NETWORK INSTALLATION AND ADMINISTRATION I I

LAB ASSIGNMENT 1 (PART 1)- MANAGING AD DOMAINS, FORESTS, AND TRUSTS

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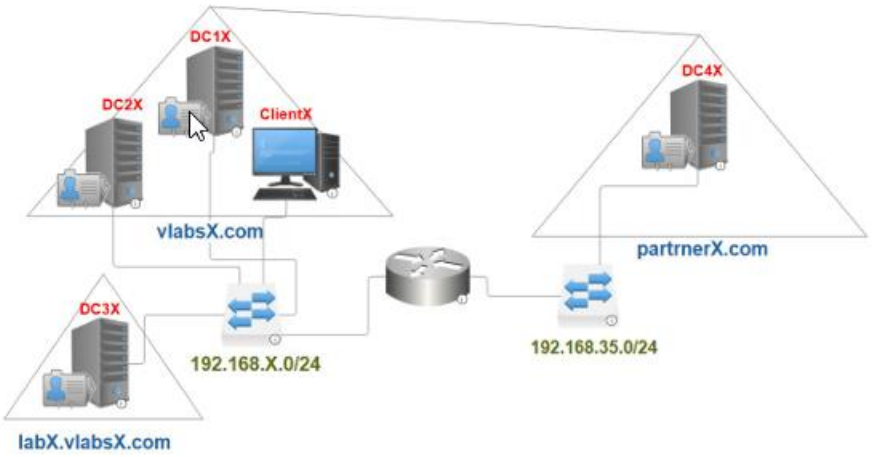
COLLEGE JOHNABBOTTE

Contents

Lab Overview

This lab provides guidance on best practices for configuring and managing Active Directory (AD) domains, forests, and trusts. In this lab, a multi-forest environment will be set up, DNS will be configured for communication, and trust relationships will be established.

Topology



My Lab Number in college is 9, So all X in the picture should be 9 .

Lab Requirements

- DC109 (Windows Server 2022): PDC for vlabs09.com
- DC209 (Windows Server 2025): RODC Core for vlabs09.com.
- DC309 (Windows Server 2022): Child DC for lab.vlabs09.com.
- DC409 (Windows Server 2025): New DC for partner09.com.
- Client09 (Windows 11): Domain-joined to vlabs09.com.
- Cisco-Router (CSR1000V): For routing between forests

Lab Assignment Preparation

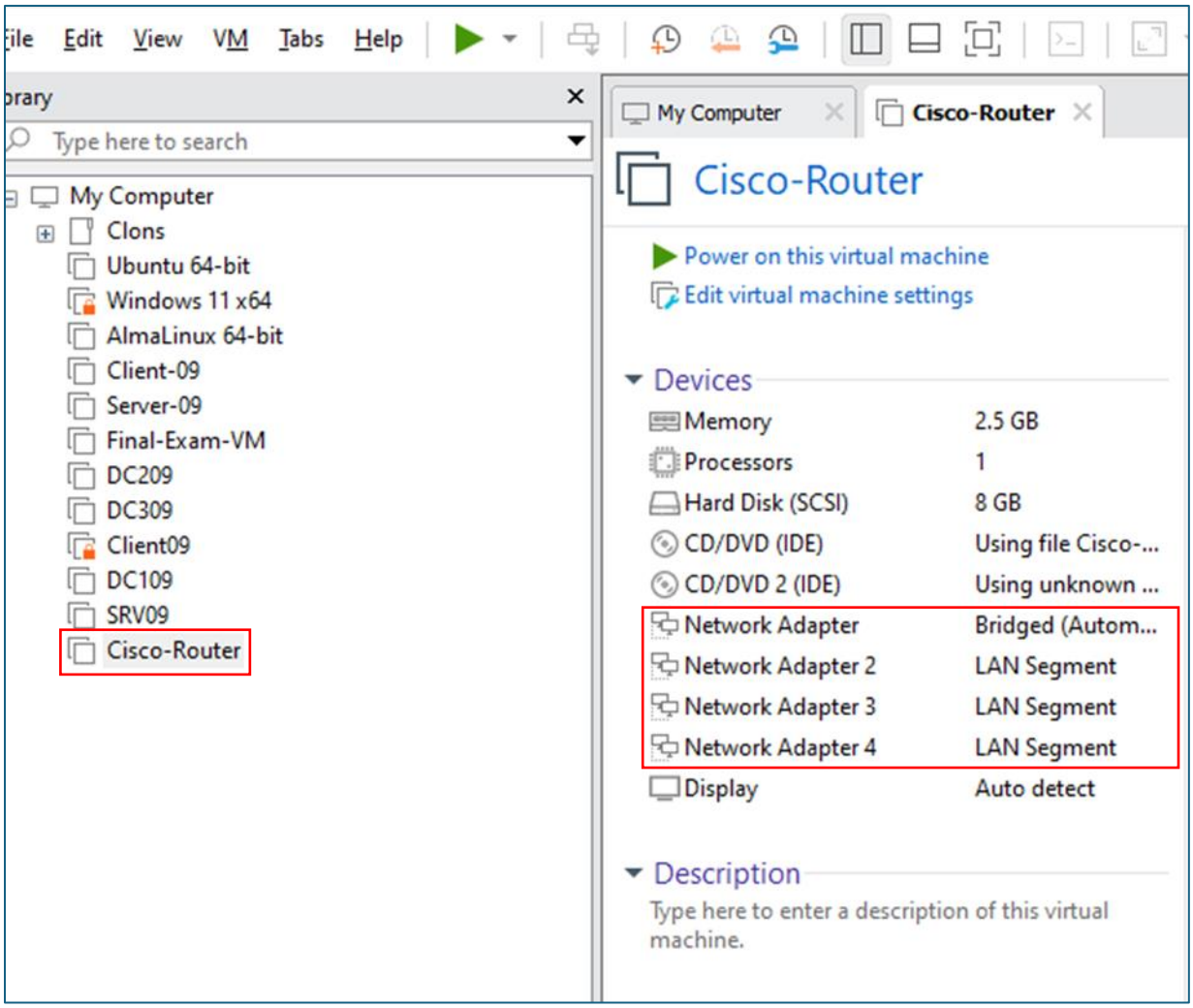
Task 1: Import Cisco Router VM

1. Download the Cisco-Router.ova file using the following link: Cisco Router VM

2. Import the Cisco-Router using the Cisco-Router.ova file.

3. Before starting the router, open the VM settings and make sure that:

- Network Adapter → Bridged
- Network Adapter 2 → LAN1
- Network Adapter 3 → LAN2
- Network Adapter 4 → LAN3



4. Start the Cisco-Router VM. Click inside the VM and press any key to continue. It will take a couple of minutes to boot. Just wait.

5. ait until it starts, type show ip int br to verify the IP address of the 4 NICs.

```
Press RETURN to get started!


Cisco-Router>sh ip int br
Interface              IP-Address      OK? Method Status                Protocol
GigabitEthernet1       192.168.25.50   YES NVRAM  up                    up
GigabitEthernet2       192.168.35.50   YES NVRAM  up                    up
GigabitEthernet3       192.168.45.50   YES NVRAM  up                    up
GigabitEthernet0       10.164.0.36     YES DHCP   up                    up
Cisco-Router>_
```

6. Verify the following:

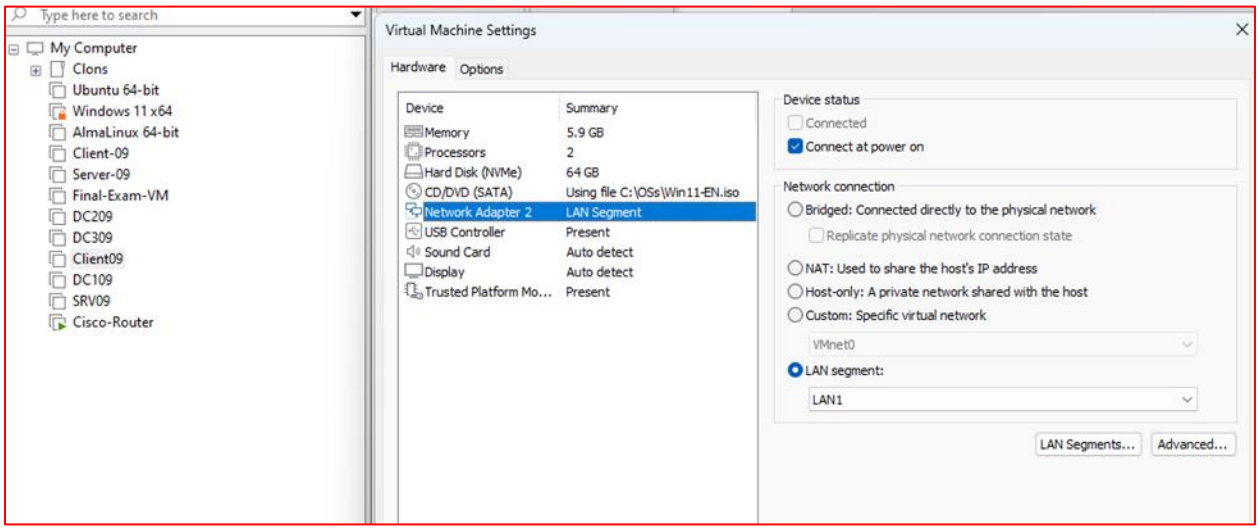
- GigabitEthernet1 has an address 192.168.25.50 → To Modify
- GigabitEthernet2 has an address 192.168.35.50 → Keep it as it is.
- GigabitEthernet3 has an address 192.168.45.50 → Keep it as it is.
- GigabitEthernet 0 has a Bridged address → Keep it as it is.

7. You need to modify this IP address of GigabitEthernet1 and use 192.168.X.50/24 (where X is your remote PC number).

```
Cisco-Router>en
Cisco-Router#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Cisco-Router(config)#int g1
Cisco-Router(config-if)#ip address 192.168.9.50 255.255.255.0
Cisco-Router(config-if)#end
Cisco-Router#wr
Building configuration...
[OK]
Cisco-Router#_
```

Task 2: Servers Configuration

1. Remove the card NAT from ClientXX (if it exists), just keep the Lan Segment LAN1.



2. Add the following Gateway IP on DC1XX, DC2XX, DC3XX and ClientXX:

- Gateway: 192.168.X.50

Note: Use this command to add the Gateway on DC2XX:

netsh interface ipv4 set address name="Ethernet0" static 192.168.25.2 255.255.255.0 192.168.25.50

```
Ethernet adapter Ethernet1:

   Connection-specific DNS Suffix  . :
   Link-local IPv6 Address . . . . . : fe80::ed:1314:306:a468%15
   IPv4 Address. . . . . . . . . . . : 192.168.9.1
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . . . . :
PS C:\Users\Administrator> netsh interface ipv4 set address name="Ethernet1" static 192.168.9.1 255.255.255.0 192.168.9.50

PS C:\Users\Administrator> ipconfig

Windows IP Configuration


Ethernet adapter Ethernet1:

   Connection-specific DNS Suffix  . :
   Link-local IPv6 Address . . . . . : fe80::ed:1314:306:a468%15
   IPv4 Address. . . . . . . . . . . : 192.168.9.1
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . . . . : 192.168.9.50
PS C:\Users\Administrator>
```

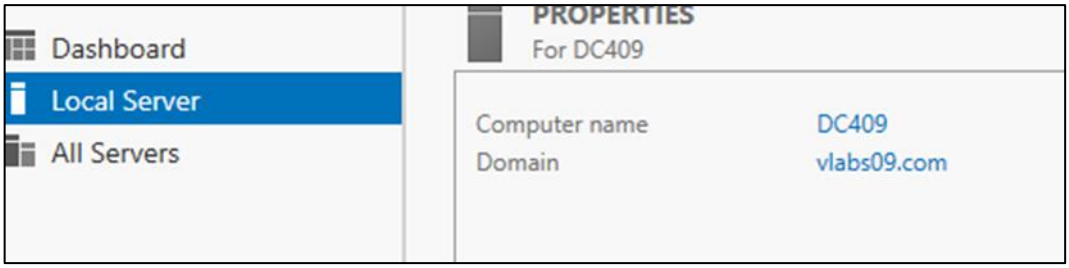
```
Ethernet adapter Ethernet0:

   Connection-specific DNS Suffix  . :
   Link-local IPv6 Address . . . . . : fe80::45b3:9cb:83b:83a8%14
   IPv4 Address. . . . . . . . . . . : 192.168.9.3
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . . . . : 192.168.9.1
PS C:\Users\Administrator> netsh interface ipv4 set address name="Ethernet0" static 192.168.9.3 255.255.255.0 192.168.9.
50

PS C:\Users\Administrator> ipconfig

Windows IP Configuration


Ethernet adapter Ethernet0:

   Connection-specific DNS Suffix  . :
   Link-local IPv6 Address . . . . . : fe80::45b3:9cb:83b:83a8%14
   IPv4 Address. . . . . . . . . . . : 192.168.9.3
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . . . . : 192.168.9.50
PS C:\Users\Administrator>
```

```
Administrator: Windows Powe

PS C:\Users\Administrator.CLIENT09> hostname
Client09
PS C:\Users\Administrator.CLIENT09> ipconfig

Windows IP Configuration


Ethernet adapter Ethernet1:

   Connection-specific DNS Suffix  . :
   Link-local IPv6 Address . . . . . : fe80::d9a5:8769:bb28:ac01%6
   IPv4 Address. . . . . . . . . . . : 192.168.9.100
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . . . . : 192.168.9.1
PS C:\Users\Administrator.CLIENT09> netsh interface ipv4 set address name="Ethernet1" static 192.168.9.100 255.255.255.0
 192.168.9.50

PS C:\Users\Administrator.CLIENT09> ipconfig

Windows IP Configuration


Ethernet adapter Ethernet1:

   Connection-specific DNS Suffix  . :
   Link-local IPv6 Address . . . . . : fe80::d9a5:8769:bb28:ac01%6
   IPv4 Address. . . . . . . . . . . : 192.168.9.100
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . . . . : 192.168.9.50
PS C:\Users\Administrator.CLIENT09>
```

