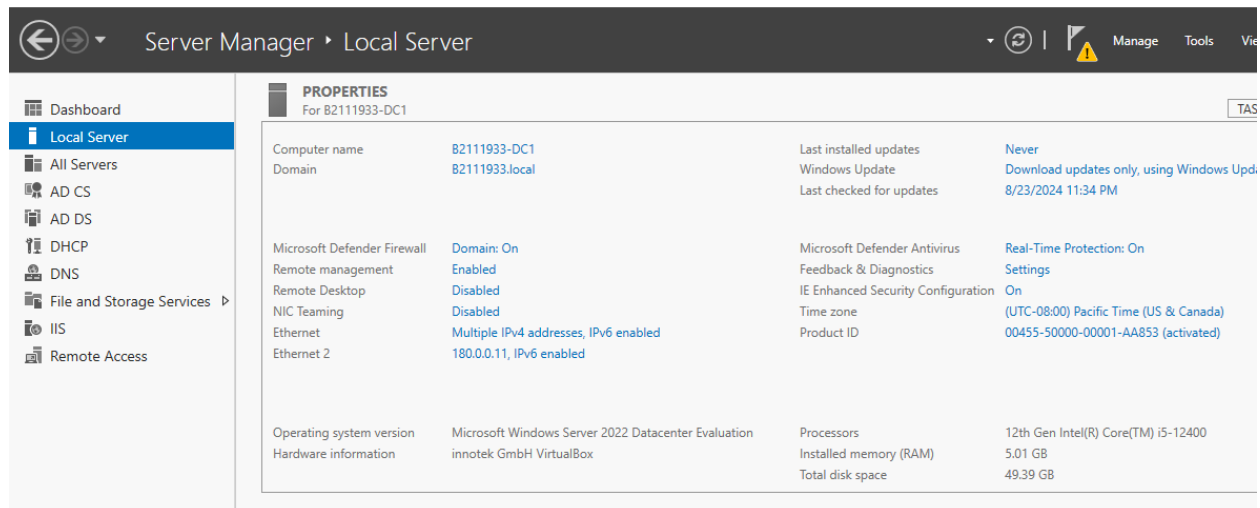Name: Truong Dang Truc Lam

ID: B2111933

Class: CT209H-M04

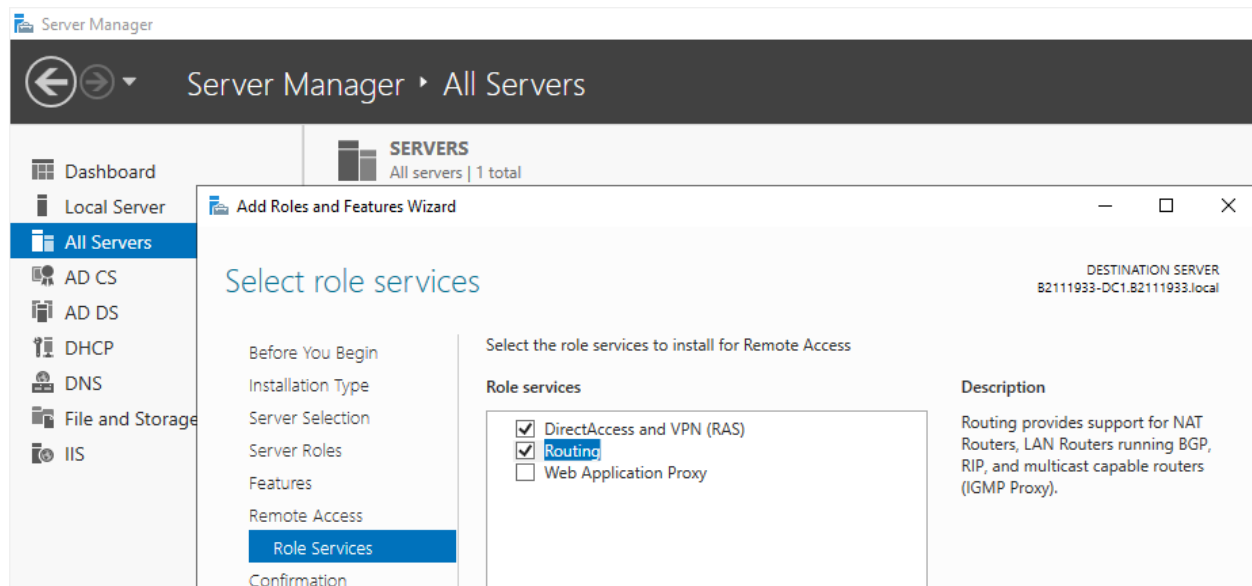# LAB 7: VPN AND DIRECTACCESS

