Deliverable 1: Invoke powershell on mgmt01 and query the active directory for your three Windows computers:

```
PS C:\Users\seraphim.gerber-adm> Get-ADComputer -Filter *


DistinguishedName : CN=AD01-SERAPHIM,OU=Domain Controllers,DC=seraphim,DC=local
DNSHostName       : ad01-seraphim.seraphim.local
Enabled           : True
Name              : AD01-SERAPHIM
ObjectClass       : computer
ObjectGUID        : f36876a1-2b4d-4a6a-bd37-d145e534e23f
SamAccountName    : AD01-SERAPHIM$
SID               : S-1-5-21-3246087057-3387548868-3839151643-1000
UserPrincipalName :

DistinguishedName : CN=MGMT01-SERAPHIM,CN=Computers,DC=seraphim,DC=local
DNSHostName       : mgmt01-seraphim.seraphim.local
Enabled           : True
Name              : MGMT01-SERAPHIM
ObjectClass       : computer
ObjectGUID        : 95a2a7f5-0ed1-4556-9cc0-d0a55349e102
SamAccountName    : MGMT01-SERAPHIM$
SID               : S-1-5-21-3246087057-3387548868-3839151643-1103
UserPrincipalName :

DistinguishedName : CN=wks01-seraphim,CN=Computers,DC=seraphim,DC=local
DNSHostName       :
Enabled           : True
Name              : wks01-seraphim
ObjectClass       : computer
ObjectGUID        : c4961580-b68a-43fe-9063-5ffc5901843d
SamAccountName    : WKS01-SERAPHIM$
SID               : S-1-5-21-3246087057-3387548868-3839151643-1106
UserPrincipalName :
```

Deliverable 2: Enumerate your two named Domain Users (adjust filter for your name)

```
PS C:\Users\seraphim.gerber-adm> Get-ADUser -filter 'Name -like "seraphim*"' -Properties MemberOf


DistinguishedName : CN=seraphim gerber,CN=Users,DC=seraphim,DC=local
Enabled           : True
GivenName         : seraphim
MemberOf          : {}
Name              : seraphim gerber
ObjectClass       : user
ObjectGUID        : 31a3d5b7-3f9e-4131-a38f-87c449dc97d3
SamAccountName    : seraphim.gerber
SID               : S-1-5-21-3246087057-3387548868-3839151643-1104
Surname           : gerber
UserPrincipalName : seraphim.gerber@seraphim.local

DistinguishedName : CN=seraphim gerber-adm,CN=Users,DC=seraphim,DC=local
Enabled           : True
GivenName         : seraphim
MemberOf          : {CN=Domain Admins,CN=Users,DC=seraphim,DC=local}
Name              : seraphim gerber-adm
ObjectClass       : user
ObjectGUID        : bf99c052-891b-4a23-8827-a56015c26632
SamAccountName    : seraphim.gerber-adm
SID               : S-1-5-21-3246087057-3387548868-3839151643-1105
Surname           : gerber-adm
UserPrincipalName : seraphim.gerber-adm@seraphim.local
```

Deliverable 3: Print your DNS Server address and DNS A Records.

```
PS C:\Users\seraphim.gerber-adm> Get-DnsClientServerAddress

InterfaceAlias               Interface Address ServerAddresses
                             Index     Family
-------------                --------- ------- ---------------
Ethernet0                            5 IPv4    {10.0.5.5}
Ethernet0                            5 IPv6    {}
Loopback Pseudo-Interface 1          1 IPv4    {}
Loopback Pseudo-Interface 1          1 IPv6    {fec0:0:0:ffff::1, fec0:0:0:ffff::2, fec0:0:0:ffff::3}


PS C:\Users\seraphim.gerber-adm>
PS C:\Users\seraphim.gerber-adm> Get-DnsServerResourceRecord -ZoneName seraphim.local -ComputerName ad01-seraphim -RRTyp
e A

HostName                 RecordType Type       Timestamp            TimeToLive      RecordData
--------                 ---------- ----       ---------            ----------      ----------
@                        A          1          1/26/2024 12:00:0... 00:10:00        10.0.5.5
ad01-seraphim            A          1          0                    01:00:00        10.0.5.5
DomainDnsZones           A          1          1/26/2024 12:00:0... 00:10:00        10.0.5.5
ForestDnsZones           A          1          1/26/2024 12:00:0... 00:10:00        10.0.5.5
fw01-seraphim            A          1          0                    01:00:00        10.0.5.2
mgmt01-seraphim          A          1          1/26/2024 12:00:0... 00:20:00        10.0.5.10
```

Deliverable 4: Check the first 3 hops of your route. Your network route should go through fw01's LAN interface(10.0.5.2) to the WAN default gateway 10.0.17.2 and then out through the CYBER.LOCAL default gateway on the 192.168.4.0/24 Network. You can use the powershell or the traditional tracert method. Provide a screenshot.

```
PS C:\Users\seraphim.gerber-adm> Test-NetConnection champlain.edu -TraceRoute -Hops 3
WARNING: Trace route to destination 208.115.107.132 did not complete. Trace terminated :: 192.168.4.251


ComputerName            : champlain.edu
RemoteAddress           : 208.115.107.132
InterfaceAlias          : Ethernet0
SourceAddress           : 10.0.5.10
PingSucceeded           : True
PingReplyDetails (RTT)  : 74 ms
TraceRoute              : 10.0.5.2
                          10.0.17.2
                          192.168.4.251
```

Deliverable 5: Deliverable 3 asked for A records. Figure out how to enumerate all the PTR records. Provide the command and output ptr records.

```
PS C:\Windows\system32> Get-DnsServerResourceRecord -ZoneName 5.0.10.in-addr.arpa -ComputerName ad01-seraphim -RRType Pt
r

HostName                  RecordType Type       Timestamp            TimeToLive      RecordData
--------                  ---------- ----       ---------            ----------      ----------
10                        PTR        12         1/27/2024 12:00:0... 00:20:00        mgmt01-seraphim.seraphim.local.
100                       PTR        12         0                    01:00:00        wks01-seraphim.seraphim.local.
2                         PTR        12         0                    01:00:00        fw01-seraphim.seraphim.local.
5                         PTR        12         1/27/2024 1:00:00 PM 00:20:00        ad01-seraphim.seraphim.local.
```

Deliverable 6: Tech Journal - This is similar to last term. This week's journal should include a course journal page for SYS265 that has an initial entry, and include your notes from your environment configuration (in far more detail than the example). Make sure you include a list of at least 3 terms or topics from the lecture or lab that you want to learn more about, and your research results. Be sure to add your instructor's GitHub account as a collaborator if your wiki is not public.

https://github.com/seraphimgerber/SYS-265/tree/main

Deliverable 7. Your deliverable meets the submission guidelines.