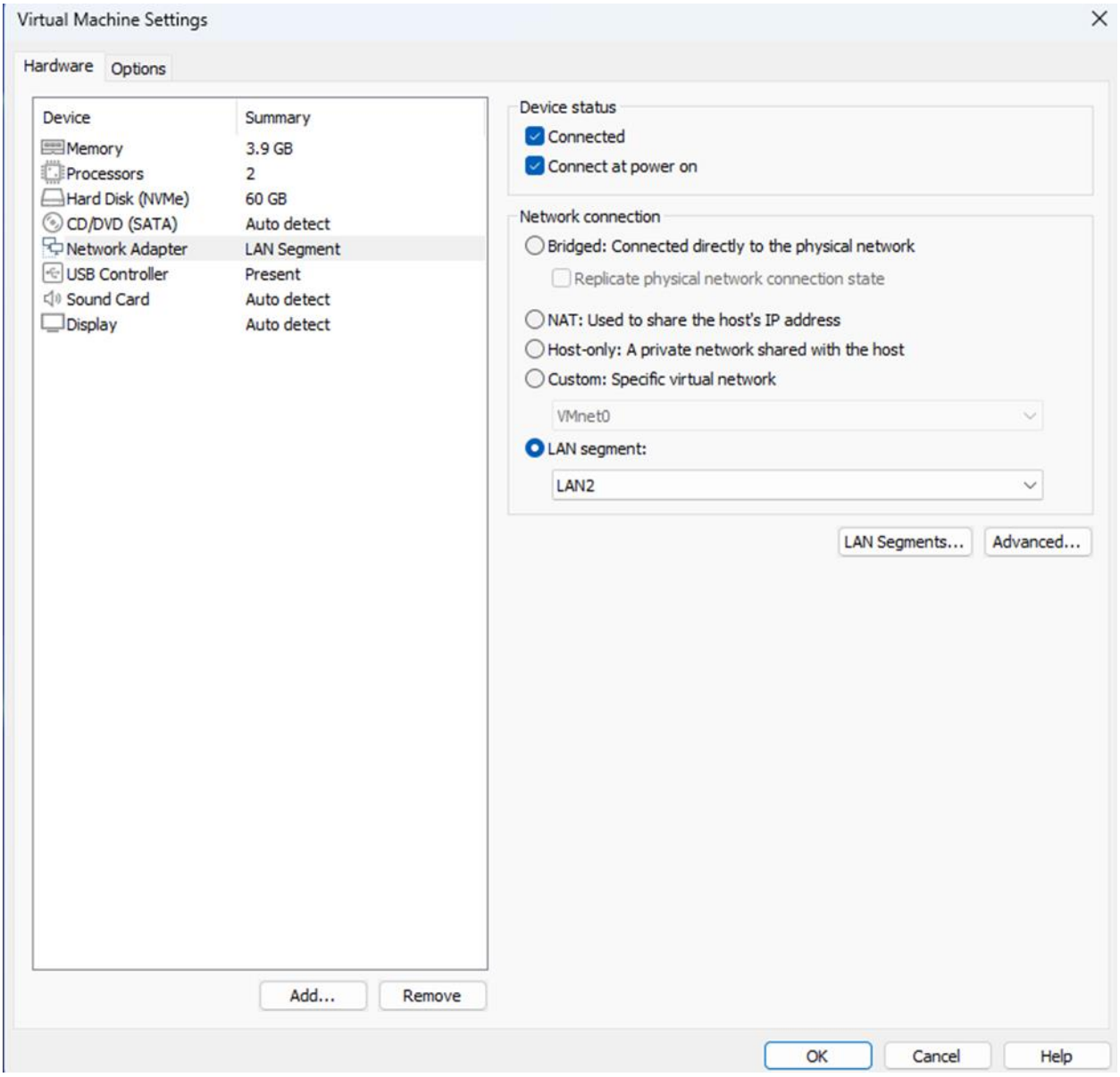
```
PS C:\Users\Administrator.VLABS09> hostname
DC209
PS C:\Users\Administrator.VLABS09> ipconfig

Windows IP Configuration


Ethernet adapter Ethernet1:

   Connection-specific DNS Suffix  . :
   Link-local IPv6 Address . . . . . : fe80::1863:1319:48cc:b44f%3
   IPv4 Address. . . . . . . . . . . : 192.168.9.2
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . . . . : 192.168.9.1
PS C:\Users\Administrator.VLABS09> netsh interface ipv4 set address name="Ethernet1" static 192.168.9.2 255.255.255.0 192.168.9.50

PS C:\Users\Administrator.VLABS09> ipconfig

Windows IP Configuration


Ethernet adapter Ethernet1:

   Connection-specific DNS Suffix  . :
   Link-local IPv6 Address . . . . . : fe80::1863:1319:48cc:b44f%3
   Default Gateway . . . . . . . . . : 192.168.9.50
PS C:\Users\Administrator.VLABS09> ipconfig

Windows IP Configuration


Ethernet adapter Ethernet1:

   Connection-specific DNS Suffix  . :
   Link-local IPv6 Address . . . . . : fe80::1863:1319:48cc:b44f%3
   IPv4 Address. . . . . . . . . . . : 192.168.9.2
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . . . . : 192.168.9.50
PS C:\Users\Administrator.VLABS09>
```

3. SRVXX: Windows Server 2025 Core Desktop

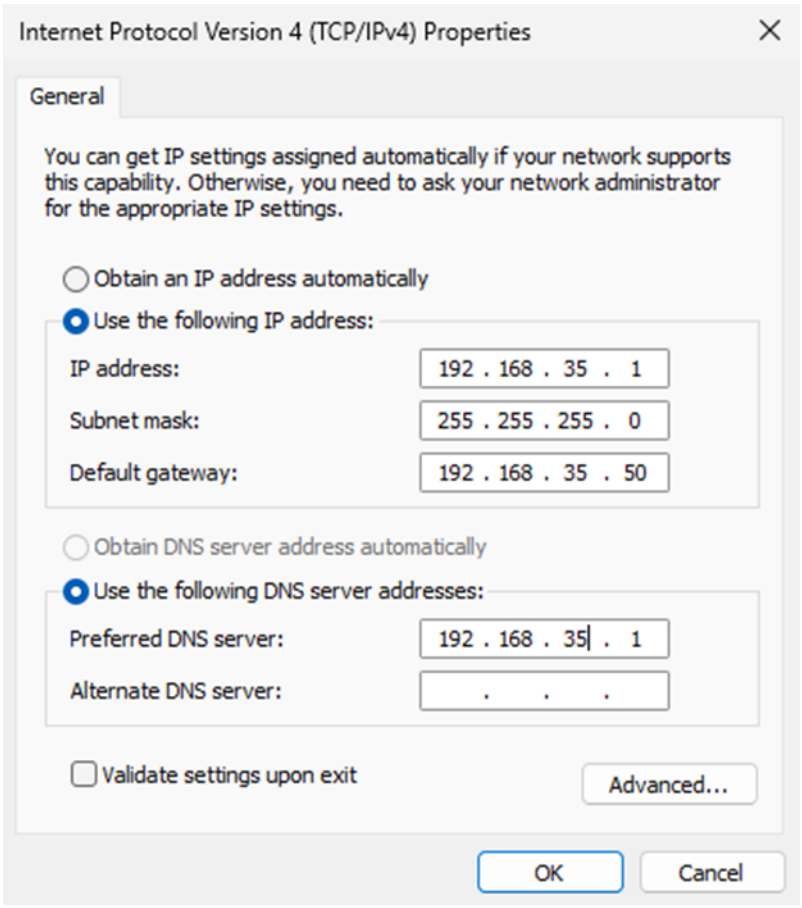
- First, rename SRVXX to DC4XX and restart the VM.



- Modify the Network Adapter → LAN2

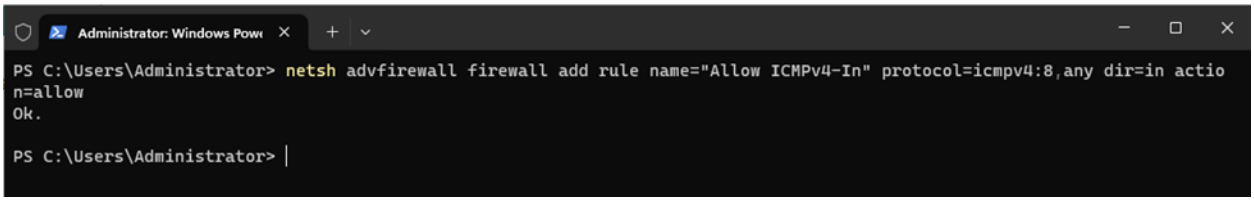


- Set IP 192.168.35.1/24
- Set Primary DNS: 192.168.35.1
- Set Gateway: 192.168.35.50



- Enable ping using the following command:

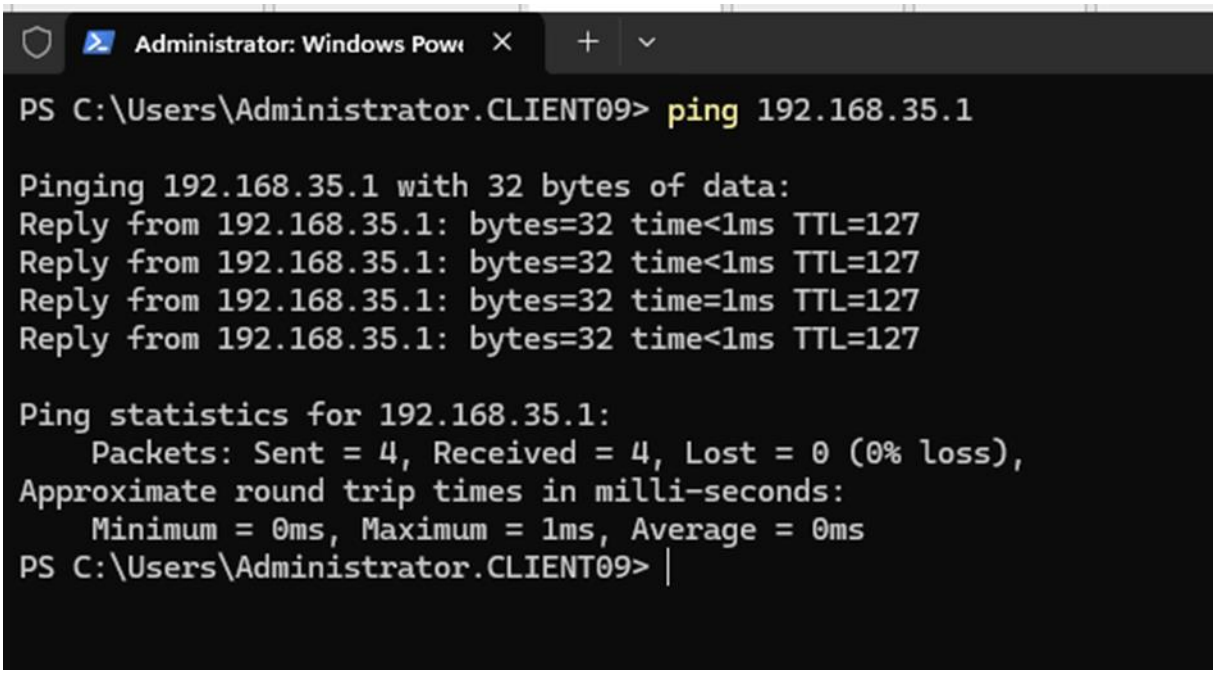
netsh advfirewall firewall add rule name="Allow ICMPv4-In" protocol=icmpv4:8,any dir=in action=allow