EXERCISE 1: BUILD THE NETWORK USING VMWARE WORKSTATION

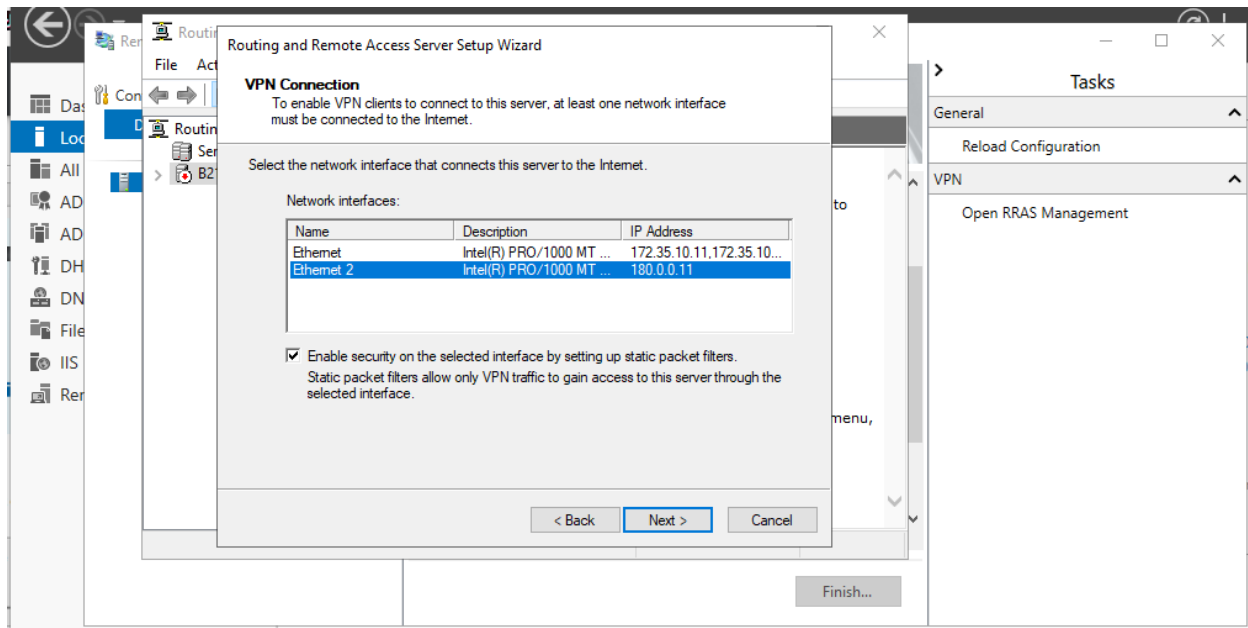I will use DC1 as the RA server because my PC can only run 2 VMs at a time

