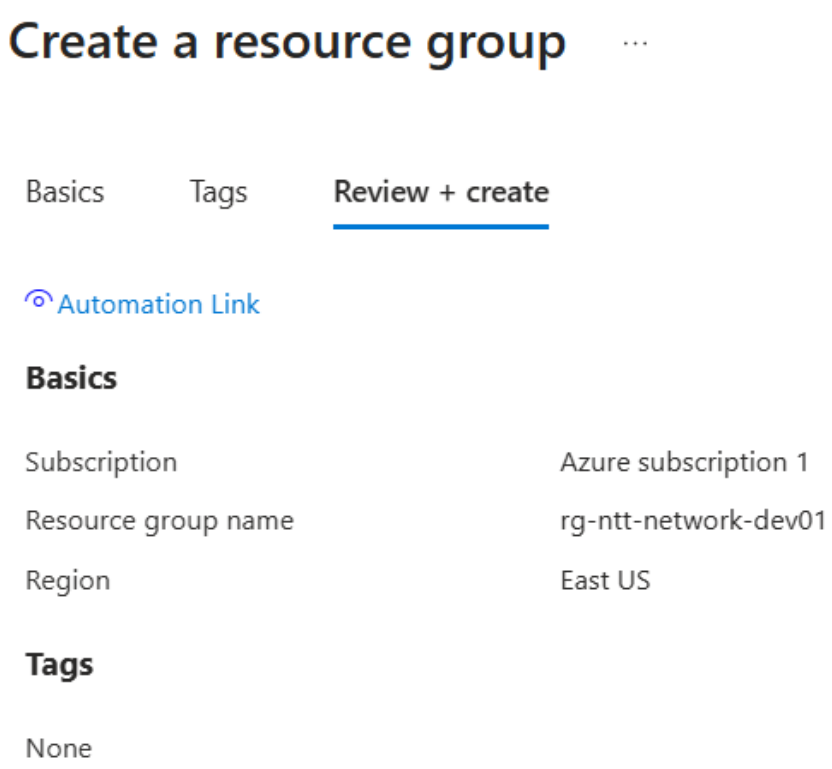
1. Create resource group for network "rg-ntt-network-dev01"



1. Create VNet "vnet-nttdomain-dev01"

Create virtual network ...

Validation passed

Basics Security IP addresses Tags **Review + create**

View automation template

Basics

Subscription	Azure subscription 1
Resource Group	rg-ntt-network-dev01
Name	vnet-nttdomain-dev01
Region	East US

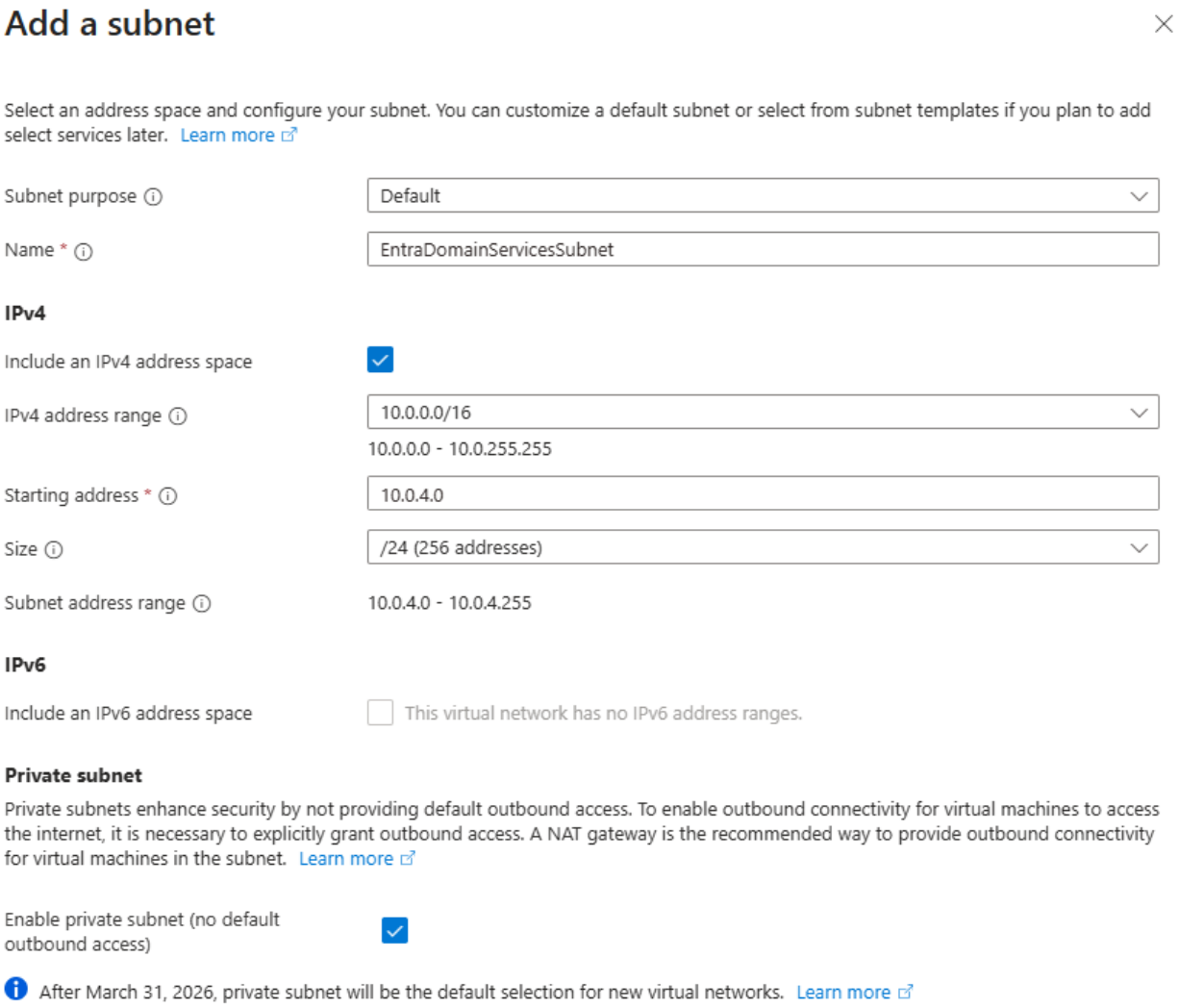
Security

Azure Bastion	Disabled
Azure Firewall	Disabled
Azure DDoS Network Protection	Disabled

IP addresses

Address space	10.0.0.0/16 (65,536 addresses)

3. Create subnet for "EntraDomainServicesSubnet"
    a. Create this subnet in the same VNet "vnet-nttdomain-dev01"



b. Create new resource group "rg-nttentradomainservices-dev01"

Create a resource group

Basics Tags Review + create

Resource group - A container that holds related resources for an Azure solution. The resource group can include all the resources for the solution, or only those resources that you want to manage as a group. You decide how you want to allocate resources to resource groups based on what makes the most sense for your organization. Learn more

Subscription * : Azure subscription 1

Resource group name * : rg-nttentradomainservices-dev01

Region * : (US) East US

c. Go inside and create Microsoft Entra Domain Services

Create Microsoft Entra Domain Services

*Basics *Networking Administration Synchronization Security Settings Tags Review + create

Microsoft Entra Domain Services provides managed domain services such as domain join, group policy, LDAP, and Kerberos/NTLM authentication. You can use Microsoft Entra Domain Services without needing to manage, patch, or service domain controllers in the cloud. For ease and simplicity, defaults have been specified to provide a one-click deployment. Learn more

Project details

When choosing the basic information needed for Microsoft Entra Domain Services, keep in mind that the subscription, resource group, DNS domain name, and location cannot be changed after creation.

Subscription * : Azure subscription 1

Resource group * : rg-nttentradomainservices-dev01

Create new

Help me choose the subscription and resource group

DNS domain name * : nttentradomain.onmicrosoft.com

Help me choose the DNS name

Region * : (US) East US

SKU * : Enterprise

Help me choose a SKU

Create Microsoft Entra Domain Services ...

*Basics *Networking Administration Synchronization Security Settings Tags Review + create

Microsoft Entra Domain Services uses a dedicated subnet within a virtual network to hold all of its resources. If using an existing network, ensure that the network configuration does not block the ports required for Microsoft Entra Domain Services to run. Learn more

Virtual network * ⓘ vnet-nttdomain-dev01

Create new

Help me choose the virtual network and address

Subnet * ⓘ EntraDomainServicesSubnet (10.0.4.0/24)

Manage

Your subnet should contain one of the private IP Address Spaces: 192.168.0.0/16, 172.16.0.0/12, or 10.0.0.0/8. While you can create public IPs, we recommend considering the associated risks before proceeding. Learn more

Help me choose the subnet and NSG

A network security group will be automatically created and associated to the subnet to protect Microsoft Entra Domain Services. The network security group will be configured according to guidelines for configuring NSGs.

Create Microsoft Entra Domain Services ...