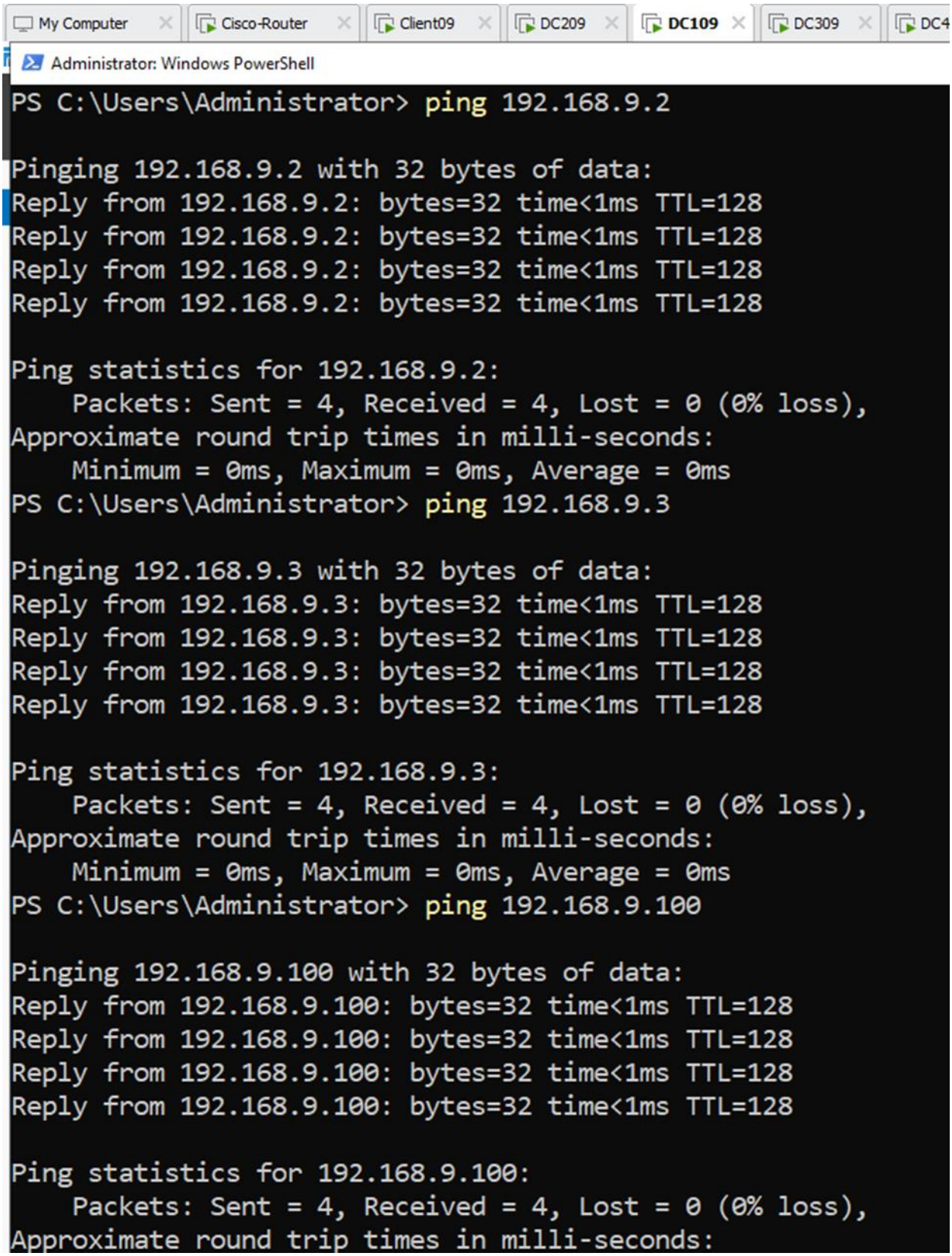


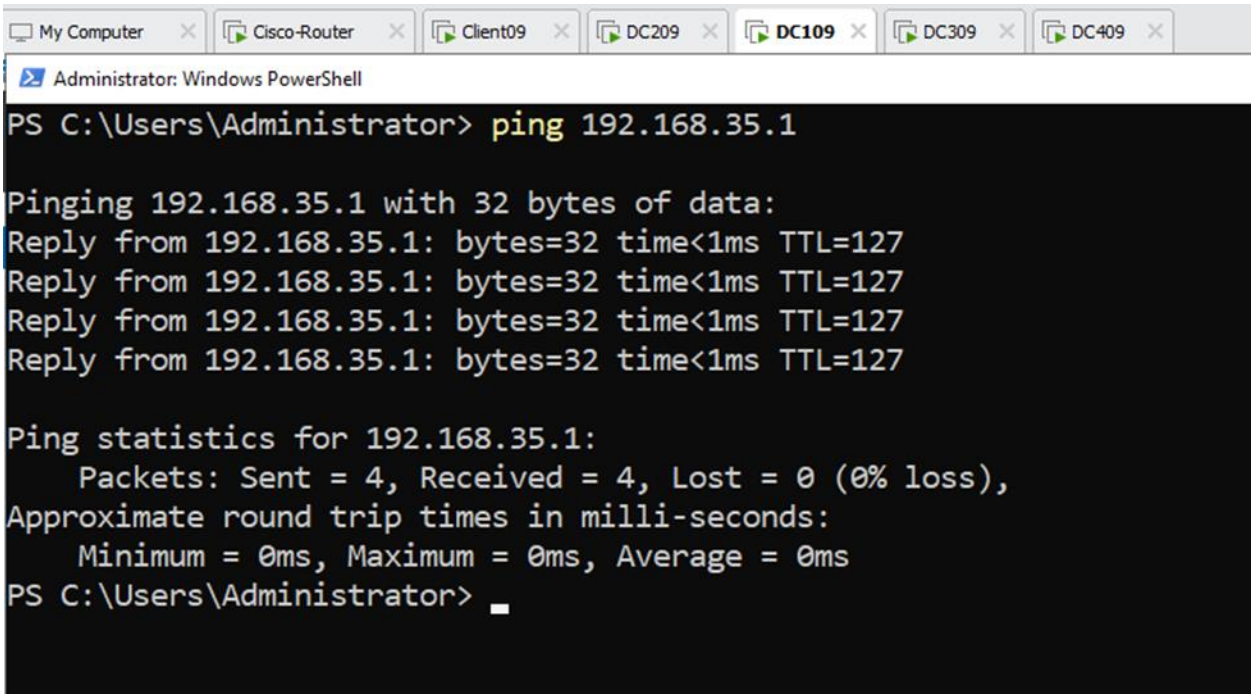
4. Test network connectivity

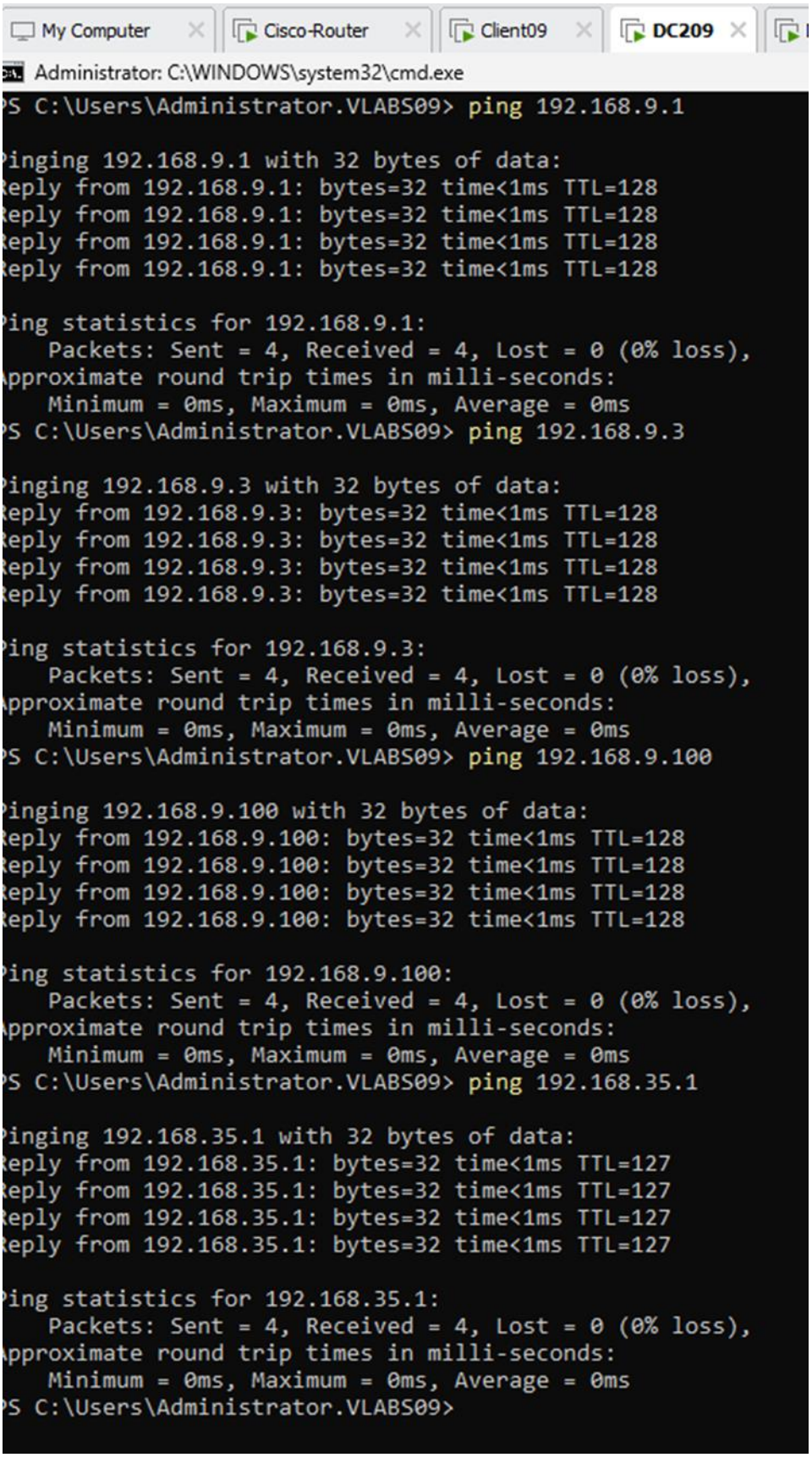
- Verify the ping between DC1XX, DC2XX, DC3XX, DC4XX, and ClientXX

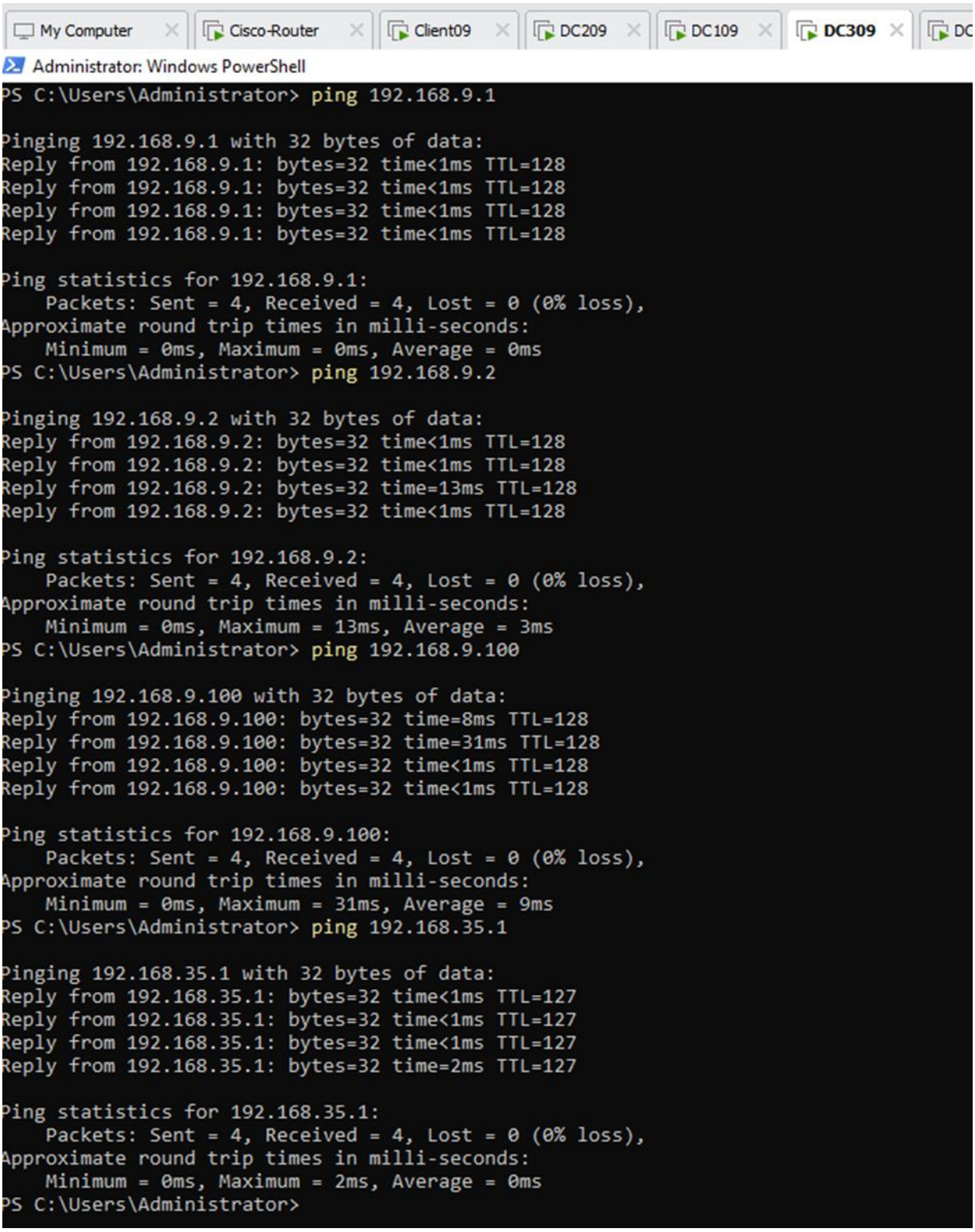
```
PS C:\Users\Administrator.CLIENT09> ping 192.168.9.1

Pinging 192.168.9.1 with 32 bytes of data:
Reply from 192.168.9.1: bytes=32 time<1ms TTL=128
Reply from 192.168.9.1: bytes=32 time<1ms TTL=128
Reply from 192.168.9.1: bytes=32 time<1ms TTL=128
Reply from 192.168.9.1: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.9.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
PS C:\Users\Administrator.CLIENT09> ping 192.168.9.2

Pinging 192.168.9.2 with 32 bytes of data:
Reply from 192.168.9.2: bytes=32 time<1ms TTL=128
Reply from 192.168.9.2: bytes=32 time<1ms TTL=128
Reply from 192.168.9.2: bytes=32 time<1ms TTL=128
Reply from 192.168.9.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.9.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
PS C:\Users\Administrator.CLIENT09> ping 192.168.9.3

Pinging 192.168.9.3 with 32 bytes of data:
Reply from 192.168.9.3: bytes=32 time<1ms TTL=128
Reply from 192.168.9.3: bytes=32 time<1ms TTL=128
Reply from 192.168.9.3: bytes=32 time<1ms TTL=128
Reply from 192.168.9.3: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.9.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
PS C:\Users\Administrator.CLIENT09>
```

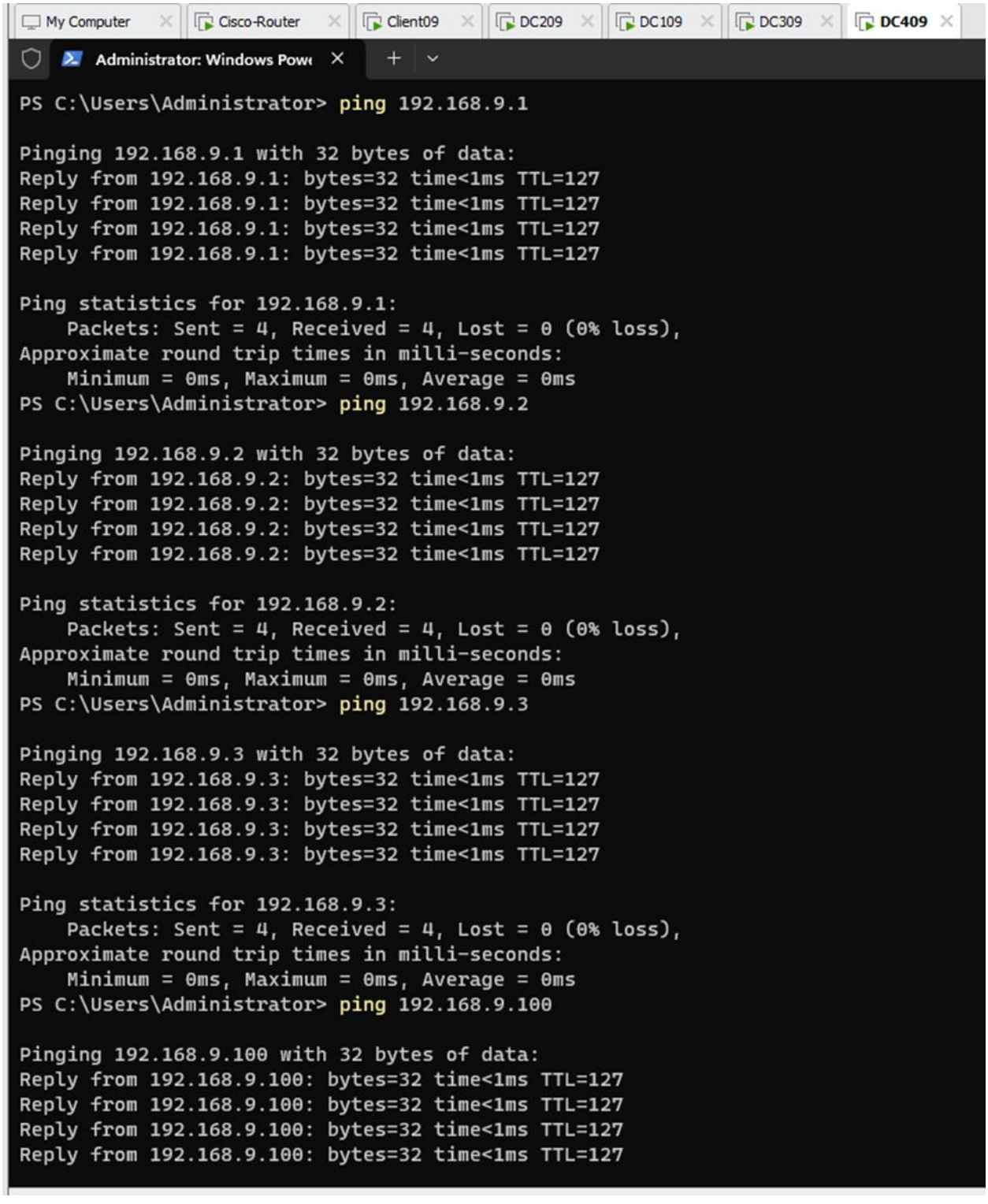

Administrator: Windows Powe
PS C:\Users\Administrator.CLIENT09> ping 192.168.35.1
Pinging 192.168.35.1 with 32 bytes of data:
Reply from 192.168.35.1: bytes=32 time<1ms TTL=127
Reply from 192.168.35.1: bytes=32 time<1ms TTL=127
Reply from 192.168.35.1: bytes=32 time=1ms TTL=127
Reply from 192.168.35.1: bytes=32 time<1ms TTL=127
Ping statistics for 192.168.35.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 1ms, Average = 0ms
PS C:\Users\Administrator.CLIENT09>


My Computer
Cisco-Router
Client09
DC209
DC109
DC309
DC4
Administrator: Windows PowerShell
PS C:\Users\Administrator> ping 192.168.9.2
Pinging 192.168.9.2 with 32 bytes of data:
Reply from 192.168.9.2: bytes=32 time<1ms TTL=128
Reply from 192.168.9.2: bytes=32 time<1ms TTL=128
Reply from 192.168.9.2: bytes=32 time<1ms TTL=128
Reply from 192.168.9.2: bytes=32 time<1ms TTL=128
Ping statistics for 192.168.9.2:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
PS C:\Users\Administrator> ping 192.168.9.3
Pinging 192.168.9.3 with 32 bytes of data:
Reply from 192.168.9.3: bytes=32 time<1ms TTL=128
Reply from 192.168.9.3: bytes=32 time<1ms TTL=128
Reply from 192.168.9.3: bytes=32 time<1ms TTL=128
Reply from 192.168.9.3: bytes=32 time<1ms TTL=128
Ping statistics for 192.168.9.3:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
PS C:\Users\Administrator> ping 192.168.9.100
Pinging 192.168.9.100 with 32 bytes of data:
Reply from 192.168.9.100: bytes=32 time<1ms TTL=128
Reply from 192.168.9.100: bytes=32 time<1ms TTL=128
Reply from 192.168.9.100: bytes=32 time<1ms TTL=128
Reply from 192.168.9.100: bytes=32 time<1ms TTL=128
Ping statistics for 192.168.9.100:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:


My Computer
Cisco-Router
Client09
DC209
DC109
DC309
DC409
Administrator: Windows PowerShell
PS C:\Users\Administrator> ping 192.168.35.1
Pinging 192.168.35.1 with 32 bytes of data:
Reply from 192.168.35.1: bytes=32 time<1ms TTL=127
Reply from 192.168.35.1: bytes=32 time<1ms TTL=127
Reply from 192.168.35.1: bytes=32 time<1ms TTL=127
Reply from 192.168.35.1: bytes=32 time<1ms TTL=127
Ping statistics for 192.168.35.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
PS C:\Users\Administrator>