EXERCISE 2: INSTALL AND CONFIGURE VPN SERVER
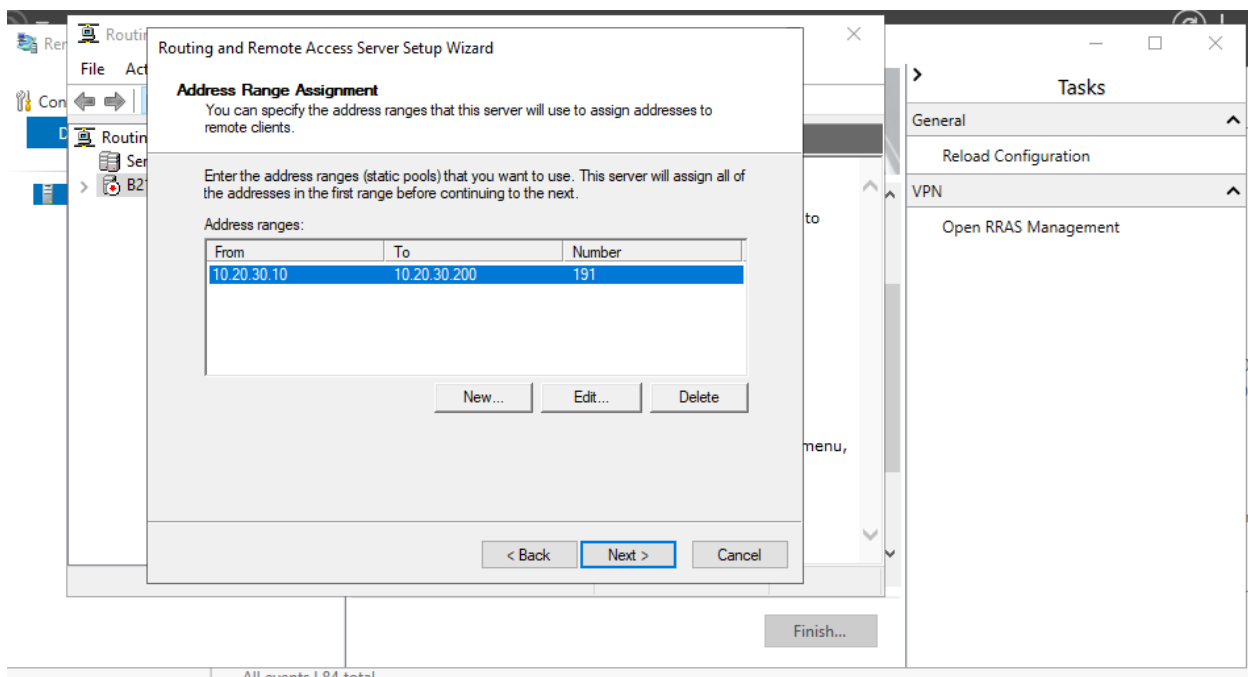
Step 1: Installing Remote Access role
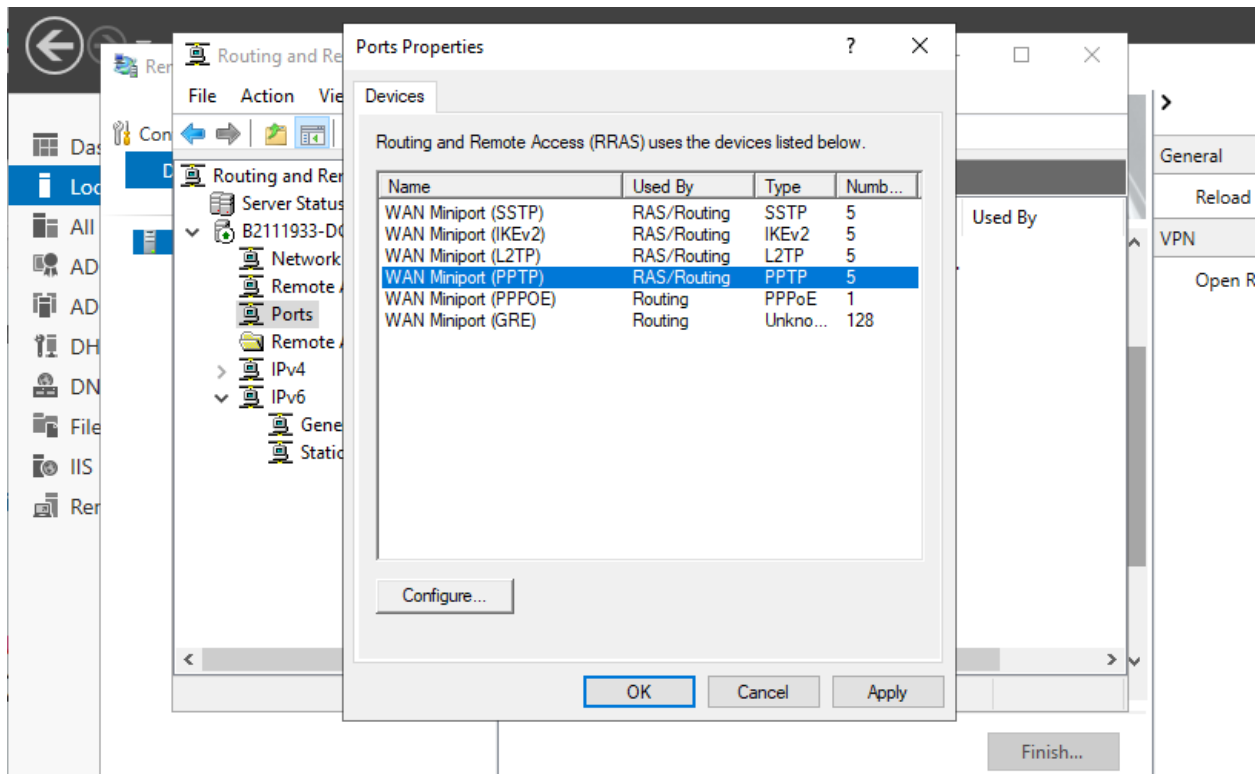