*Basics *Networking **Administration** Synchronization Security Settings Tags Review + create

Use these settings to specify which users should have administrative privileges and be notified of problems on your managed domain. Learn more

AAD DC Administrators ⓘ Manage group membership

Help me choose AAD DC Admins

Notifications

These groups will be notified when you have an alert of warning or critical severity

- [x] All Global Administrators of the Microsoft Entra ID directory.
- [x] Members of the AAD DC Administrators group.

Additional email recipients:

Add another email to be contacted at

Help me choose who gets notifications

Create Microsoft Entra Domain Services ...

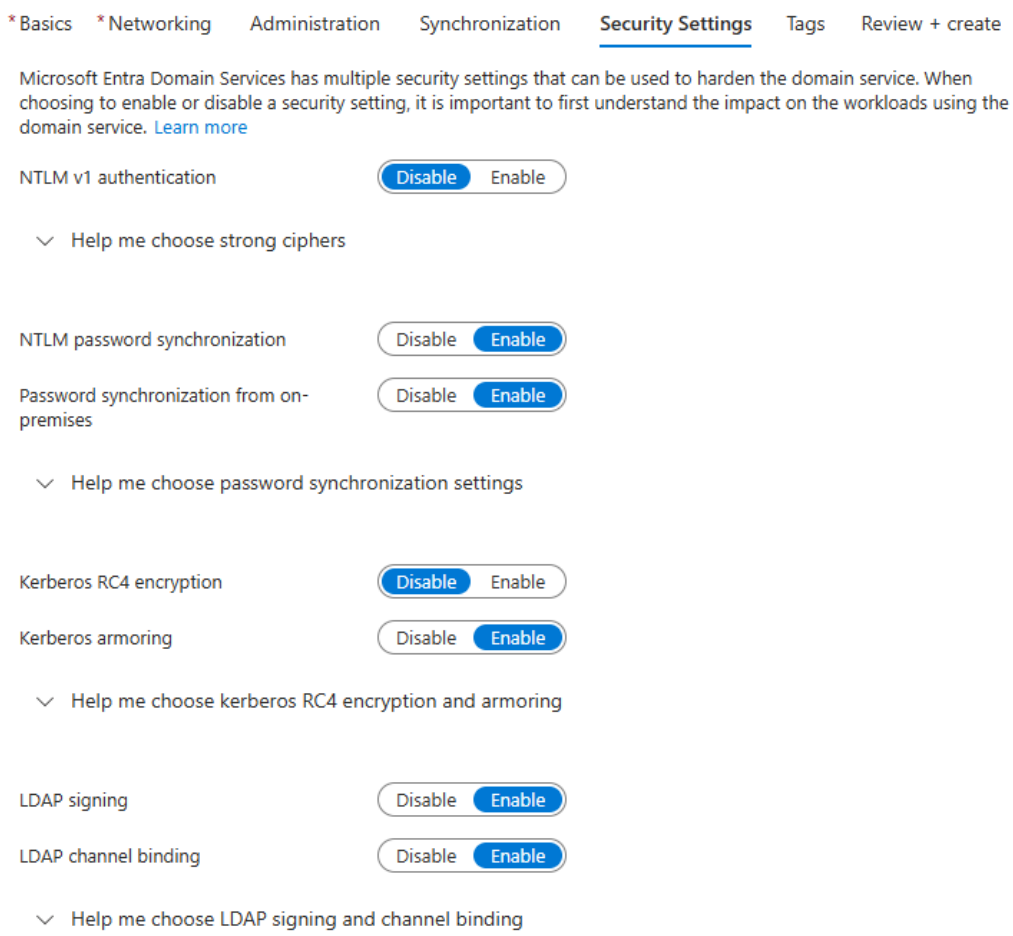
*Basics *Networking Administration **Synchronization** Security Settings Tags Review + create

Microsoft Entra Domain Services provides a one-way synchronization from Microsoft Entra ID to the managed domain. In addition, only certain attributes are synchronized down to the managed domain, along with groups, group memberships, and passwords. Learn more

Synchronization type All Cloud-only

Synchronization filter ☐ Filter by group entitlements

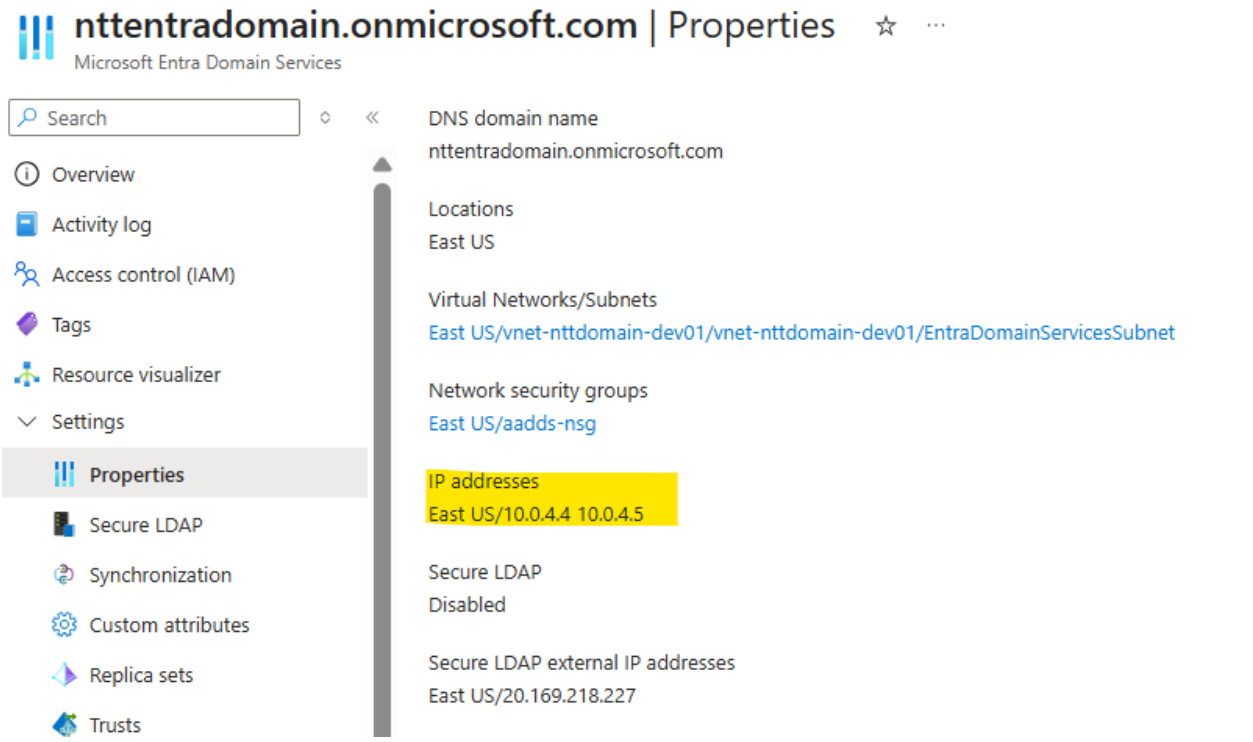
Help me choose the synchronization settings