My Computer
Cisco-Router
Client09
DC209
Administrator: C:\WINDOWS\system32\cmd.exe
S C:\Users\Administrator.VLABS09> ping 192.168.9.1
inging 192.168.9.1 with 32 bytes of data:
eply from 192.168.9.1: bytes=32 time<1ms TTL=128
eply from 192.168.9.1: bytes=32 time<1ms TTL=128
eply from 192.168.9.1: bytes=32 time<1ms TTL=128
eply from 192.168.9.1: bytes=32 time<1ms TTL=128
ing statistics for 192.168.9.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
pproximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
S C:\Users\Administrator.VLABS09> ping 192.168.9.3
inging 192.168.9.3 with 32 bytes of data:
eply from 192.168.9.3: bytes=32 time<1ms TTL=128
eply from 192.168.9.3: bytes=32 time<1ms TTL=128
eply from 192.168.9.3: bytes=32 time<1ms TTL=128
eply from 192.168.9.3: bytes=32 time<1ms TTL=128
ing statistics for 192.168.9.3:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
pproximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
S C:\Users\Administrator.VLABS09> ping 192.168.9.100
inging 192.168.9.100 with 32 bytes of data:
eply from 192.168.9.100: bytes=32 time<1ms TTL=128
eply from 192.168.9.100: bytes=32 time<1ms TTL=128
eply from 192.168.9.100: bytes=32 time<1ms TTL=128
eply from 192.168.9.100: bytes=32 time<1ms TTL=128
ing statistics for 192.168.9.100:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
pproximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
S C:\Users\Administrator.VLABS09> ping 192.168.35.1
inging 192.168.35.1 with 32 bytes of data:
eply from 192.168.35.1: bytes=32 time<1ms TTL=127
eply from 192.168.35.1: bytes=32 time<1ms TTL=127
eply from 192.168.35.1: bytes=32 time<1ms TTL=127
eply from 192.168.35.1: bytes=32 time<1ms TTL=127
ing statistics for 192.168.35.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
pproximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
S C:\Users\Administrator.VLABS09>


My Computer
Cisco-Router
Client09
DC209
DC109
DC309
Administrator: Windows PowerShell
PS C:\Users\Administrator> ping 192.168.9.1
Pinging 192.168.9.1 with 32 bytes of data:
Reply from 192.168.9.1: bytes=32 time<1ms TTL=128
Reply from 192.168.9.1: bytes=32 time<1ms TTL=128
Reply from 192.168.9.1: bytes=32 time<1ms TTL=128
Reply from 192.168.9.1: bytes=32 time<1ms TTL=128
Ping statistics for 192.168.9.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
PS C:\Users\Administrator> ping 192.168.9.2
Pinging 192.168.9.2 with 32 bytes of data:
Reply from 192.168.9.2: bytes=32 time<1ms TTL=128
Reply from 192.168.9.2: bytes=32 time<1ms TTL=128
Reply from 192.168.9.2: bytes=32 time=13ms TTL=128
Reply from 192.168.9.2: bytes=32 time<1ms TTL=128
Ping statistics for 192.168.9.2:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 13ms, Average = 3ms
PS C:\Users\Administrator> ping 192.168.9.100
Pinging 192.168.9.100 with 32 bytes of data:
Reply from 192.168.9.100: bytes=32 time=8ms TTL=128
Reply from 192.168.9.100: bytes=32 time=31ms TTL=128
Reply from 192.168.9.100: bytes=32 time<1ms TTL=128
Reply from 192.168.9.100: bytes=32 time<1ms TTL=128
Ping statistics for 192.168.9.100:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 31ms, Average = 9ms
PS C:\Users\Administrator> ping 192.168.35.1
Pinging 192.168.35.1 with 32 bytes of data:
Reply from 192.168.35.1: bytes=32 time<1ms TTL=127
Reply from 192.168.35.1: bytes=32 time<1ms TTL=127
Reply from 192.168.35.1: bytes=32 time<1ms TTL=127
Reply from 192.168.35.1: bytes=32 time=2ms TTL=127
Ping statistics for 192.168.35.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 2ms, Average = 0ms
PS C:\Users\Administrator>


My Computer
Cisco-Router
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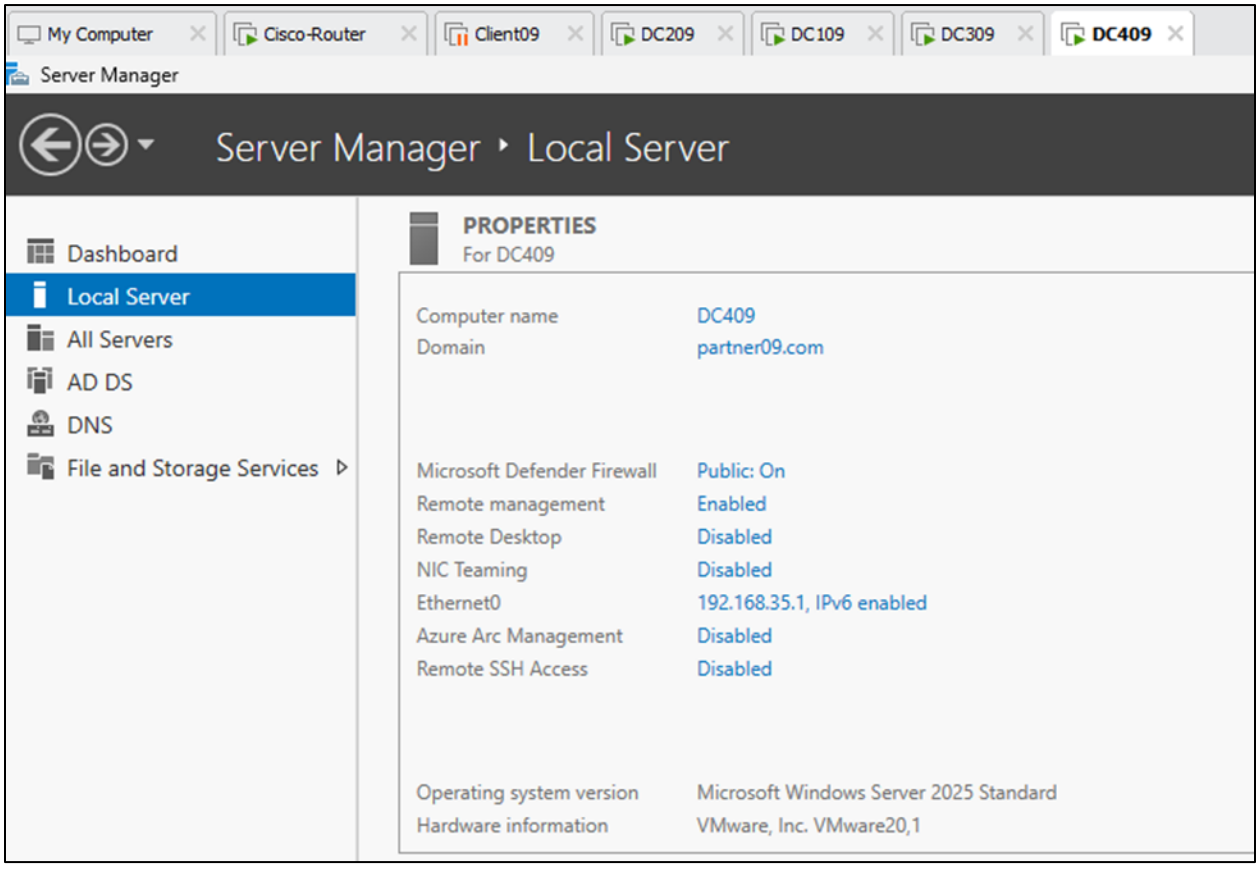
DC409
Administrator: Windows Powe
PS C:\Users\Administrator> ping 192.168.9.1
Pinging 192.168.9.1 with 32 bytes of data:
Reply from 192.168.9.1: bytes=32 time<1ms TTL=127
Reply from 192.168.9.1: bytes=32 time<1ms TTL=127
Reply from 192.168.9.1: bytes=32 time<1ms TTL=127
Reply from 192.168.9.1: bytes=32 time<1ms TTL=127
Ping statistics for 192.168.9.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
PS C:\Users\Administrator> ping 192.168.9.2
Pinging 192.168.9.2 with 32 bytes of data:
Reply from 192.168.9.2: bytes=32 time<1ms TTL=127
Reply from 192.168.9.2: bytes=32 time<1ms TTL=127
Reply from 192.168.9.2: bytes=32 time<1ms TTL=127
Reply from 192.168.9.2: bytes=32 time<1ms TTL=127
Ping statistics for 192.168.9.2:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
PS C:\Users\Administrator> ping 192.168.9.3
Pinging 192.168.9.3 with 32 bytes of data:
Reply from 192.168.9.3: bytes=32 time<1ms TTL=127
Reply from 192.168.9.3: bytes=32 time<1ms TTL=127
Reply from 192.168.9.3: bytes=32 time<1ms TTL=127
Reply from 192.168.9.3: bytes=32 time<1ms TTL=127
Ping statistics for 192.168.9.3:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
PS C:\Users\Administrator> ping 192.168.9.100
Pinging 192.168.9.100 with 32 bytes of data:
Reply from 192.168.9.100: bytes=32 time<1ms TTL=127
Reply from 192.168.9.100: bytes=32 time<1ms TTL=127
Reply from 192.168.9.100: bytes=32 time<1ms TTL=127
Reply from 192.168.9.100: bytes=32 time<1ms TTL=127

LAB Tasks

Task 1: Promote DC409 as a New Domain Controller in a New Forest

1. Promote DC409 as a new DC in a New Forest named partner09.com using GUI

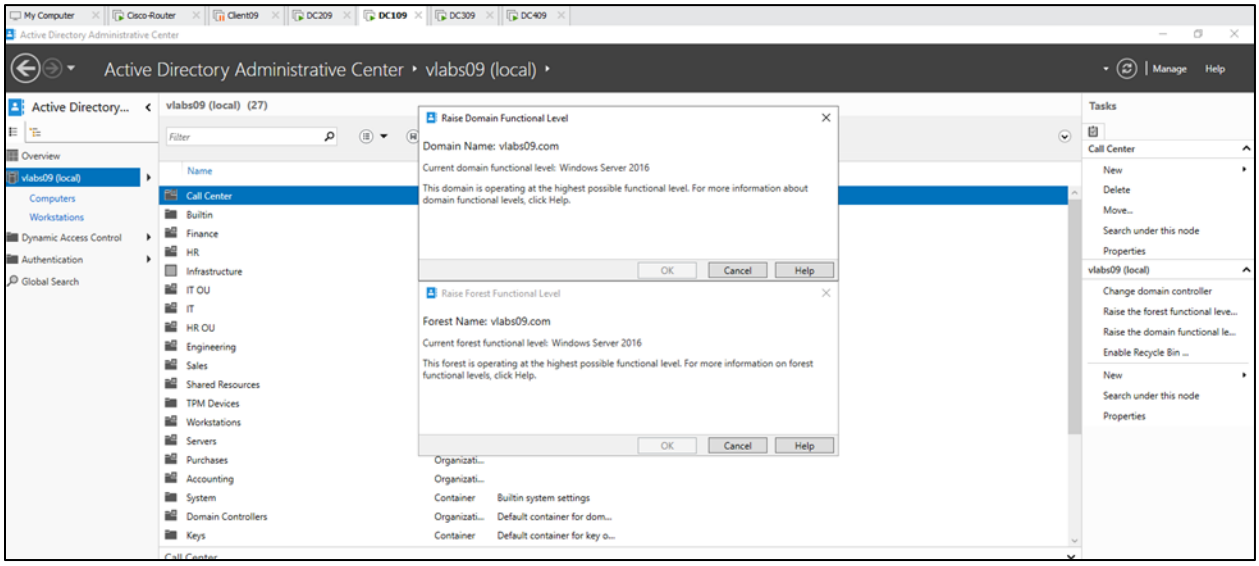
- Install AD DS role on DC409.
- Create a new forest partner09.com.



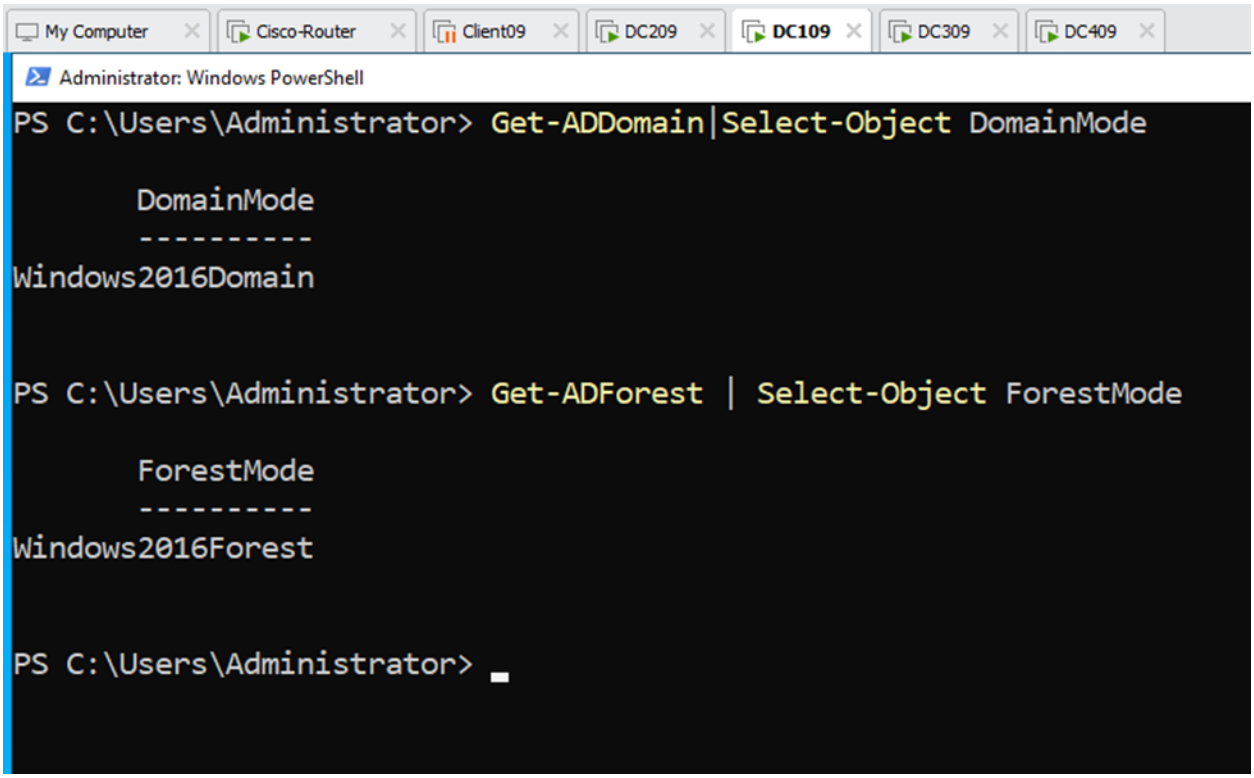
Task 2: Verify Domain and Forest Functional Levels