Install VPN with Routing

Step 2: Configure and Enable Routing and Remote Access on Server 2016

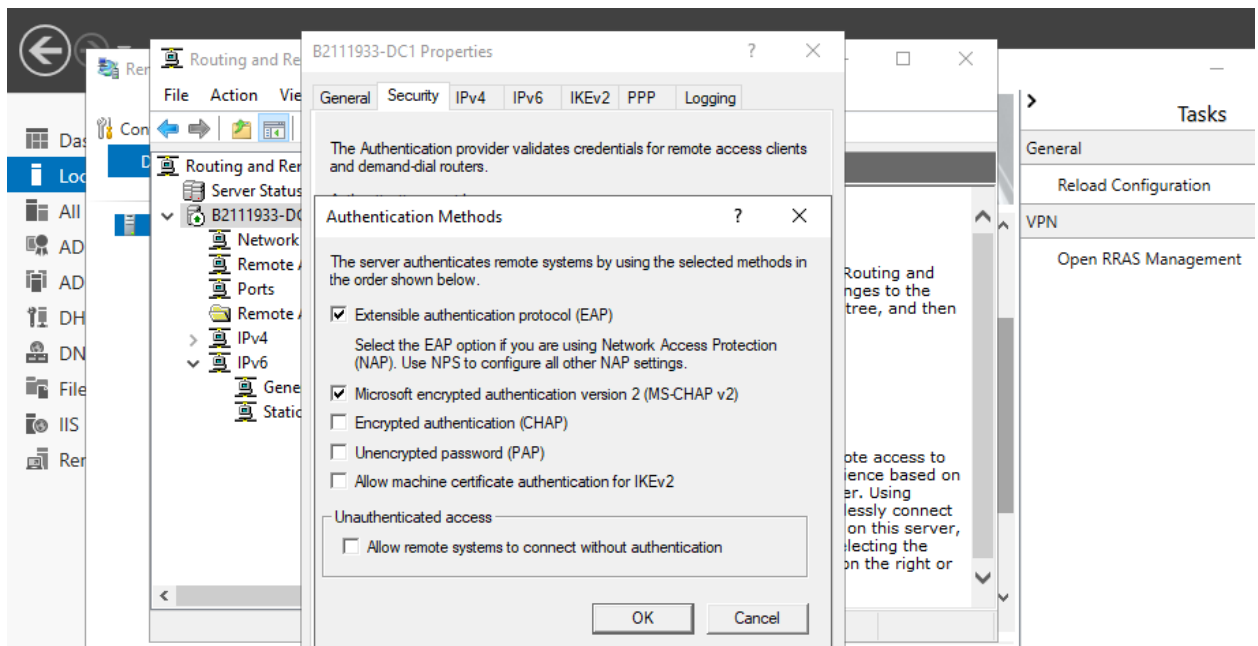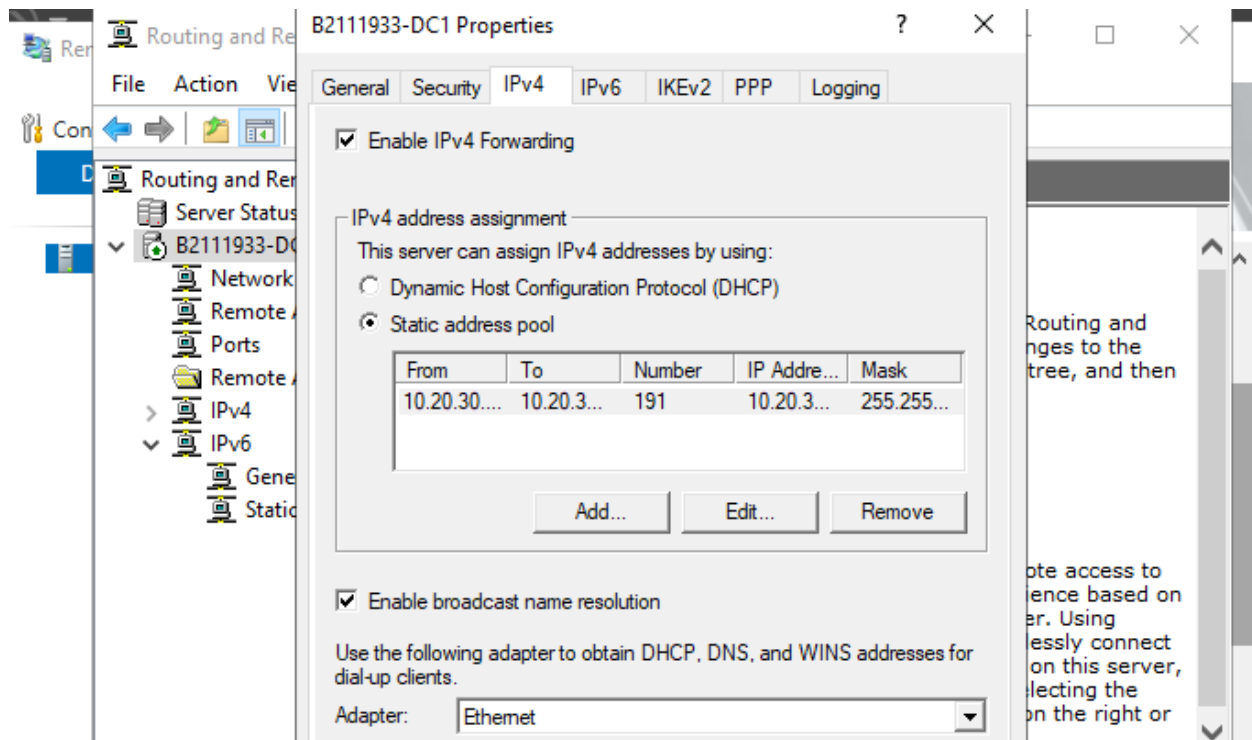Select Ethernet 2 for VPN