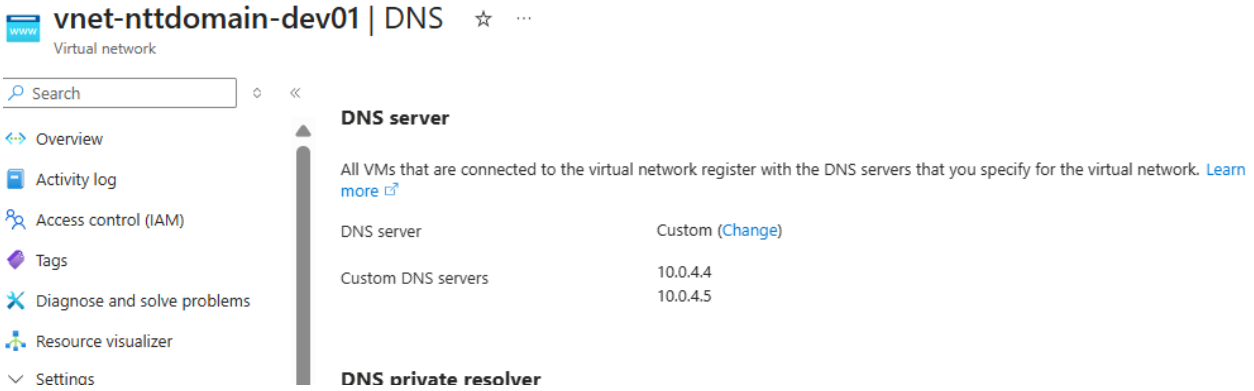


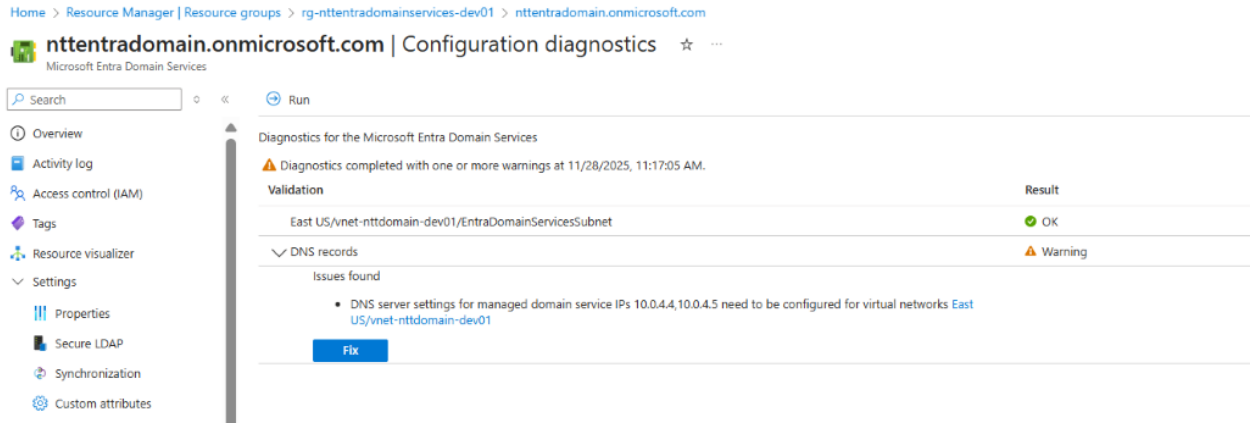
d. Click review + create

4. Get the DNS IP Address from Microsoft Entra Domain Services and Configured DNS Server settings for managed domain service IP in virtual networks "vnet-nttdomain-dev01"

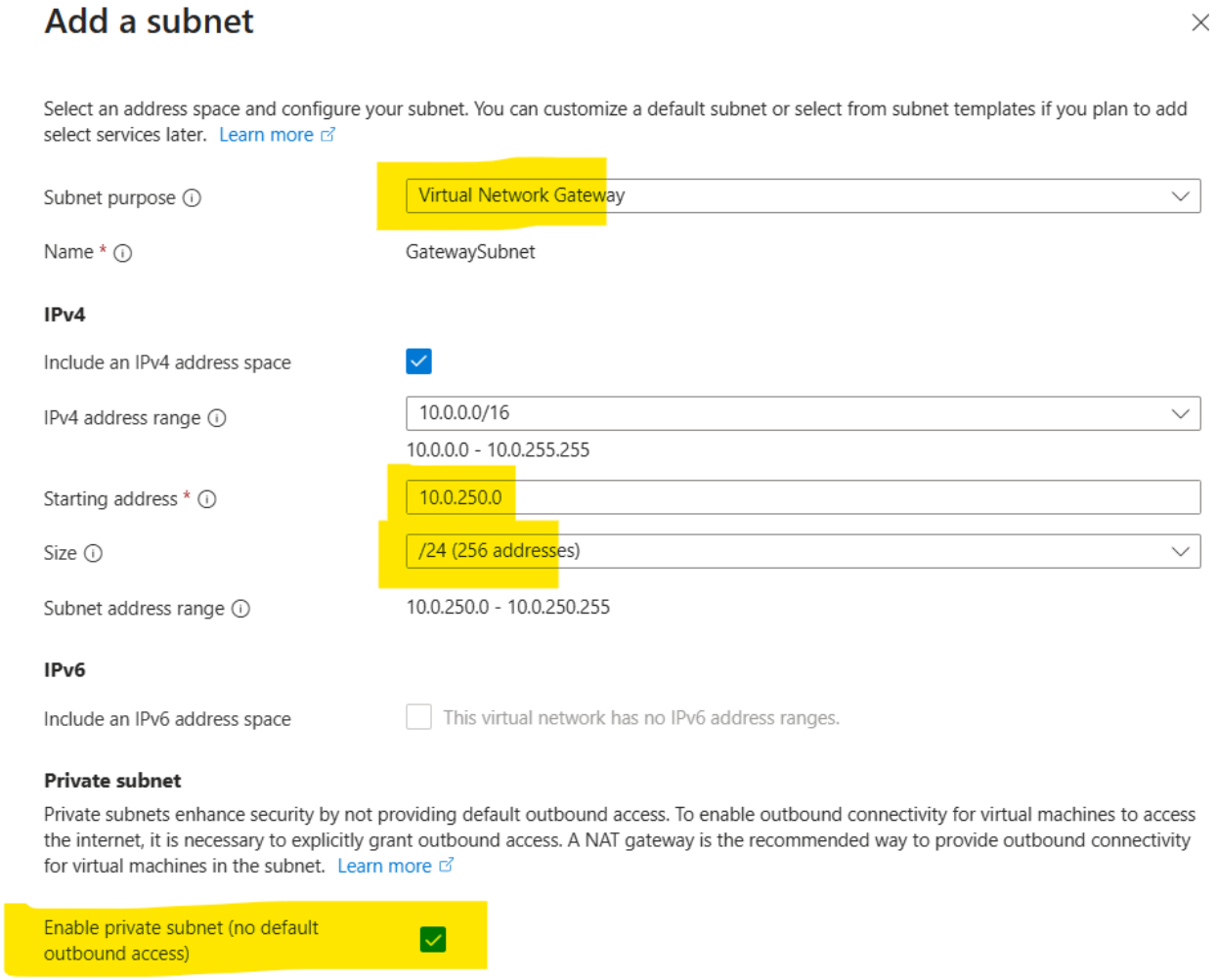
    a. Go to the resource group "rg-nttentradomainservices-dev01" > open Microsoft Entra Domain Services "nttentradomain.onmicrosoft.com" > Settings > Properties > take note the IP addresses > go to your VNet > settings > DNS > Update DNS Server IP Address; OR run the configuration diagnostics


nttentradomain.onmicrosoft.com | Properties
Microsoft Entra Domain Services
Search
Overview
Activity log
Access control (IAM)
Tags
Resource visualizer
Settings
Properties
Secure LDAP
Synchronization
Custom attributes
Replica sets
Trusts
DNS domain name
nttentradomain.onmicrosoft.com
Locations
East US
Virtual Networks/Subnets
East US/vnet-nttdomain-dev01/vnet-nttdomain-dev01/EntraDomainServicesSubnet
Network security groups
East US/aadds-nsg
IP addresses
East US/10.0.4.4 10.0.4.5
Secure LDAP
Disabled
Secure LDAP external IP addresses
East US/20.169.218.227


vnet-nttdomain-dev01 | DNS
Virtual network
Search
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Resource visualizer
Settings
DNS server
All VMs that are connected to the virtual network register with the DNS servers that you specify for the virtual network. Learn more
DNS server
Custom (Change)
Custom DNS servers
10.0.4.4
10.0.4.5
DNS private resolver


Home > Resource Manager | Resource groups > rg-nttentradomainservices-dev01 > nttentradomain.onmicrosoft.com
nttentradomain.onmicrosoft.com | Configuration diagnostics
Microsoft Entra Domain Services
Search
Overview
Activity log
Access control (IAM)
Tags
Resource visualizer
Settings
Properties
Secure LDAP
Synchronization
Custom attributes
Run
Diagnostics for the Microsoft Entra Domain Services
Diagnostics completed with one or more warnings at 11/28/2025, 11:17:05 AM.
Validation
Result
East US/vnet-nttdomain-dev01/EntraDomainServicesSubnet
OK
DNS records
Warning
Issues found
DNS server settings for managed domain service IPs 10.0.4.4,10.0.4.5 need to be configured for virtual networks East US/vnet-nttdomain-dev01
Fix

5. Create Subnet for "GatewaySubnet"



4. Create Virtual Network Gateway "vnetgateway-nttdomain-dev01"

Create virtual network gateway ...

Validation passed

Basics Tags **Review + create**

Basics

Subscription	Azure subscription 1
Resource group	rg-ntt-network-dev01
Name	vnetgateway-nttdomain-dev01
Region	East US
SKU	VpnGw2AZ
Generation	Generation2
Virtual network	vnet-nttdomain-dev01
Subnet	GatewaySubnet (10.0.250.0/24)
Gateway type	Vpn
VPN type	RouteBased
Enable active-active mode	Disabled
Enable Advanced Connectivity	Disabled
Configure BGP	Disabled
Public IP address	vnetgateway-publicip-nttdomain-dev01

Tags

None

4. Creating the root certificate & client certificates (Reference: https://learn.microsoft.com/en-us/azure/vpn-gateway/vpn-gateway-certificates-point-to-site)
    a. This certificate is very important for our point-to-site configuration later
    b. On your local computer (I assume MyPC), easier way is opening PowerShell ISE
    c. Copy, Paste, and run the PowerShell code in PowerShell ISE Editor (with current user login):
    d. If you facing UnAuthorizedAccess error, you need to run this command "Set-ExecutionPolicy –ExecutionPolicy ByPass"