1. Check the Domain and Forest Functional Levels on vlabs09.com

- Using Active Directory Administrative Center

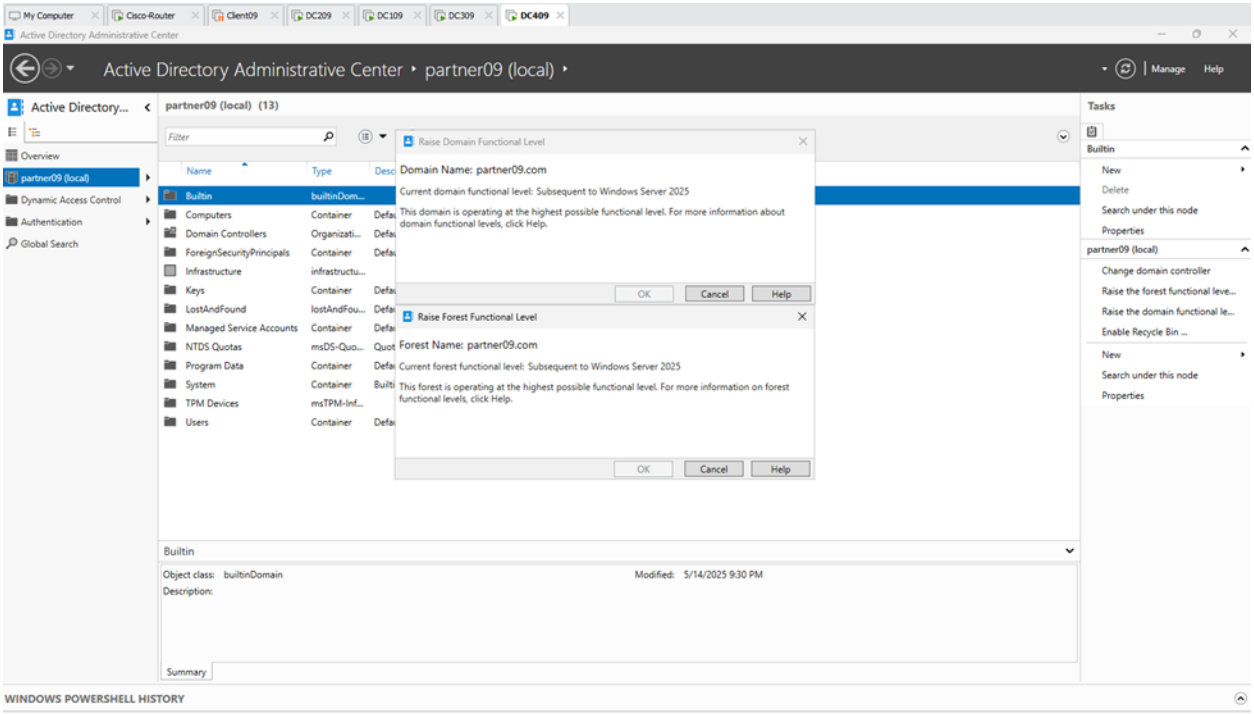


- Using PowerShell

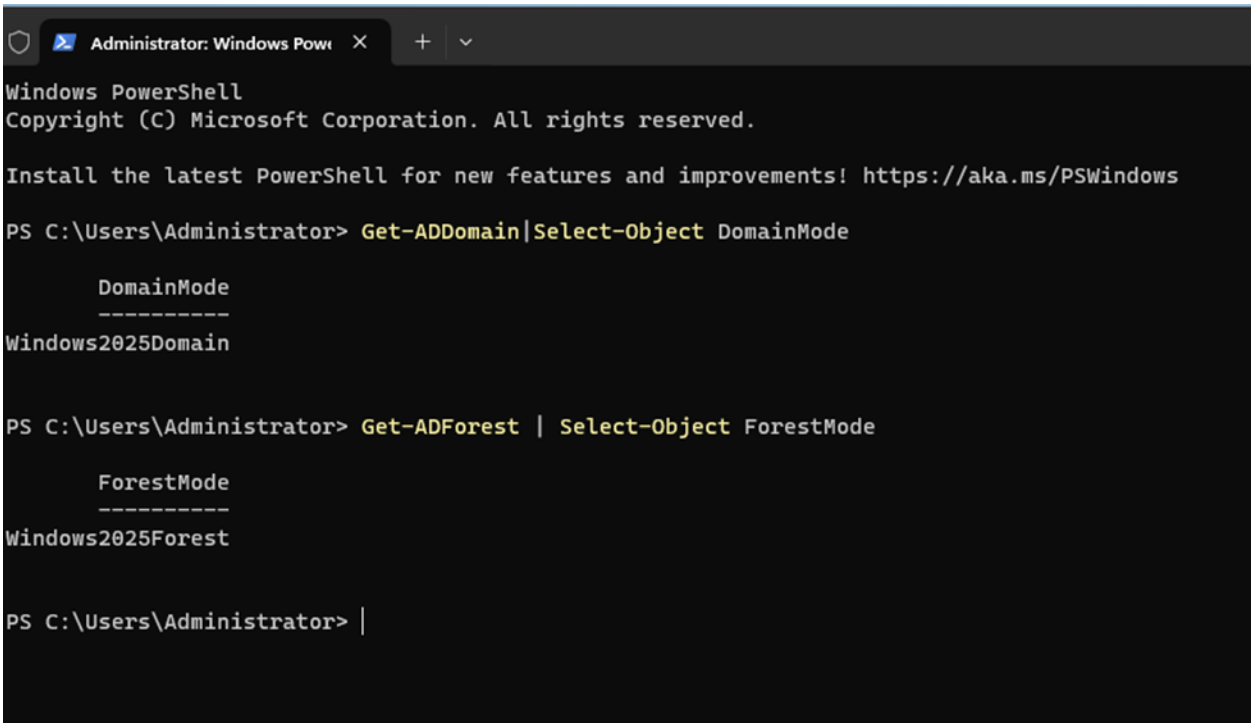


2. Check the Domain and Forest Functional Levels on partner09.com

- Using Active Directory Administrative Center



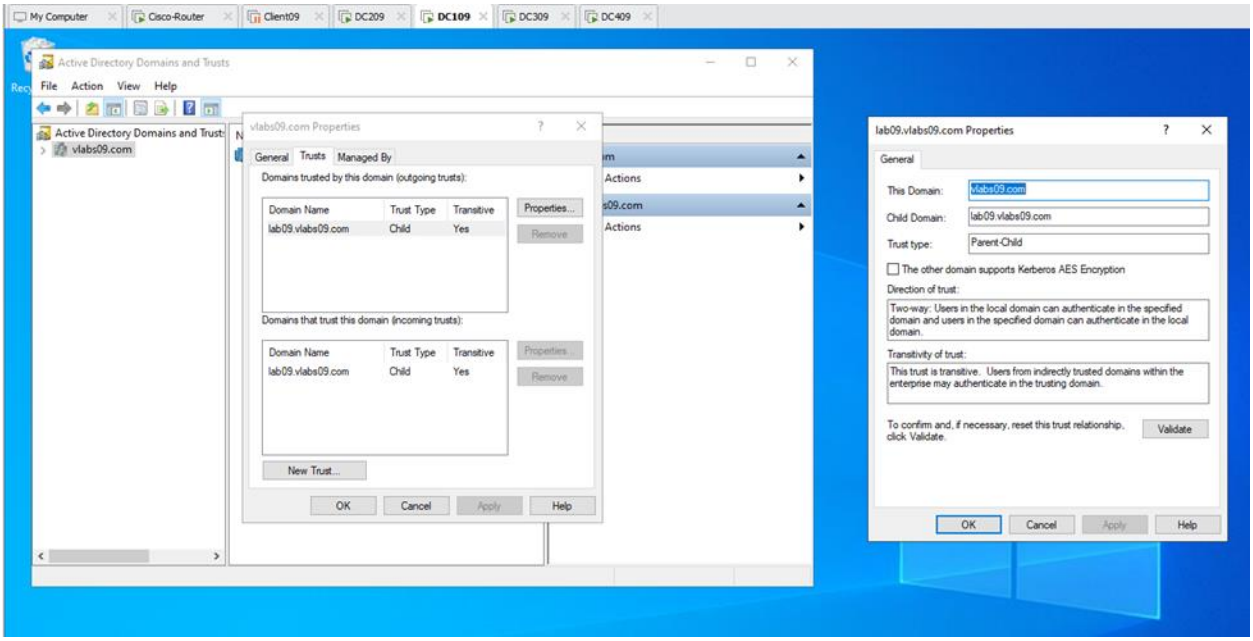
- Using PowerShell

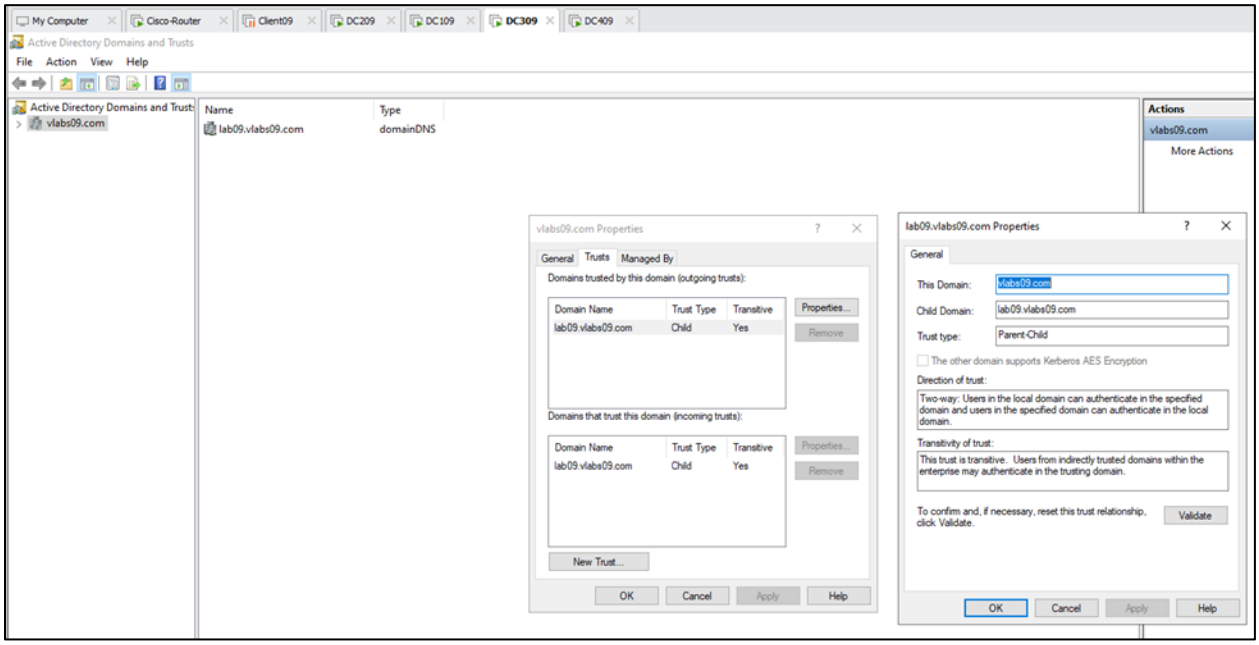


Task 3: Listing Trusts

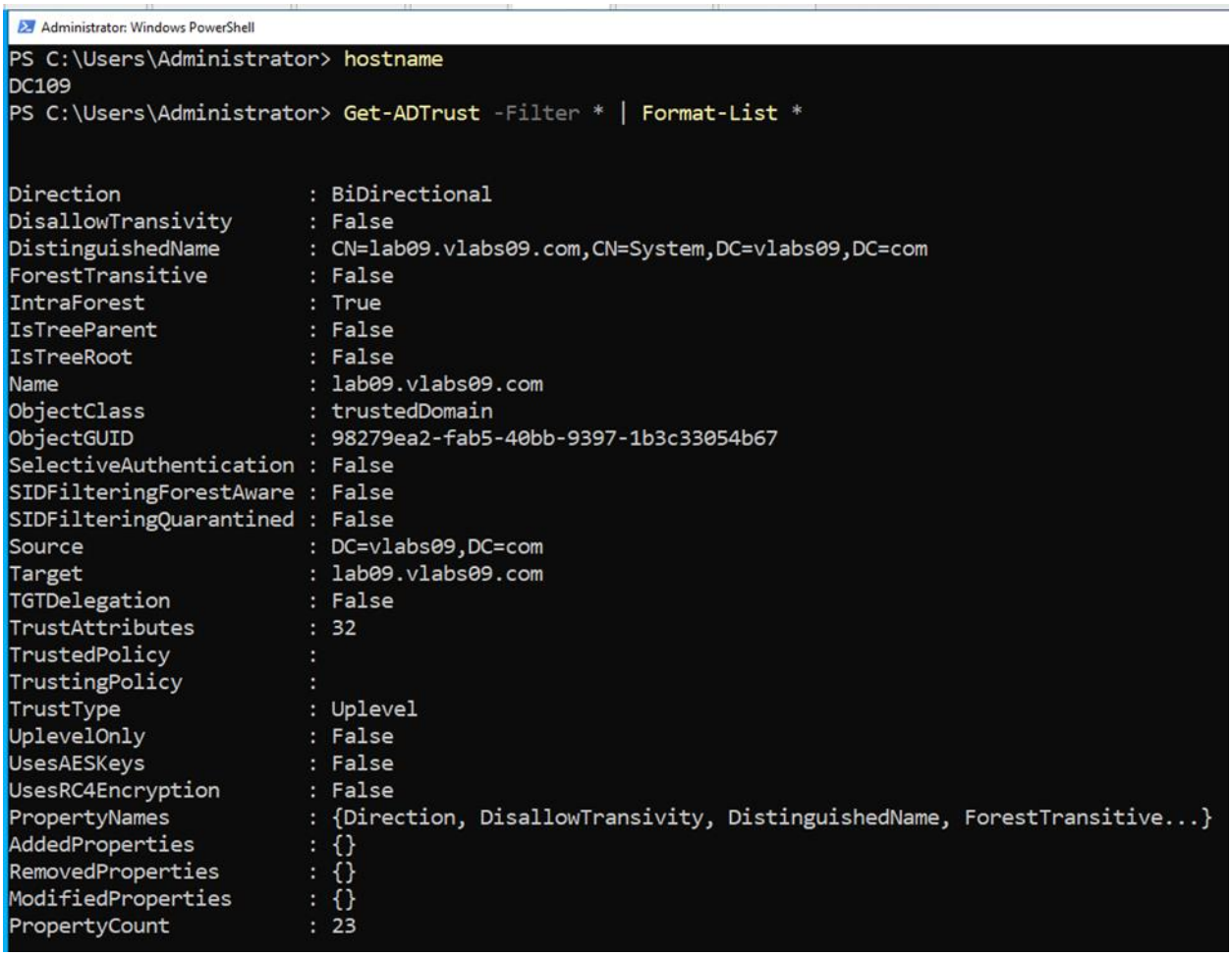
1. List all Trusts on vlabs09.com and labs09.vlabs09.com

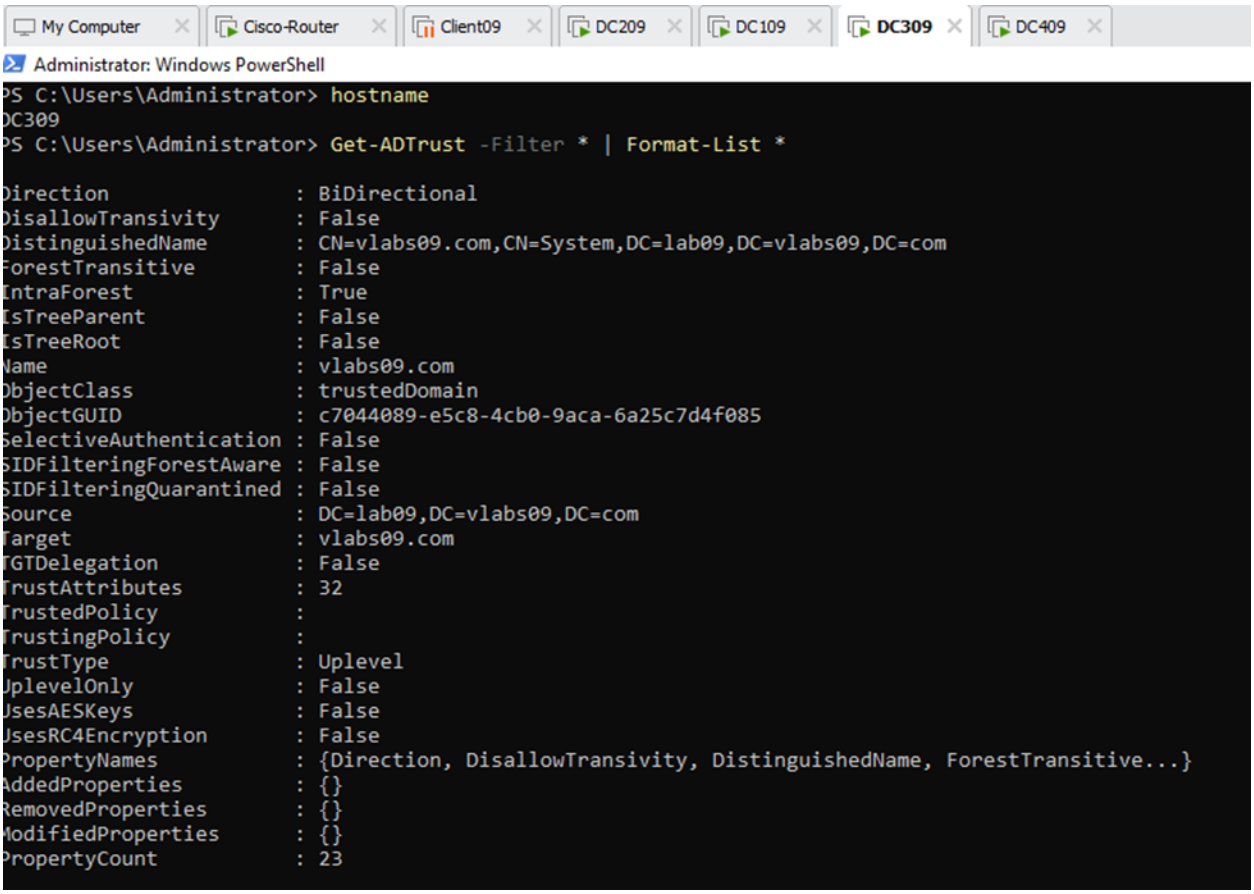
- Using Active Directory Domains and Trusts.