VPN IP range

Verify that 128 ports exist for SSTP, IKEv2, PPTP, and L2TP

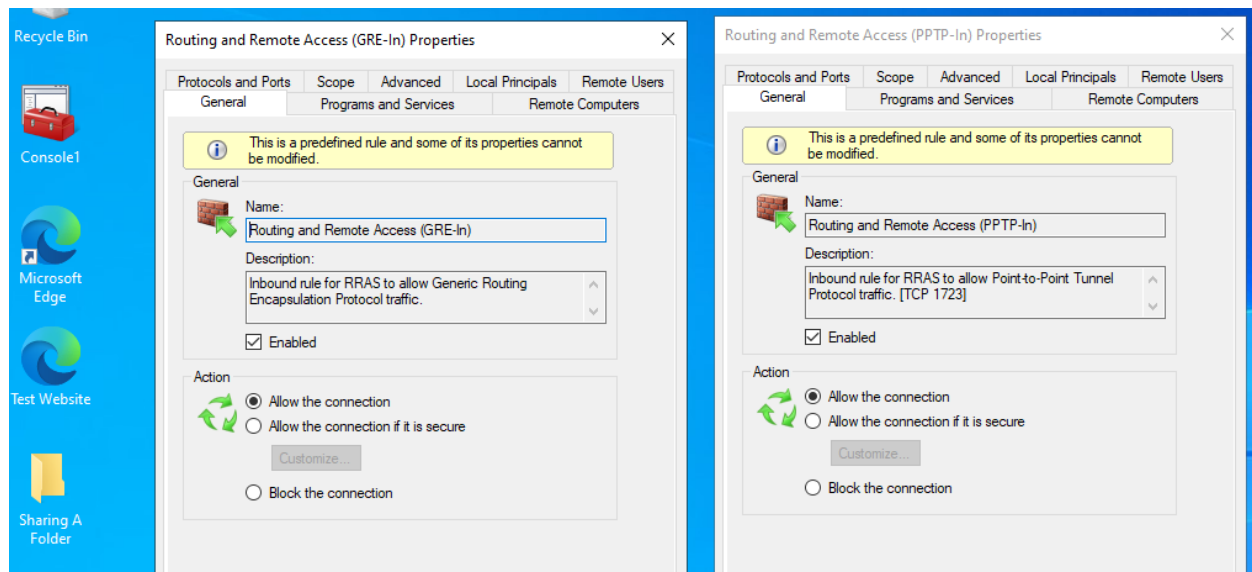Step 3: Configure VPN Server Settings (Security, IP Range, etc.)

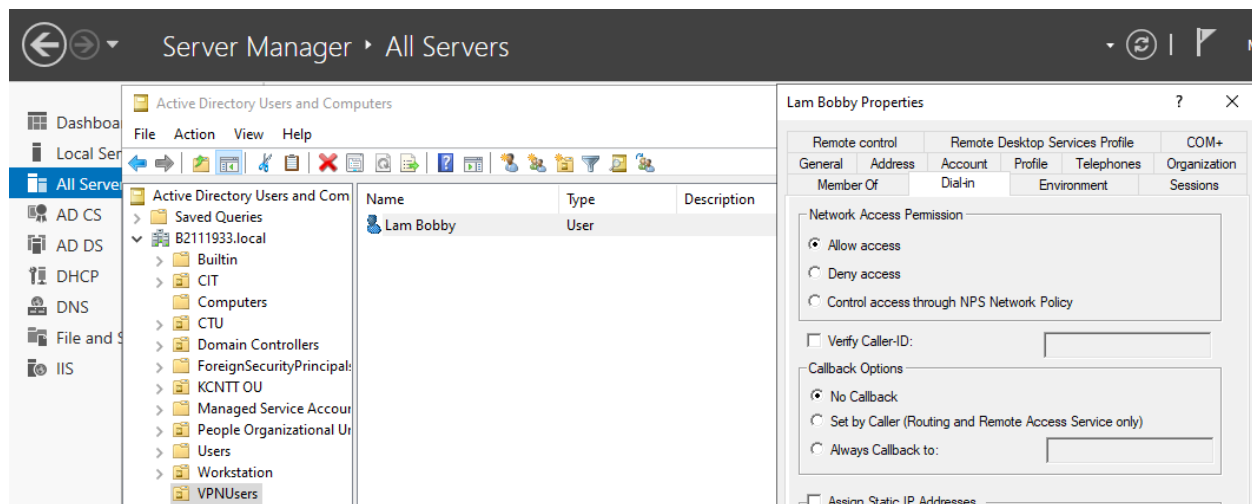Select MS-CHAP v2 in Authentication Methods