#

##

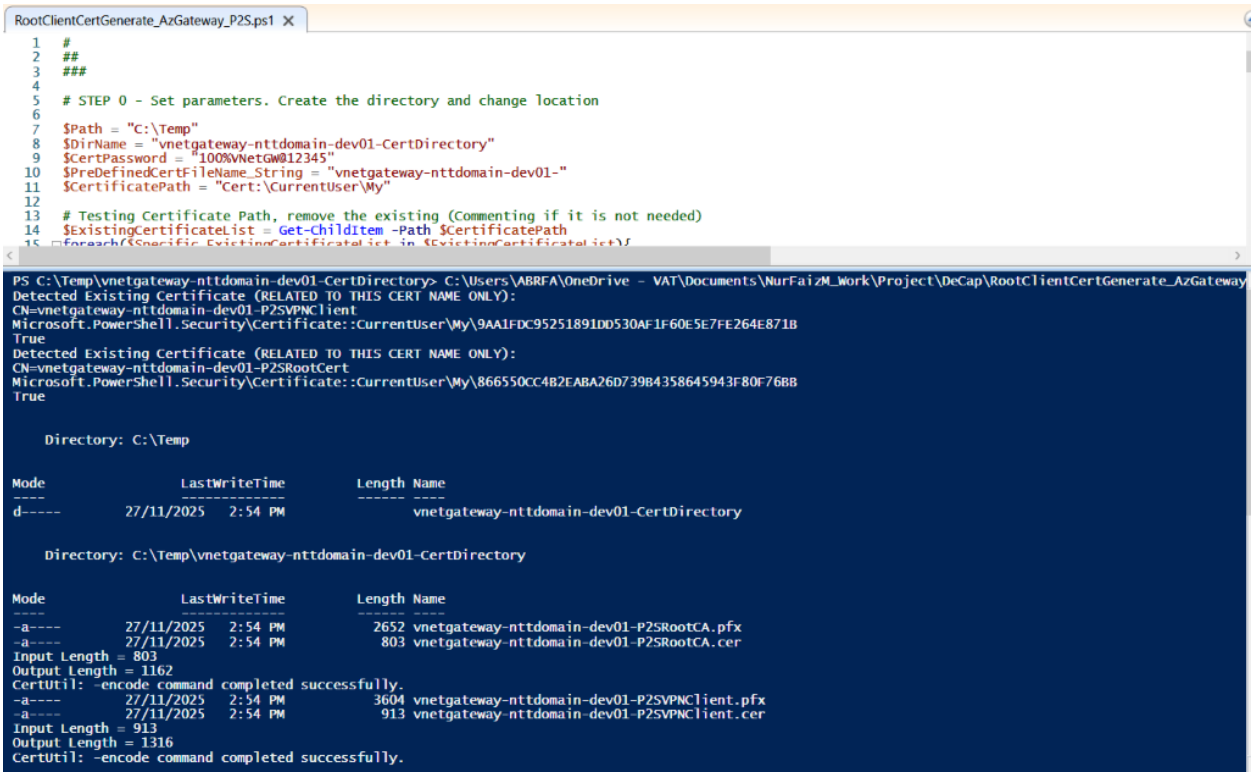
###

```
# STEP 0 - Set parameters. Create the directory and change location

$Path = "C:\Temp"
$DirName = "vnetgateway-nttdomain-dev01-CertDirectory"
$CertPassword = "100%VNetGW@12345"
$PreDefinedCertFileName_String = "vnetgateway-nttdomain-dev01-"
$CertificatePath = "Cert:\CurrentUser\My"

# Testing Certificate Path, remove the existing (Commenting if it is not needed)
$ExistingCertificateList = Get-ChildItem -Path $CertificatePath
foreach($Specific_ExistingCertificateList in $ExistingCertificateList){

   Write-Host "Detected Existing Certificate (RELATED TO THIS CERT NAME ONLY):"
   Write-Host $Specific_ExistingCertificateList.Subject
   Write-Host $Specific_ExistingCertificateList.PSPath
   if(($Specific_ExistingCertificateList.Subject -eq "CN=$($PreDefinedCertFileName_String)P2SVPNClient") -
or ($Specific_ExistingCertificateList.Subject -eq "CN=$($PreDefinedCertFileName_String)P2SRootCert")){
      $true
      Remove-Item -Path $Specific_ExistingCertificateList.PSPath -Recurse -Force
   }else{
      $false
   }

}

# Checking the certificate local directories (Commenting if it is not needed)
if(Test-Path -Path "$($Path)\$($DirName)"){
   Remove-Item -Path "$($Path)\$($DirName)" -Recurse -Force
}
```

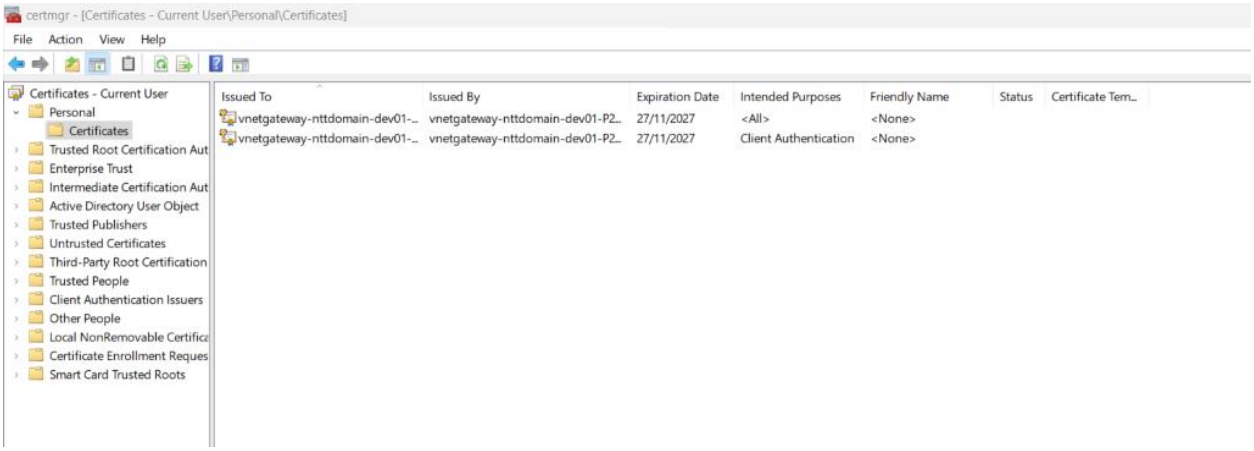
```
New-Item -ItemType Directory -Path $Path -Name $DirName -Force
Set-Location -Path "$($Path)\$($DirName)"

###
##
#

#
##
###

# STEP 1 - To Create Root Certificate
# Create the self-signed Root CA (same as OpenSSL x509 root)
$rootCert = New-SelfSignedCertificate `
   -Type Custom `
   -KeyExportPolicy Exportable `
   -KeyLength 2048 `
   -KeyAlgorithm RSA `
   -KeySpec Signature `
   -HashAlgorithm SHA256 `
   -Subject "CN=$($PreDefinedCertFileName_String)P2SRootCert" `
   -CertStoreLocation "$($CertificatePath)" `
   -KeyUsageProperty Sign `
   -KeyUsage CertSign, CRLSign `
   -NotAfter (Get-Date).AddMonths(24)


# Export private key + certificate (PFX)
```

```
$Password = ConvertTo-SecureString -String $CertPassword -Force -AsPlainText

Export-PfxCertificate -Cert $rootCert -FilePath "$($PreDefinedCertFileName_String)P2SRootCA.pfx" -Password $Password -Force

#Export certificate only (CRT/PEM)
Export-Certificate -Cert $rootCert -FilePath "$($PreDefinedCertFileName_String)P2SRootCA.cer" -Force

certutil -encode "$($PreDefinedCertFileName_String)P2SRootCA.cer" "$($PreDefinedCertFileName_String)P2SRootCA.pem"

###
##
#

#
##
###

# STEP 2 - To Create Client Certificate signed by the root certificate (created in STEP 1)
# Create the client certificate request
$clientReq = New-SelfSignedCertificate `
  -Type Custom `
  -KeyExportPolicy Exportable `
  -KeyLength 2048 `
  -KeyAlgorithm RSA `
  -HashAlgorithm SHA256 `
  -NotAfter (Get-Date).AddMonths(24) `
  -KeySpec Signature `
  -Subject "CN=$($PreDefinedCertFileName_String)P2SVPNClient" `
```

```
    -DnsName "$($PreDefinedCertFileName_String)P2SVPNClient" `
    -CertStoreLocation "$($CertificatePath)" `
    -Signer $rootCert `
    -TextExtension @("2.5.29.37={text}1.3.6.1.5.5.7.3.2")



# Export PFX
Export-PfxCertificate -Cert $clientReq -FilePath "$($PreDefinedCertFileName_String)P2SVPNClient.pfx" -Password $Password -Force


# Export public certificate
Export-Certificate -Cert $clientReq -FilePath "$($PreDefinedCertFileName_String)P2SVPNClient.cer" -Force


certutil -encode "$($PreDefinedCertFileName_String)P2SVPNClient.cer" "$($PreDefinedCertFileName_String)P2SVPNClient.crt"


###
##
#
```