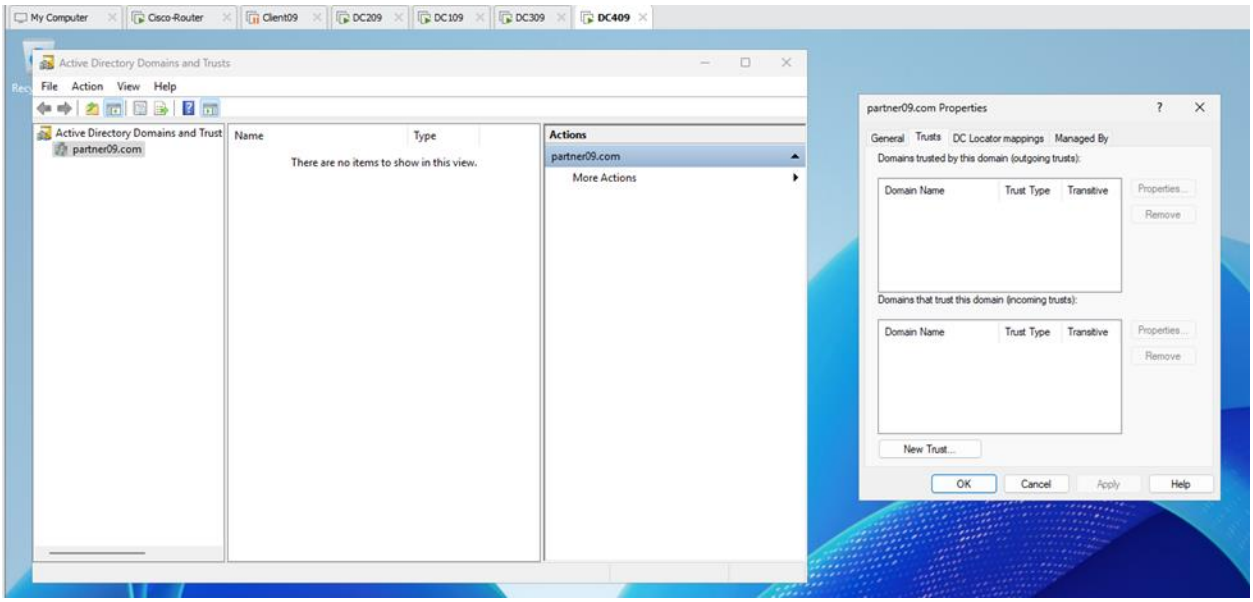
- Using PowerShell.



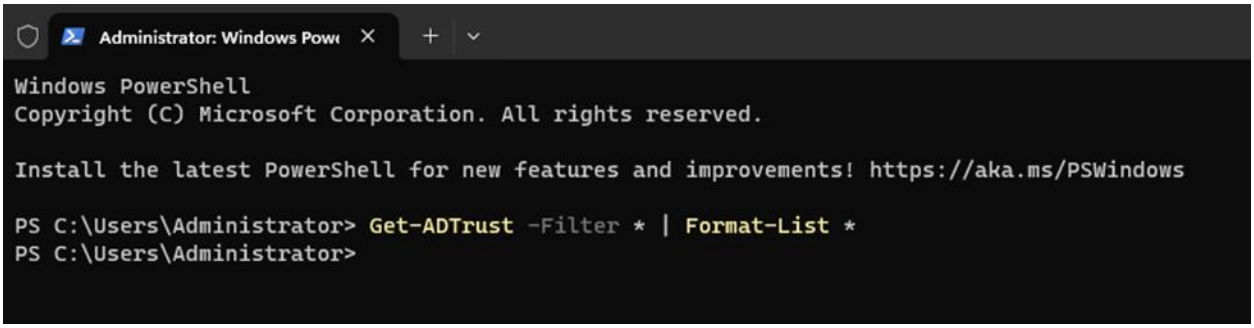


2. List all Trusts on partner09.com

- Using Active Directory Domains and Trusts.



- Using PowerShell.



Task 4: Creating Trusts

1. Create DNS Conditional Forwarders to ensure both forests can resolve each other's domains.

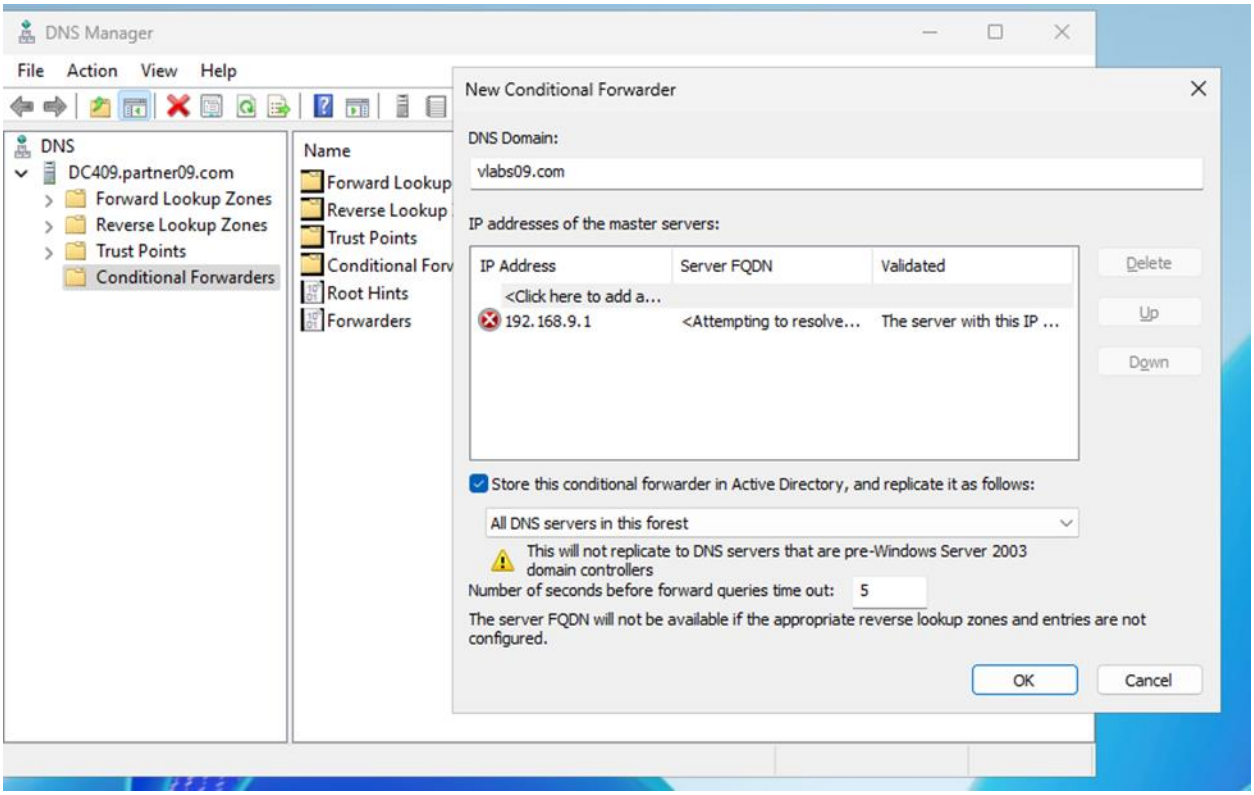
- On the DNS server of DC109 create a Conditional Forwarder for partner09.com using PowerShell

```
PS C:\Users\Administrator> Add-DnsServerConditionalForwarderZone -Name "partner09.com" -MasterServers 192.168.35.1 -ReplicationScope Forest
PS C:\Users\Administrator>
```

- Verify using nslookup.

```
PS C:\Users\Administrator> nslookup partner09.com
DNS request timed out.
    timeout was 2 seconds.
Server:  UnKnown
Address:  ::1

Non-authoritative answer:
Name:    partner09.com
Address:  192.168.35.1
```

- On the DNS server of DC409 create a Conditional Forwarder for vlabs09.com using GUI

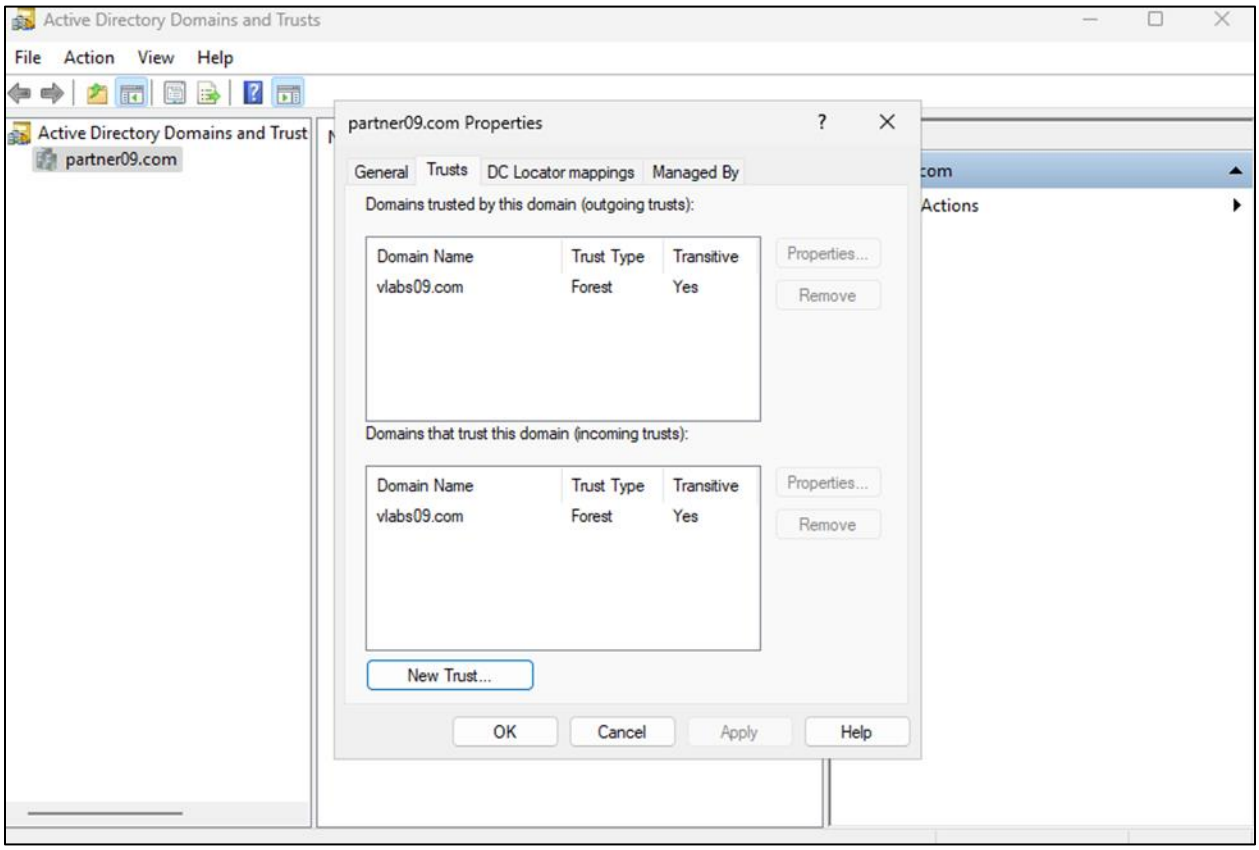


- Verify using nslookup.

```
PS C:\Users\Administrator> nslookup vlabs09.com
DNS request timed out.
    timeout was 2 seconds.
Server:  UnKnown
Address:  ::1

Non-authoritative answer:
Name:    vlabs09.com
Address:  192.168.9.1

PS C:\Users\Administrator>
```

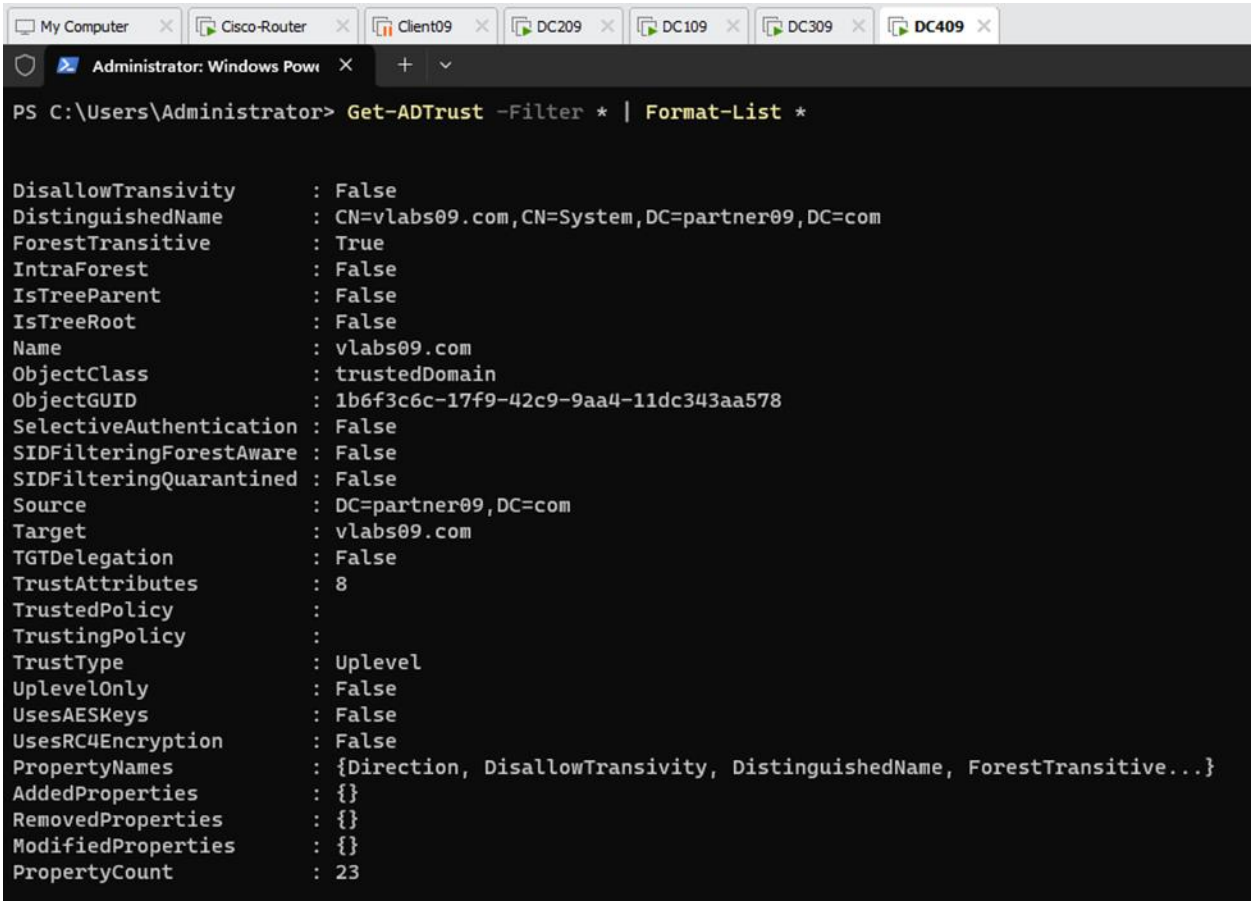
2. Using GUI:

- Create a Two-Way Transitive Forest Trust between vlabs09.com and partner09.com



3. Using PowerShell:

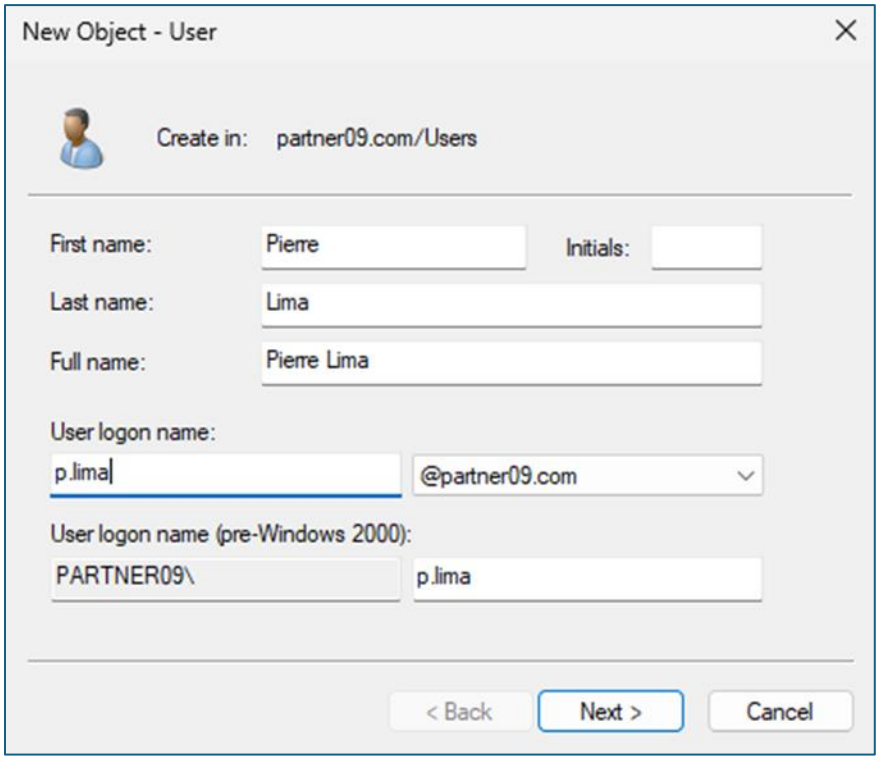
- Verify the Trust Status on both Servers.

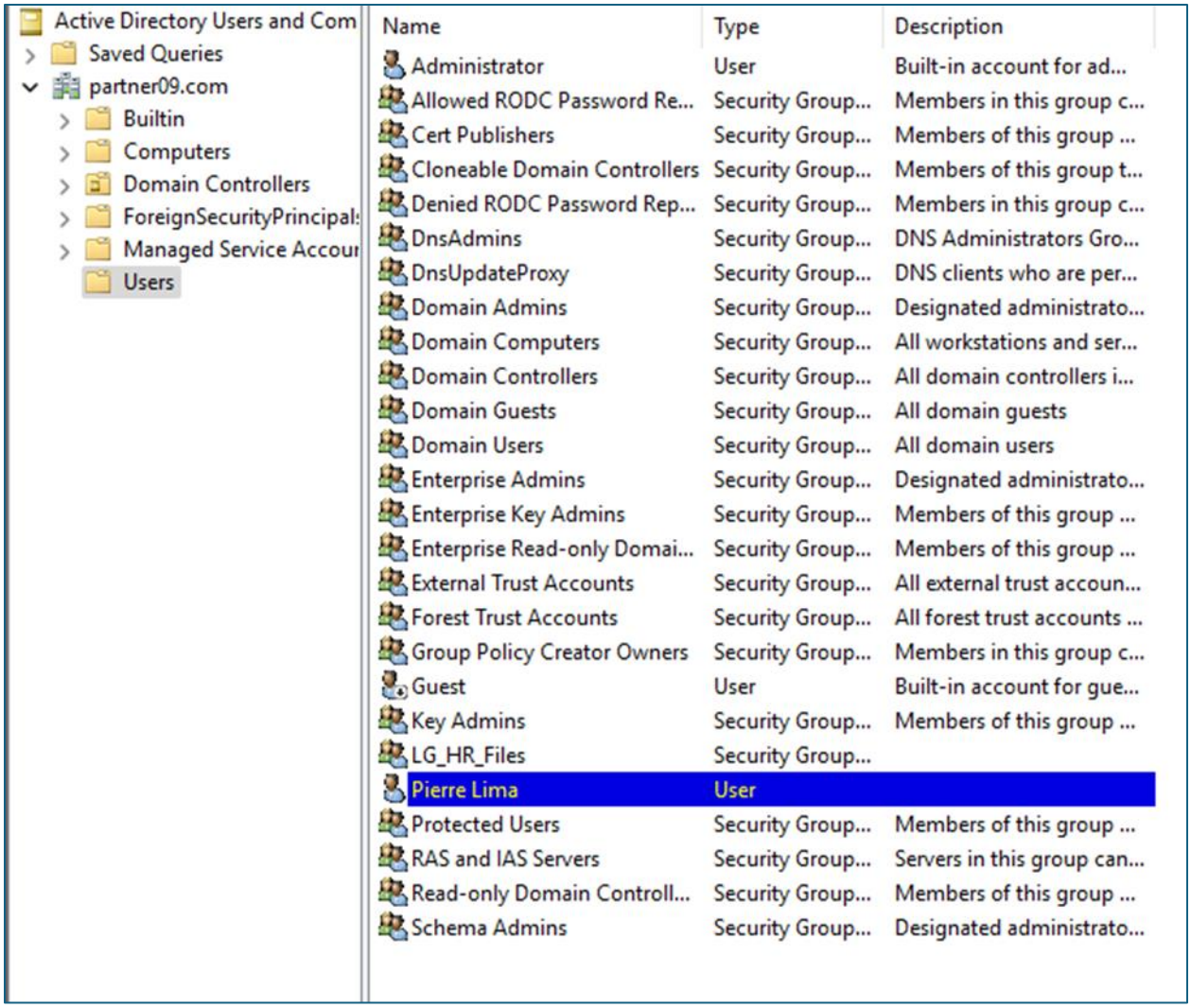


Task 5: Testing Trust Between Two Forests

1. On DC409.partner09.com:

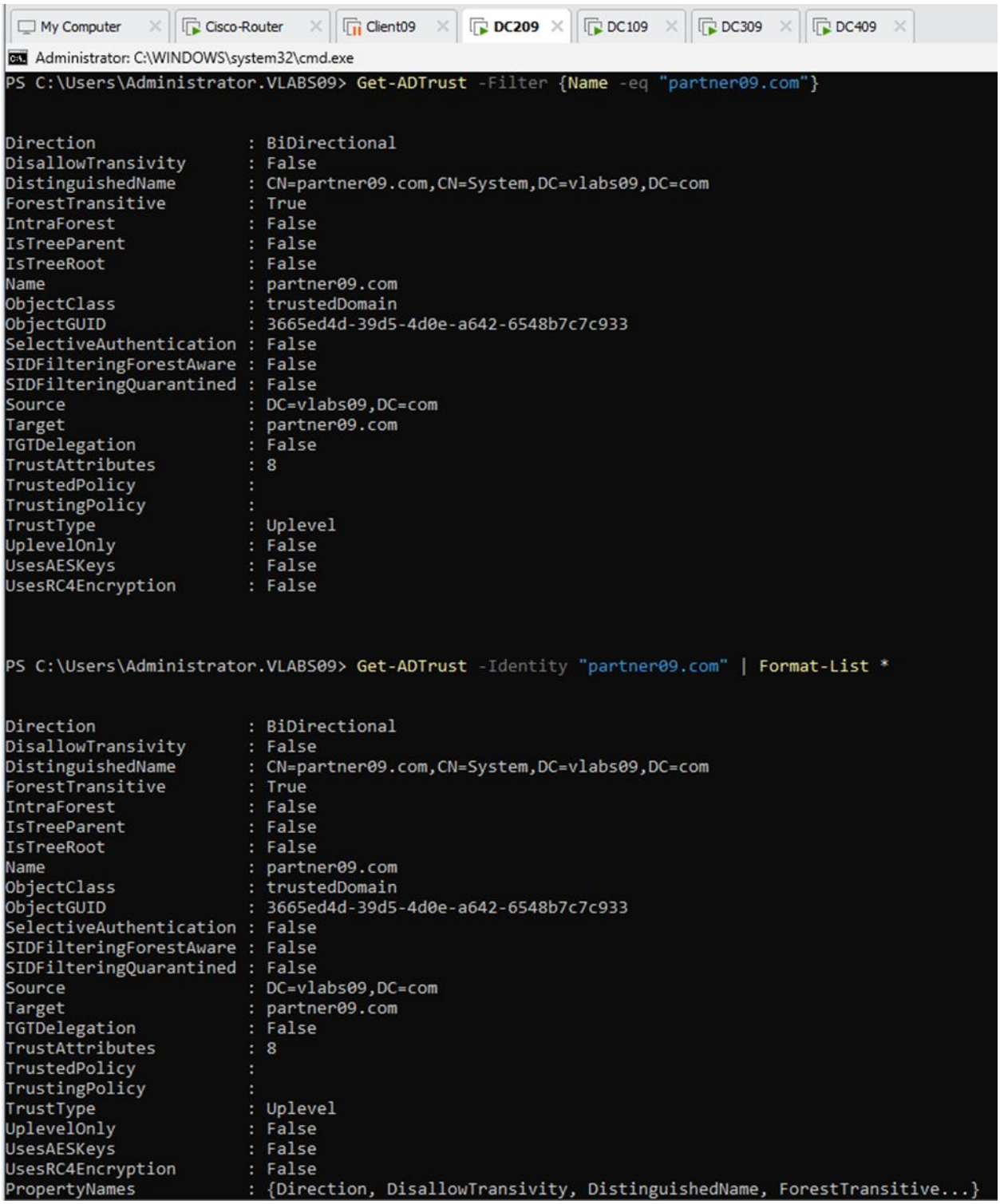
- Create a new user in partner09.com → Pierre Lima / Passw0rd$




Active Directory Users and Com
Saved Queries
partner09.com
Builtin
Computers
Domain Controllers
ForeignSecurityPrincipal:
Managed Service Accour
Users
Name
Type
Description
Administrator
User
Built-in account for ad...
Allowed RODC Password Re...
Security Group...
Members in this group c...
Cert Publishers
Security Group...
Members of this group ...
Cloneable Domain Controllers
Security Group...
Members of this group t...
Denied RODC Password Rep...
Security Group...
Members in this group c...
DnsAdmins
Security Group...
DNS Administrators Gro...
DnsUpdateProxy
Security Group...
DNS clients who are per...
Domain Admins
Security Group...
Designated administrato...
Domain Computers
Security Group...
All workstations and ser...
Domain Controllers
Security Group...
All domain controllers i...
Domain Guests
Security Group...
All domain guests
Domain Users
Security Group...
All domain users
Enterprise Admins
Security Group...
Designated administrato...
Enterprise Key Admins
Security Group...
Members of this group ...
Enterprise Read-only Domai...
Security Group...
Members of this group ...
External Trust Accounts
Security Group...
All external trust accoun...
Forest Trust Accounts
Security Group...
All forest trust accounts ...
Group Policy Creator Owners
Security Group...
Members in this group c...
Guest
User
Built-in account for gue...
Key Admins
Security Group...
Members of this group ...
LG_HR_Files
Security Group...
Pierre Lima
User
Protected Users
Security Group...
Members of this group ...
RAS and IAS Servers
Security Group...
Servers in this group can...
Read-only Domain Controll...
Security Group...
Members of this group ...
Schema Admins
Security Group...
Designated administrato...

2. On DC209.vlabs09.com (Windows Server Core, RODC):

- Verify the trust relationship with partner09.com using PowerShell.



```
PS C:\Users\Administrator.VLABS09> hostname
DC209
PS C:\Users\Administrator.VLABS09> Get-ADTrust -Filter * | Select-Object Name, Target, TrustType, Direction

Name              Target            TrustType     Direction
----              ------            ---------     ---------
lab09.vlabs09.com lab09.vlabs09.com   Uplevel BiDirectional
partner09.com     partner09.com       Uplevel BiDirectional


PS C:\Users\Administrator.VLABS09>
```

- Create a folder C:\Secret

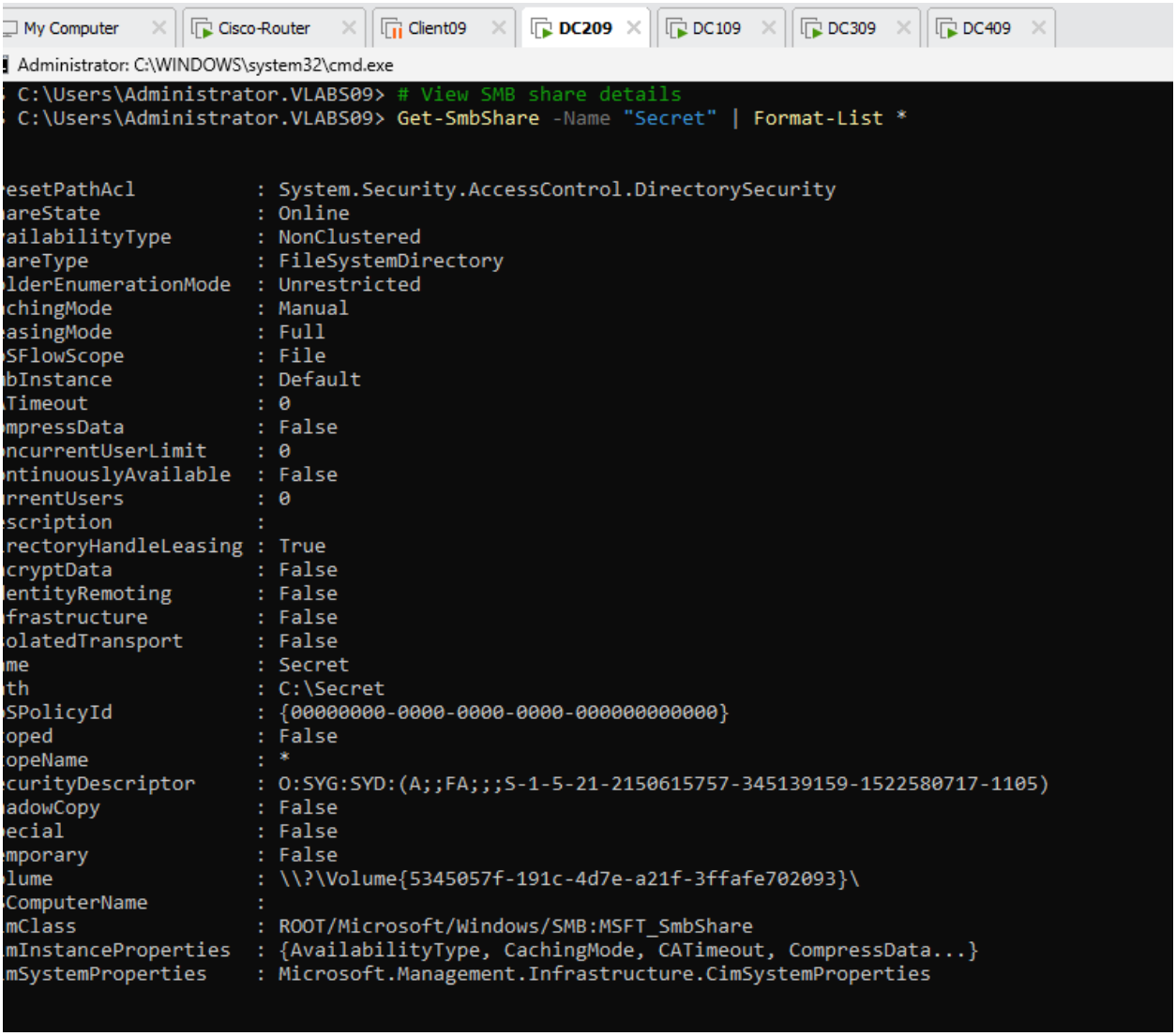
```
PS C:\Users\Administrator.VLABS09> New-Item -Path "C:\Secret" -ItemType Directory -Force


    Directory: C:\


Mode                 LastWriteTime         Length Name
----                 -------------         ------ ----
d-----         5/15/2025   8:16 AM                Secret


PS C:\Users\Administrator.VLABS09>
```