VPN Ipv4 range

Step 4: Allow Routing and Remote Access Inbound Traffic in Windows Firewall
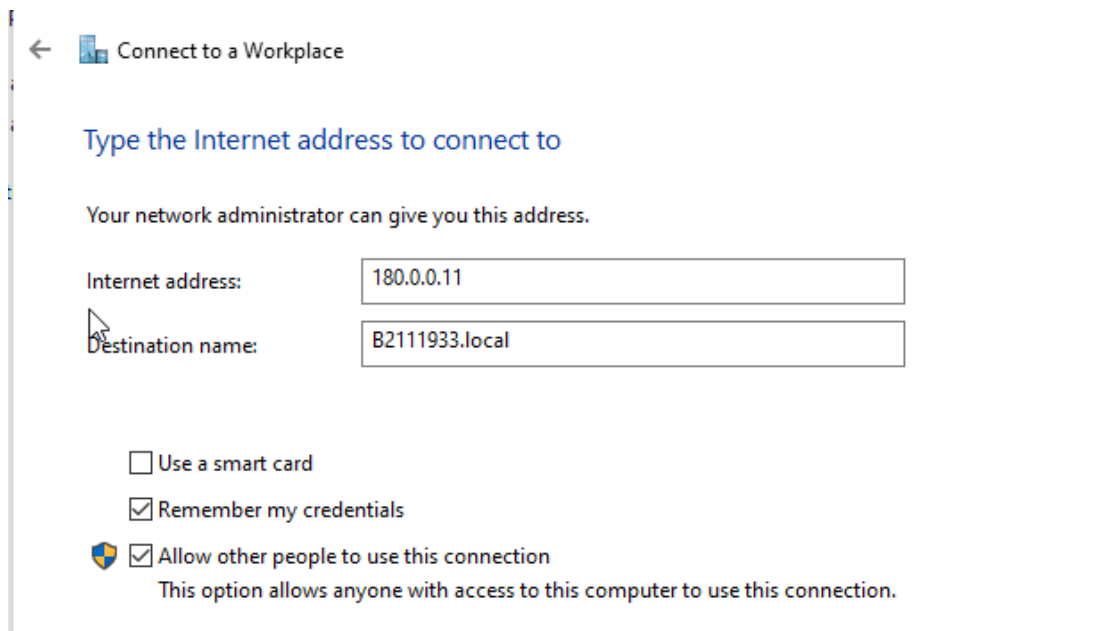

Config Inbound Traffic for Firewall to allow PPTP and GRE
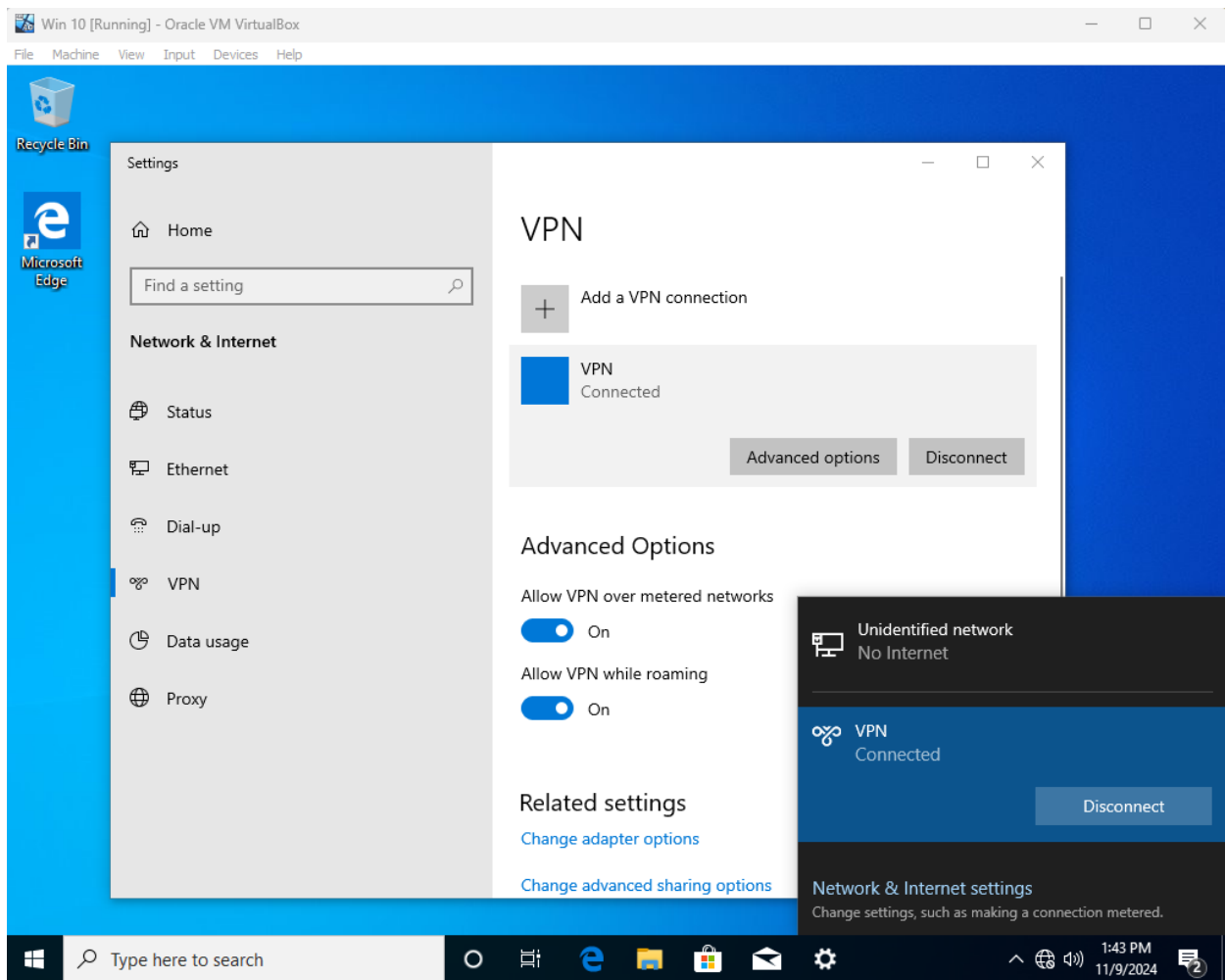
Step 5: Select which users will have VPN Access