5. Verify the cert is create in certificate manager of current users (Go to start > search for certmgr.msc > Certificates – Current User > Personal > Certificates)



6. Configuring the Point-to-site connection

    a. Reference = https://learn.microsoft.com/en-us/azure/vpn-gateway/point-to-site-certificate-gateway

    b. Export the root cert "vnetgateway-nttdomain-dev01-P2SRootCert". From the certificate manager of current users (Go to start > search for certmgr.msc > Certificates – Current

User > Personal > Certificates), right click > all tasks > export of this certificate "vnetgateway-nttdomain-dev01-P2SRootCert" > from the certificate export wizard: click next > selext No, do not export the private key and click next > Select Base-64 encoded X.509 (.CER) for the file format and click next > Browse the location to export file and set file name > click next > click finish.

c. Go back to the location of certificate that we've export (e.g: C:\Temp\vnetgateway-nttdomain-dev01-CertDirectory) and open it with notepad. You should see certificate like below:

d. Go back to your Virtual Network Gateway > Settings > Point-to-Site- Configuration > Click Configure Now:

   i. Enter the custom our defined private IP range that will be using in P2S client (e.g 172.16.201.0/24) in Address Pool

      1. The P2S client address pool must NOT overlap with:

         a. Your VNet (e.g. 10.0.0.0/16 or whatever you use)

         b. The GatewaySubnet (10.0.250.0/24)

         c. On-premises networks (if hybrid)

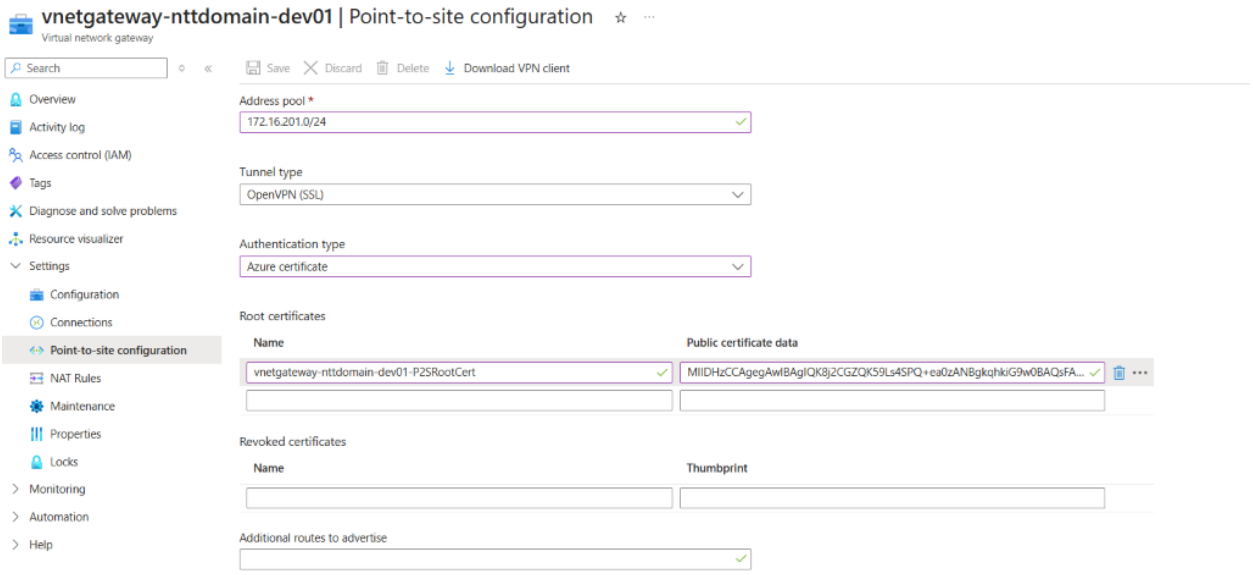
         d. Other P2S pools (if multiple gateways)

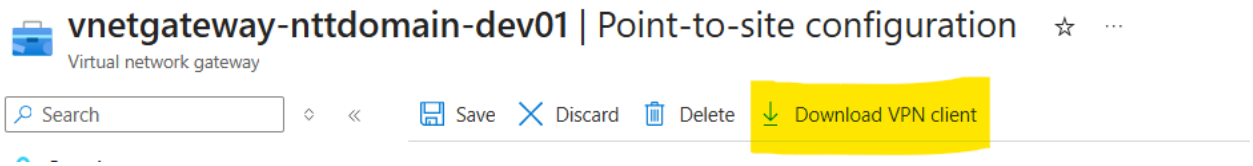
ii. Tunnel type set OpenVPN (SSL)

iii. Authentication type = Azure Certificate

iv. Root Certificates (Name = Set same Root certificate name that we export on previous step, Public Certificate Data = Copy from the certificate data that we open with notepad)

v. Click save and download the VPN client

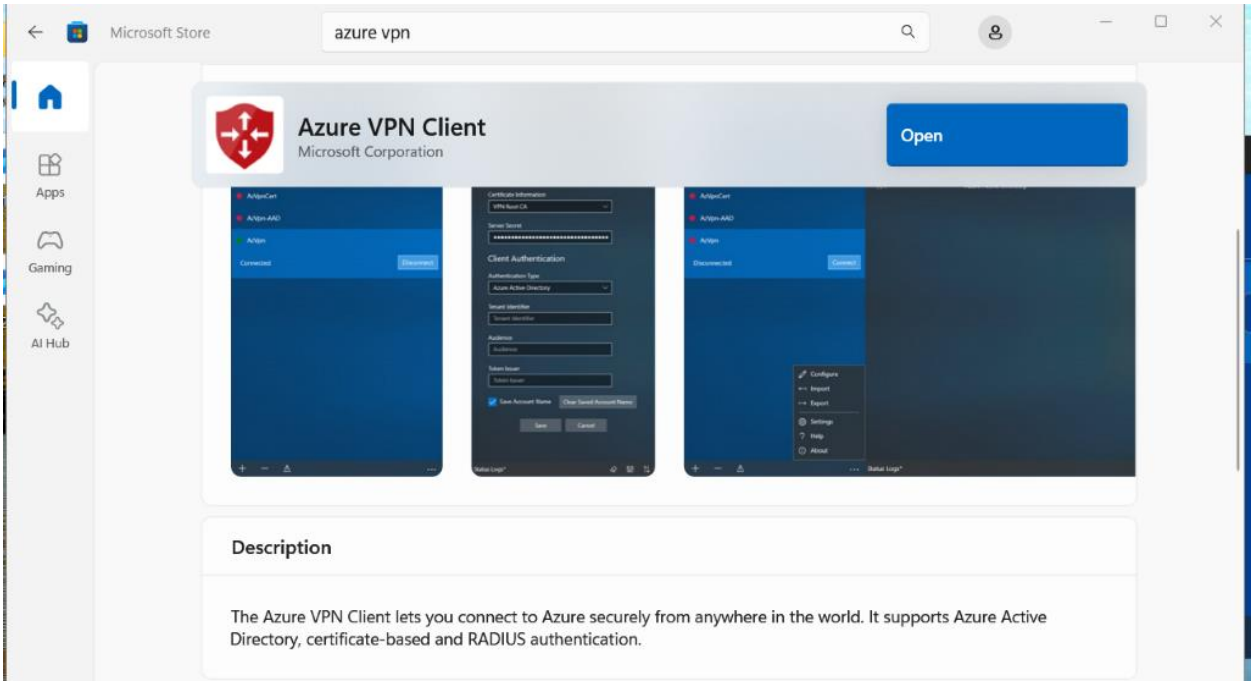




e. Testing the Azure VPN Client:

i. Once you have download the VPN client from the Azure Point-To-Site, you may extract it. It should look like below. Inside the folder should have the AzureVPN folder and inside that we have the VPN profiles