- Share C:\Secret and assign permissions Read/Write to p.laurin@partnerX.com.

```
PS C:\Users\Administrator.VLABS09> New-SmbShare -Name "Secret" -Path "C:\Secret" -FullAccess "p.laurin@partner09.com"
New-SmbShare : No mapping between account names and security IDs was done.
At line:1 char:1
+ New-SmbShare -Name "Secret" -Path "C:\Secret" -FullAccess "p.laurin@p ...
+ ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
    + CategoryInfo          : NotSpecified: (MSFT_SMBShare:ROOT/Microsoft/Windows/SMB/MSFT_SMBShare) [New-SmbShare], CimException
    + FullyQualifiedErrorId : Windows System Error 1332,New-SmbShare

PS C:\Users\Administrator.VLABS09> New-SmbShare -Name "Secret" -Path "C:\Secret" -FullAccess "p.lima@partner09.com"

Name   ScopeName Path      Description
----   --------- ----      -----------
Secret *         C:\Secret


PS C:\Users\Administrator.VLABS09>
```

```
PS C:\Users\Administrator.VLABS09> # Get current ACL
PS C:\Users\Administrator.VLABS09> $acl = Get-Acl "C:\Secret"
PS C:\Users\Administrator.VLABS09>
PS C:\Users\Administrator.VLABS09> # Create the permission rule (NTFS-level)
PS C:\Users\Administrator.VLABS09> $rule = New-Object System.Security.AccessControl.FileSystemAccessRule(
>>     "p.lima@partner09.com", "Modify", "ContainerInherit,ObjectInherit", "None", "Allow"
>> )
PS C:\Users\Administrator.VLABS09>
PS C:\Users\Administrator.VLABS09> # Add the rule and apply it
PS C:\Users\Administrator.VLABS09> $acl.AddAccessRule($rule)
PS C:\Users\Administrator.VLABS09> Set-Acl "C:\Secret" $acl
PS C:\Users\Administrator.VLABS09>
```

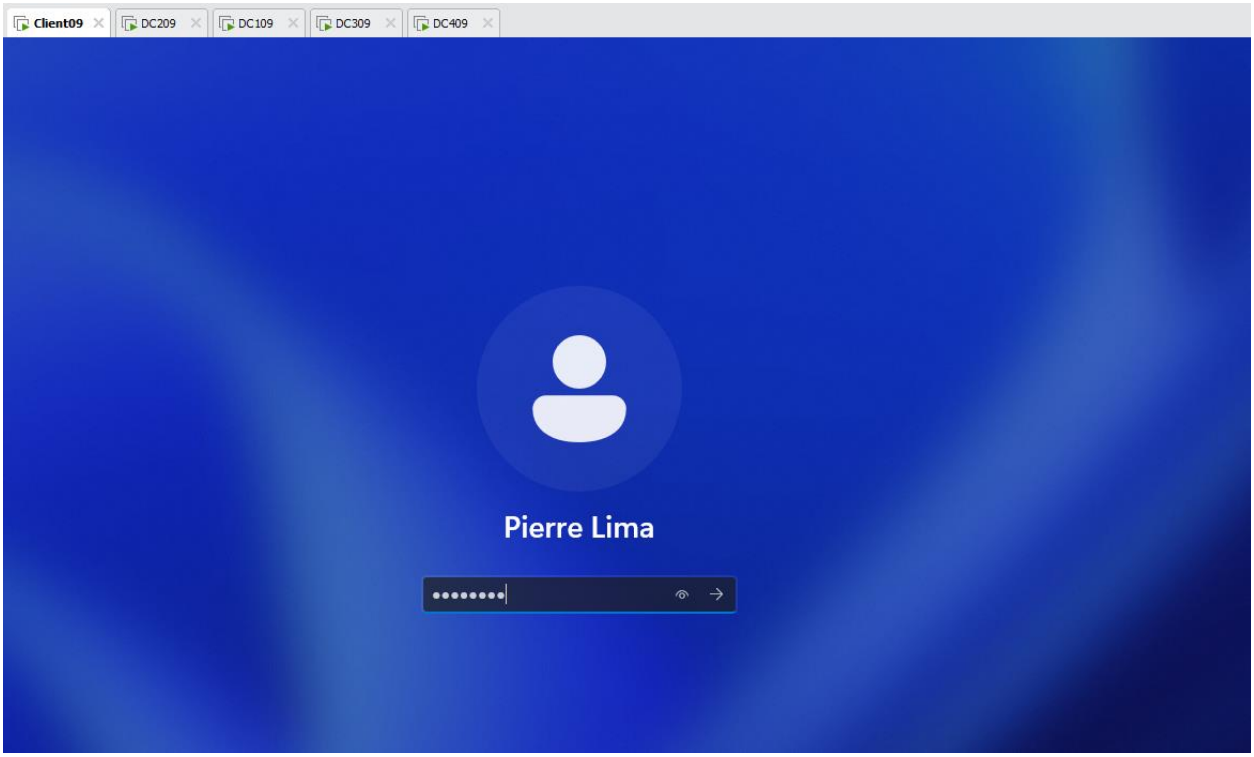
- Verify the shared folder and NTFS permissions.



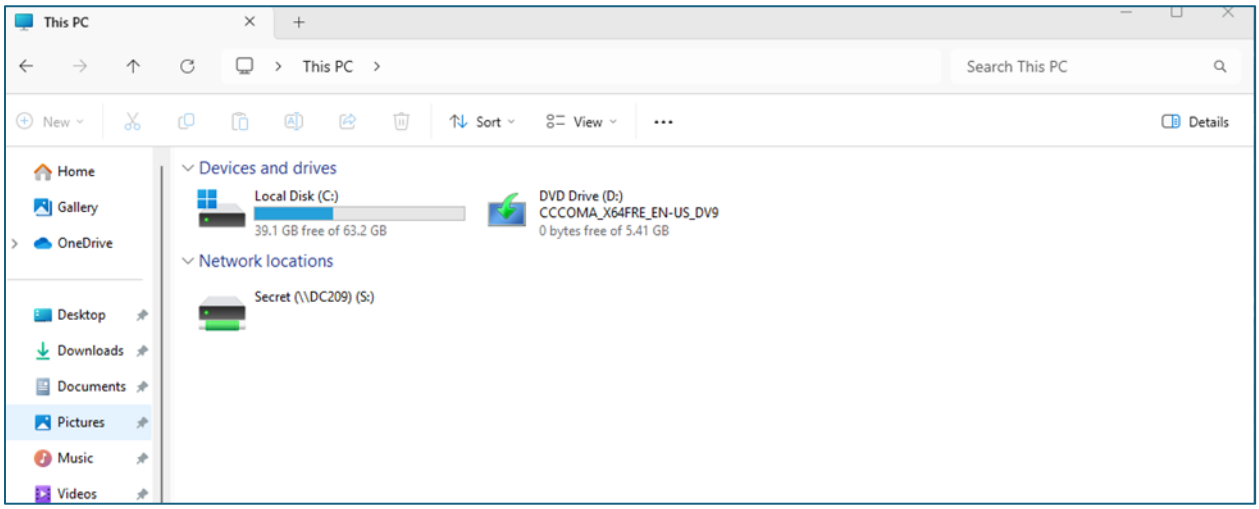
```
PS C:\Users\Administrator.VLABS09>
PS C:\Users\Administrator.VLABS09> # View NTFS permissions
PS C:\Users\Administrator.VLABS09> (Get-Acl "C:\Secret").Access


FileSystemRights  : Modify, Synchronize
AccessControlType : Allow
IdentityReference : PARTNER09\p.lima
IsInherited       : False
InheritanceFlags  : ContainerInherit, ObjectInherit
PropagationFlags  : None

FileSystemRights  : FullControl
AccessControlType : Allow
IdentityReference : NT AUTHORITY\SYSTEM
IsInherited       : True
InheritanceFlags  : ContainerInherit, ObjectInherit
PropagationFlags  : None

FileSystemRights  : FullControl
AccessControlType : Allow
IdentityReference : BUILTIN\Administrators
IsInherited       : True
InheritanceFlags  : ContainerInherit, ObjectInherit
PropagationFlags  : None

FileSystemRights  : ReadAndExecute, Synchronize
AccessControlType : Allow
IdentityReference : BUILTIN\Users
IsInherited       : True
InheritanceFlags  : ContainerInherit, ObjectInherit
PropagationFlags  : None

FileSystemRights  : AppendData
AccessControlType : Allow
IdentityReference : BUILTIN\Users
IsInherited       : True
InheritanceFlags  : ContainerInherit
PropagationFlags  : None

FileSystemRights  : CreateFiles
AccessControlType : Allow
IdentityReference : BUILTIN\Users
IsInherited       : True
InheritanceFlags  : ContainerInherit
PropagationFlags  : None

FileSystemRights  : 268435456
AccessControlType : Allow
IdentityReference : CREATOR OWNER
IsInherited       : True
InheritanceFlags  : ContainerInherit, ObjectInherit
PropagationFlags  : InheritOnly
```

3. From Client09:

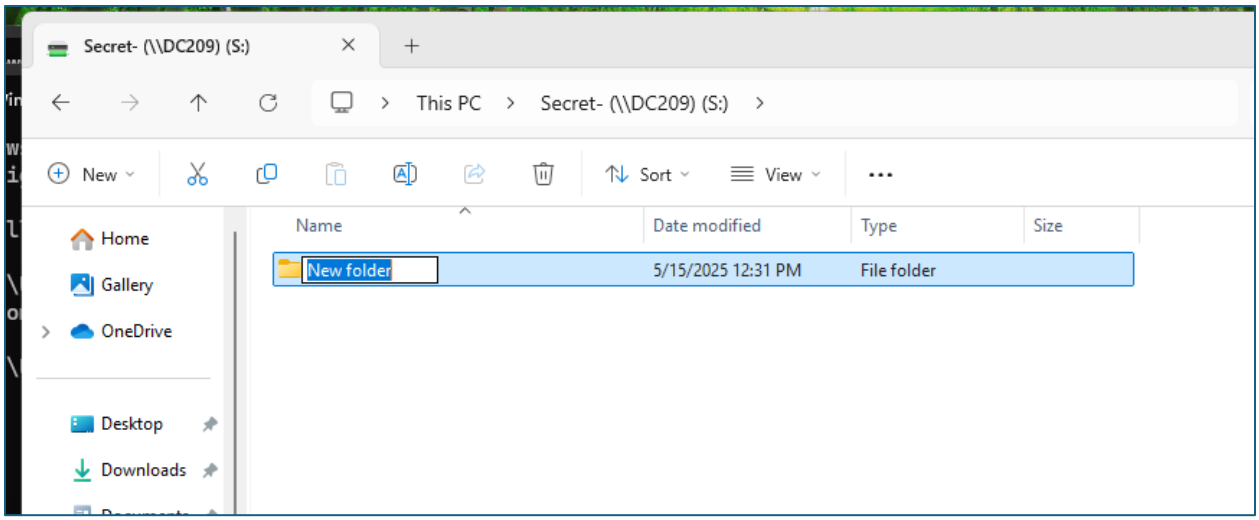
- Log in with Pierre Lima from partner09.com

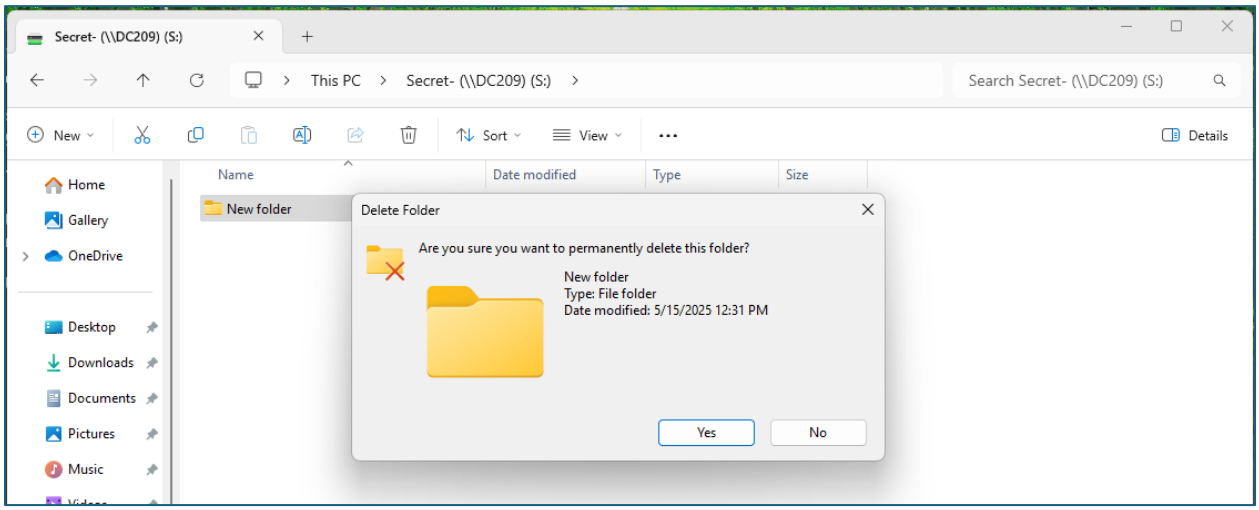


- Map the shared folder \\DC209\Secret as drive S:



- Test file creation and access.





Appendices

#Verify the trust relationship with **partnerXX.com**:
Get-ADTrust -Filter {Name -eq "partnerXX.com"}

Get-ADTrust -Identity "partnerXX.com" | Format-List *

#Create a folder C:\Secret:

New-Item -Path "C:\Secret" -ItemType Directory -Force

#Share C:\Secret and assign permissions Read/Write to user@partnerXX.com:
New-SmbShare -Name "Secret" -Path "C:\Secret" -FullAccess "user@partnerXX.com"
$acl = Get-Acl "C:\Secret"

$rule = New-Object System.Security.AccessControl.FileSystemAccessRule("user@partnerXX.com", "Modify", "ContainerInherit,ObjectInherit", "None", "Allow")

$acl.AddAccessRule($rule)

Set-Acl "C:\Secret" $acl

Verify the shared folder and NTFS permissions
Get-SmbShare -Name "Secret" | Format-List *
(Get-Acl "C:\Secret").Access