Creating OU & Users for VPN

EXERCISE 3: SETUP VPN CONNECTION FOR CLIENT

Setup VPN connection for client

Connected to VPN

Check IP address of VPN

```
C:. Command Prompt

C:\Users\LS>tracert 172.35.10.11

Tracing route to 172.35.10.11 over a maximum of 30 hops

  1    <1 ms     <1 ms     <1 ms  10.20.30.10
  2     1 ms     <1 ms     <1 ms  172.35.10.11

Trace complete.

C:\Users\LS>_
```
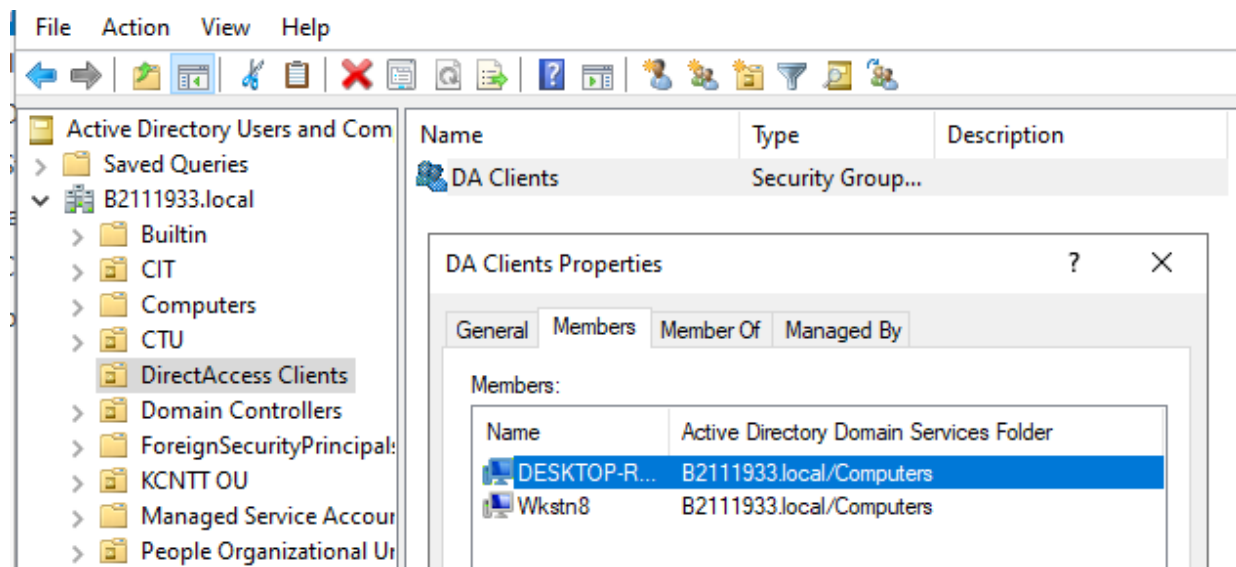
Test connectivity

It takes 2 hops to reach the destination 172.35.10.11 (the external card of the server).
The first hop is to 10.20.30.10 (the VPN gateway).
The VPN gateway will act as a bridge between the two networks.