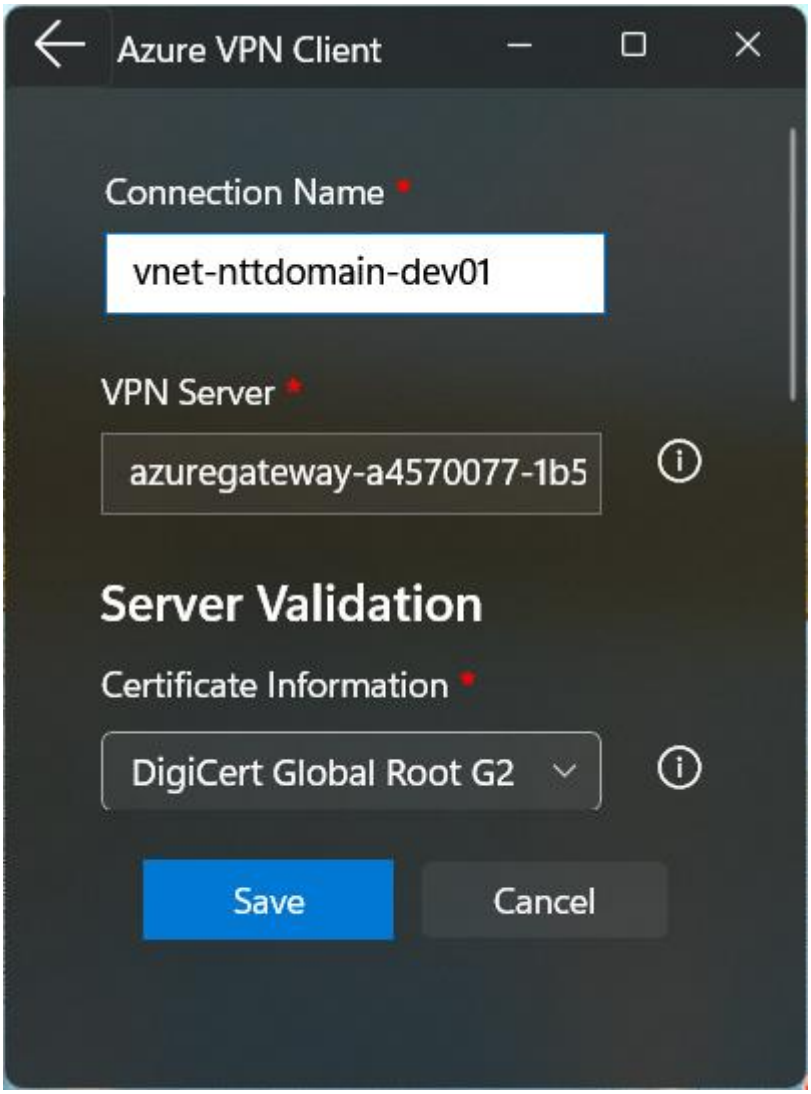
ii. If no Azure VPN installer, we can get it from Microsoft Store



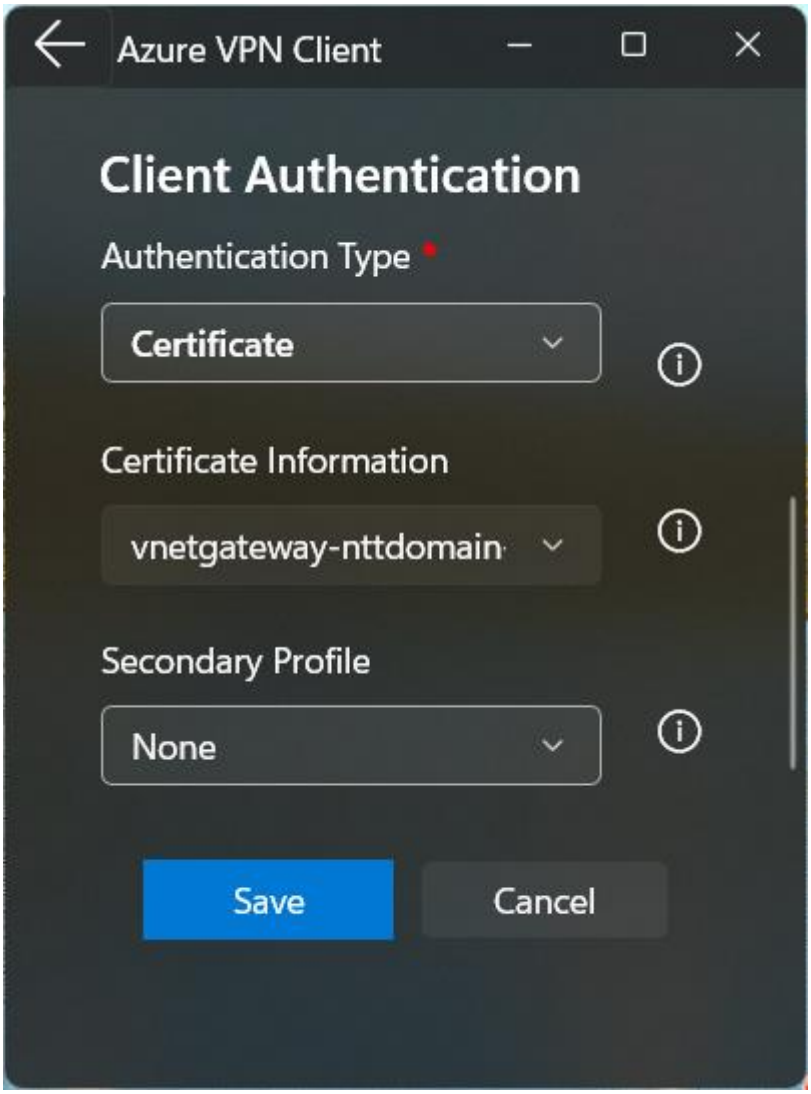
iii. (Assume we are in client computer) Once Azure VPN Client Install, then we need to configure it. First import the client certificate (*.pfx) on the client side. IMPORTANT: Client certificate must be import into any client side (Can use automation / GPO / Policies to do that). When import the client certificate, it may asking for the password, please enter password that we set in the script earlier.

iv. From azure VPN Client click + icon > click import

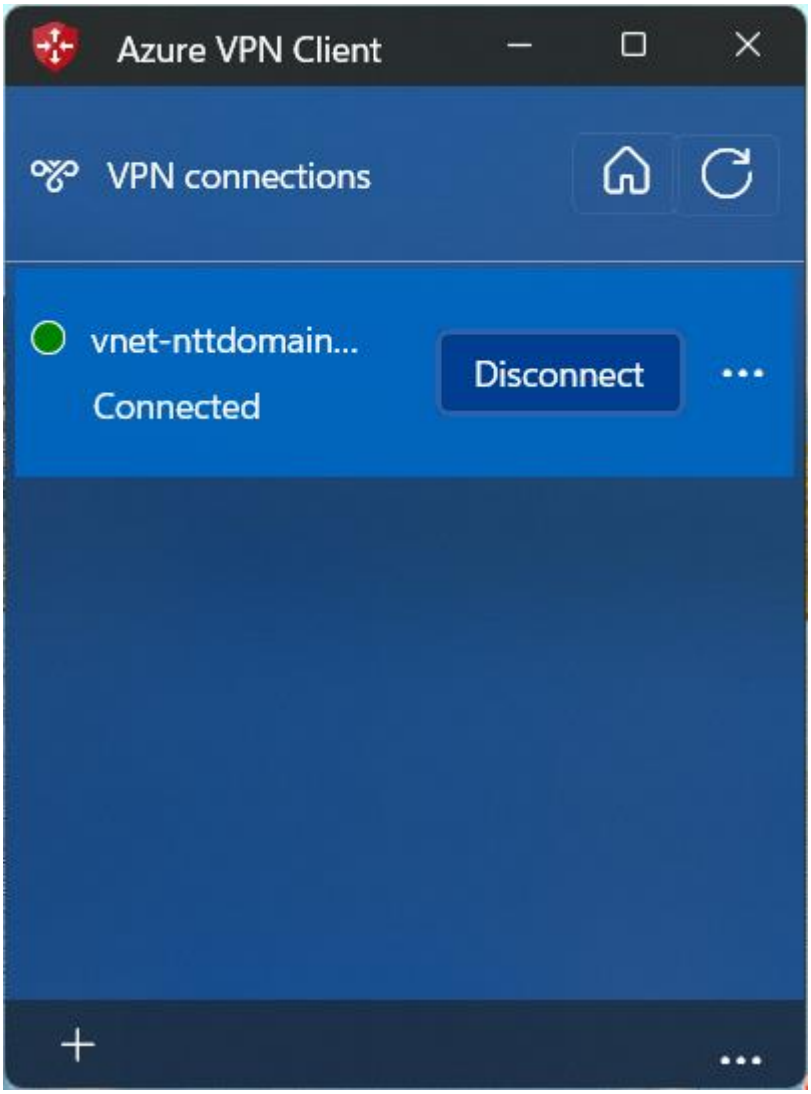
v. Go to VPN Profiles that we've download previously (inside AzureVPN folder), you will see azurevpnconfig.xml > select and click Open. You will see connection name, server validation information



vi. Scroll down until client authentication. Authentication type (certificate) > Certificate Information (Choose the client certificate name that we've successfully import earlier) > Click Save



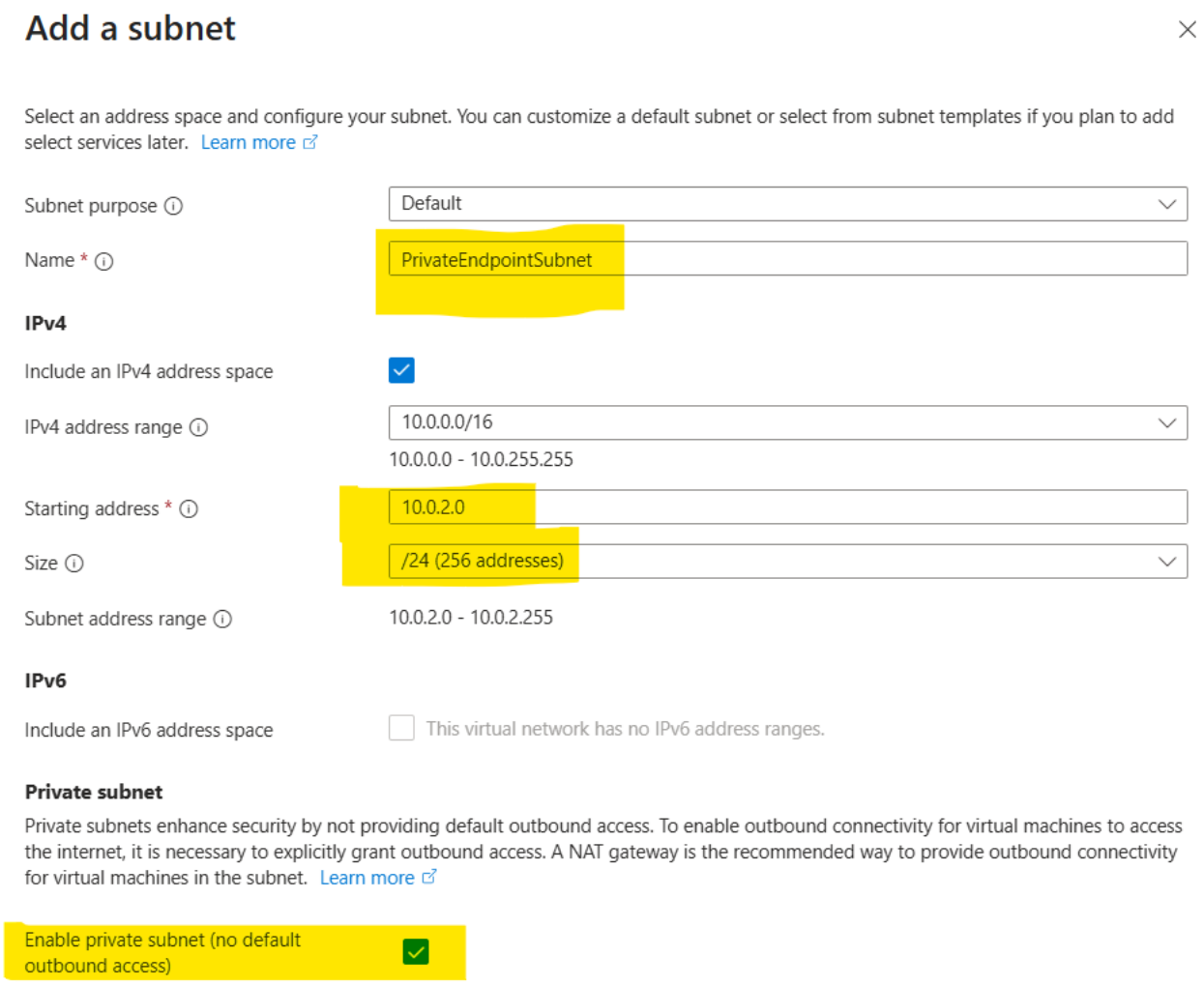
vii. From your home network, please try to connect. It shpuld be connected



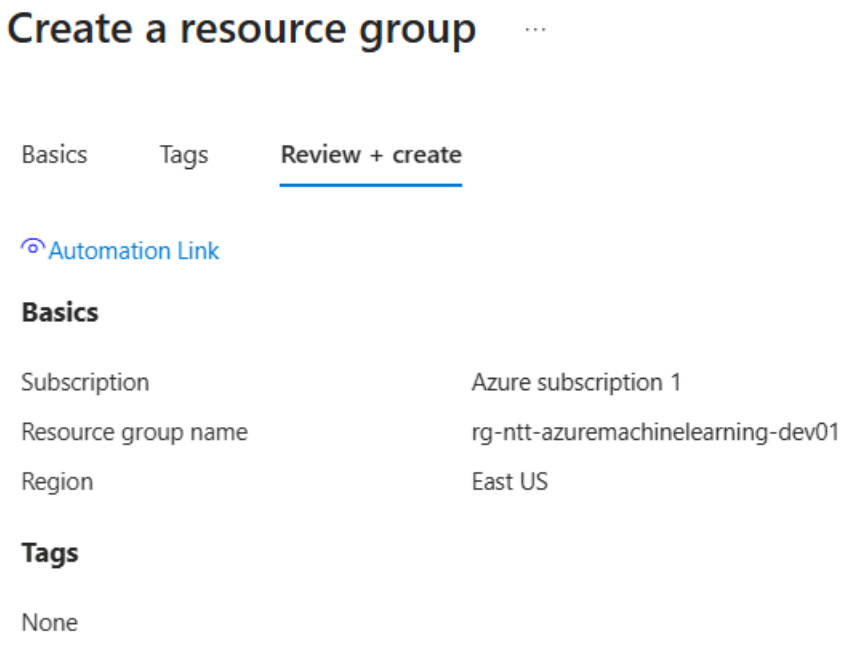
viii. Open command prompt and do ipconfig. You should see the adapter (Azure VPN) that we connected and the IP address should be within the address pool that we've assigned in point-to-site configuration (172.16.201.0/24):

```
PPP adapter vnet-nttdomain-dev01:

   Connection-specific DNS Suffix  . :
   IPv4 Address. . . . . . . . . . . : 172.16.201.2
   Subnet Mask . . . . . . . . . . . : 255.255.255.255
   Default Gateway . . . . . . . . . :
```

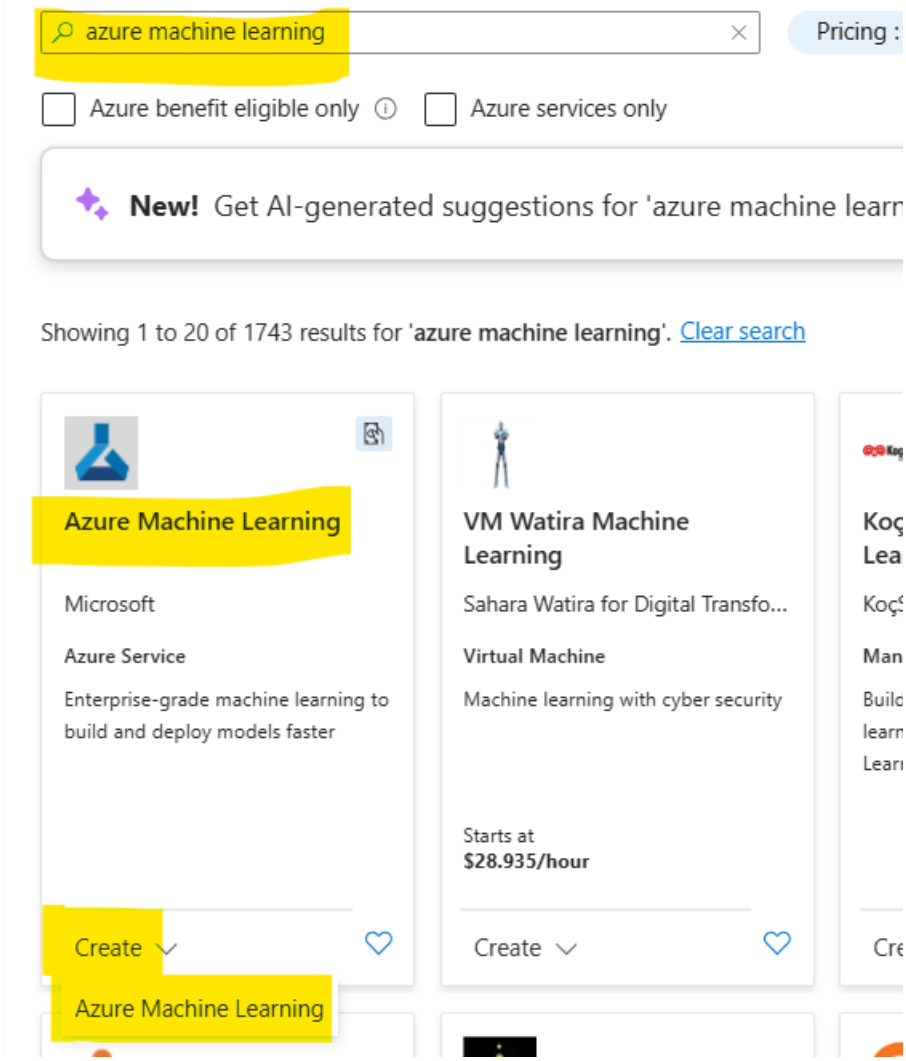
7. Create a new subnet "PrivateEndpointSubnet"



8. Create Azure Machine Learning resource group "rg-ntt-azuremachinelearning-dev01"



9. Create Azure Machine Learning
    a. Go inside resource group "rg-ntt-azuremachinelearning-dev01"
    b. Click create new resources > search for azure machine learning > click create > click azure machine learning


azure machine learning
Pricing :
Azure benefit eligible only
Azure services only
New! Get AI-generated suggestions for 'azure machine learn
Showing 1 to 20 of 1743 results for 'azure machine learning'. Clear search
Azure Machine Learning
Microsoft
Azure Service
Enterprise-grade machine learning to build and deploy models faster
Create
Azure Machine Learning
VM Watira Machine Learning
Sahara Watira for Digital Transfo...
Virtual Machine
Machine learning with cyber security
Starts at
$28.935/hour
Create