EXERCISE 4: INSTALL AND CONFIGURE DIRECTACCESS

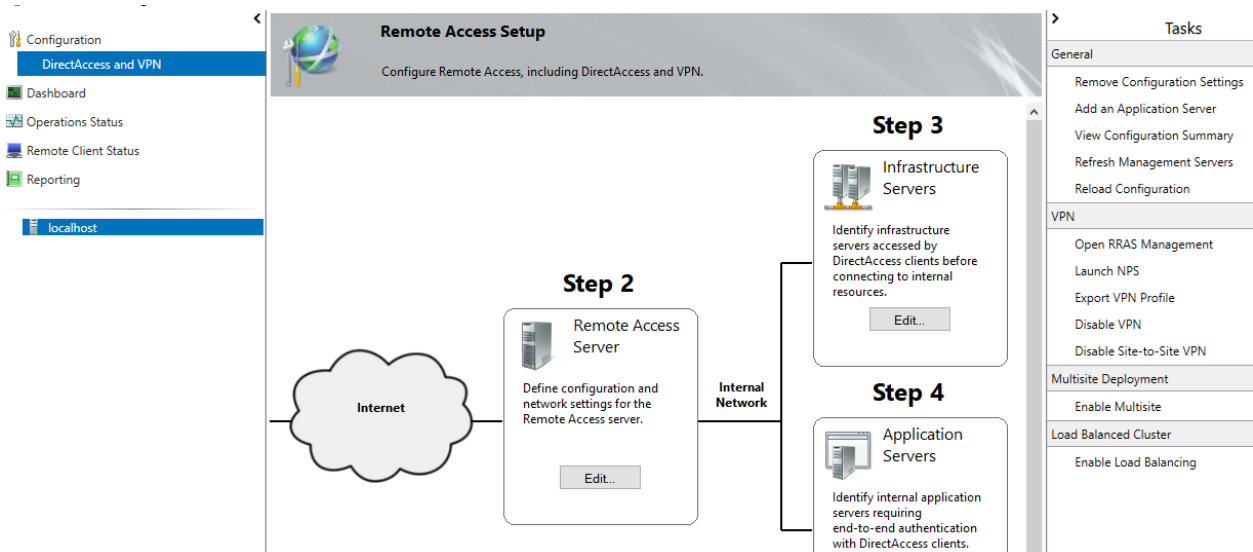## A. Creating DirectAccess OU & Group in Active Directory

Allow those computers to use DirectAccess services

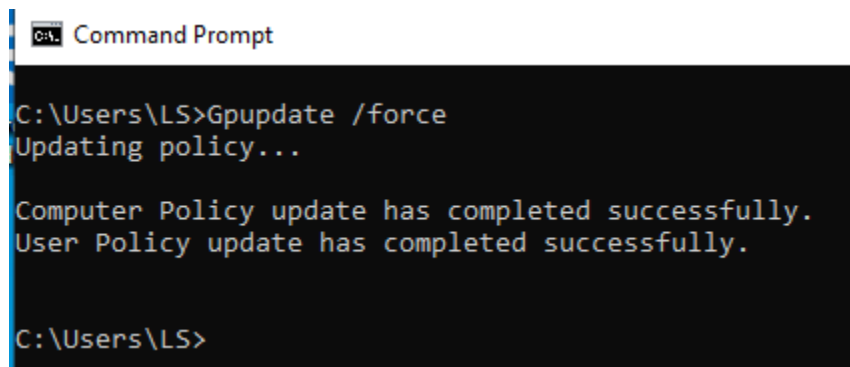## B. Installing the Remote Access server role

(Already done in Exercise 2)

C. Configure DirectAccess

Configure DirectAccess

D. Test Direct Access on the Windows Client

Update Group Policy on Client

Verify that DirectAccessClient GPO applied to the client

```
C:\Windows\system32>ipconfig

Windows IP Configuration


Ethernet adapter Ethernet:

   Connection-specific DNS Suffix  . :
   Link-local IPv6 Address . . . . . : fe80::ac86:e6e0:8558:ce6e%11
   IPv4 Address. . . . . . . . . . . : 180.0.0.31
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . . . . : 180.0.0.1

Tunnel adapter Microsoft IP-HTTPS Platform Interface:

   Connection-specific DNS Suffix  . :
   IPv6 Address. . . . . . . . . . . : 2002:b400:b:1000:9de7:b355:9044:7e66
   Temporary IPv6 Address. . . . . . : 2002:b400:b:1000:cc9b:d497:7ee:7c48
   Link-local IPv6 Address . . . . . : fe80::9de7:b355:9044:7e66%5
   Default Gateway . . . . . . . . . :

C:\Windows\system32>
```

Verify connectivity to the DirectAccess server.

The IPv6 address starts with **2002:** (IP-HTTPS address)