Azure Machine Learning

Create a machine learning workspace

Basics | Inbound Access | Outbound Access | Encryption | Identity | Tags | Review + create

Resource details

Every workspace must be assigned to an Azure subscription, which is where billing happens. You use resource groups like folders to organize and manage resources, including the workspace you're about to create.
Learn more about Azure resource groups

Subscription * : Azure subscription 1

Resource group * : rg-ntt-azuremachinelearning-dev01
Create new

Workspace details

Configure your basic workspace settings like its storage connection, authentication, container, and more. Learn more

Name * : azmlws-workspace-dev01

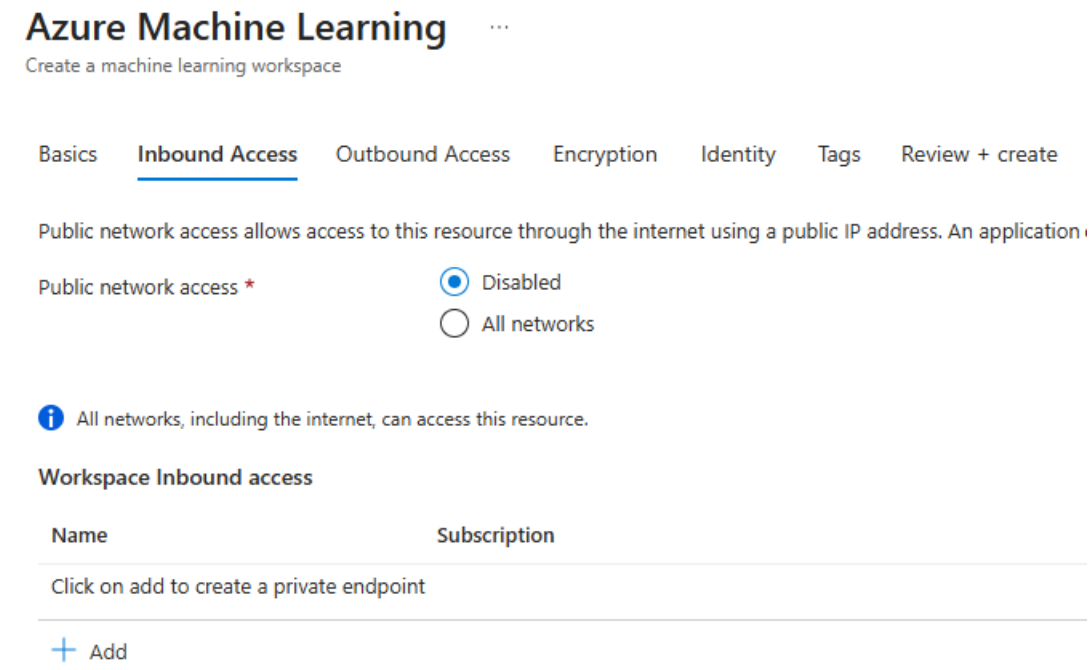
Region * : East US

Storage account * : (new) azmlwsstorageacctdev01
Create new

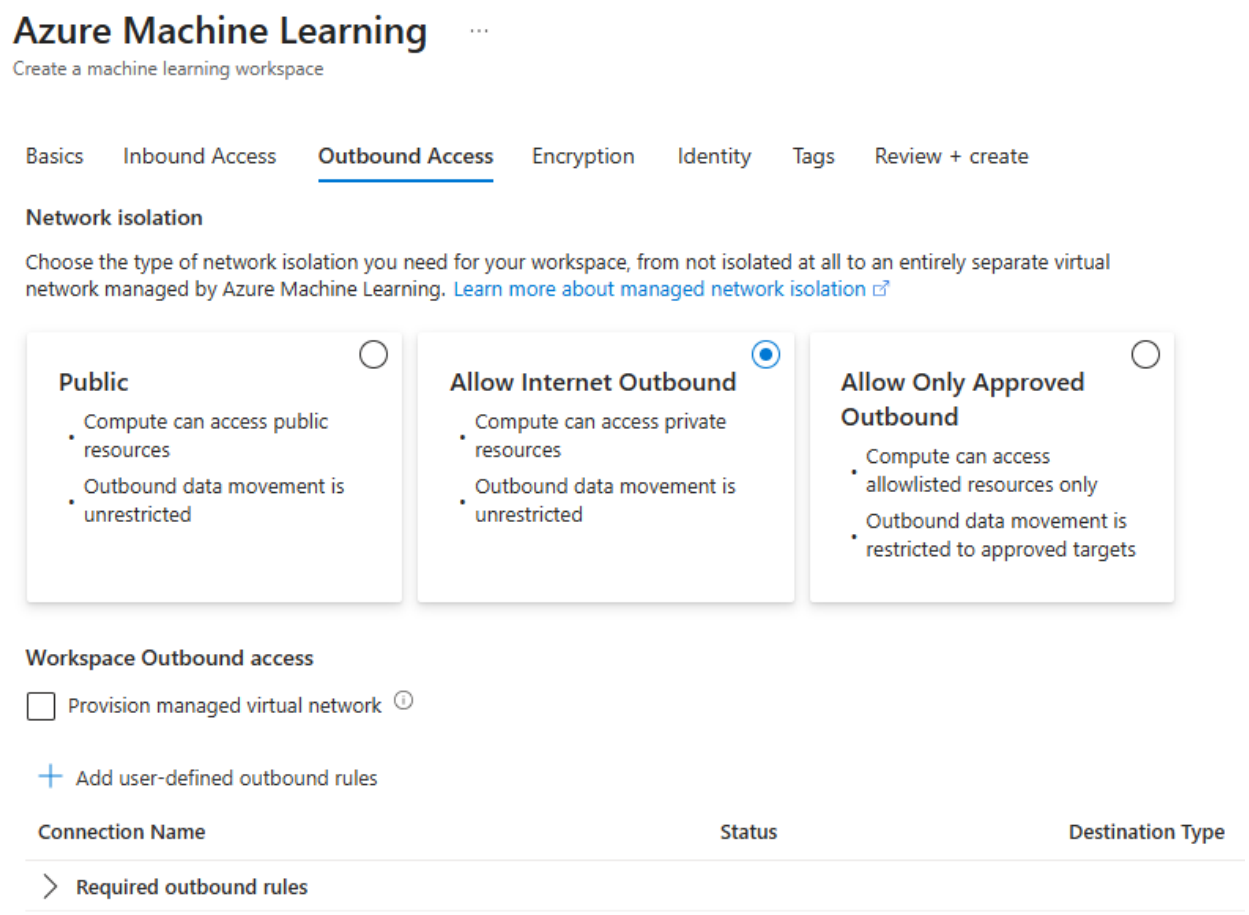
Key vault * : (new) azmlwskeyvaultdev01
Create new

Application insights * : (new) azmlwsappsinsightdev01
Create new

Container registry : (new) azmlwscontainerregistrydev01
Create new



(Outbound Access) If choosing Allow Internet Outbound then no need for user defined outbound rule (we can create later if needed)

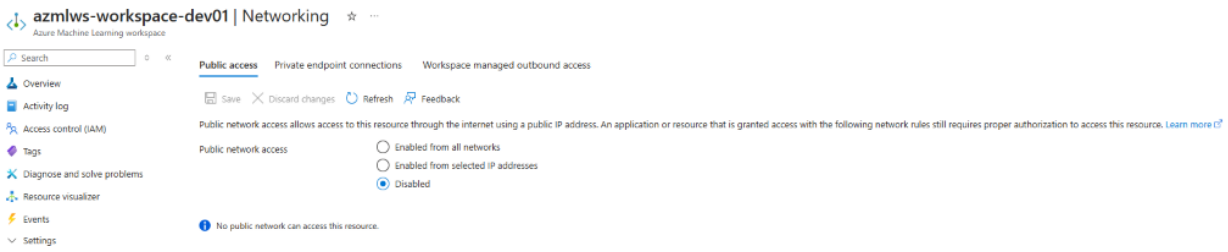


c. Click review + create

10. Create private endpoint for workspace

a. Go to resource group "rg-ntt-azuremachinelearning-dev01" > open azure machine learning workspace "azmlws-workspace-dev01" > Settings > networking

b. Public access tabs > Disable public access



c. Private endpoints connections > click + Private endpoint

Create a private endpoint

1 Basics 2 Resource 3 Virtual Network 4 DNS 5 Tags 6 Review + create

Use private endpoints to privately connect to a service or resource. Your private endpoint must be in the same region as your virtual network, but can be in a different region from the private link resource that you are connecting to. Learn more

Project details

Subscription * : Azure subscription 1

Resource group * : rg-ntt-azuremachinelearning-dev01

Create new

Instance details

Name * : azmlws-workspace-pe-dev01

Network Interface Name * : azmlws-workspace-pe-dev01-nic

Region * : East US

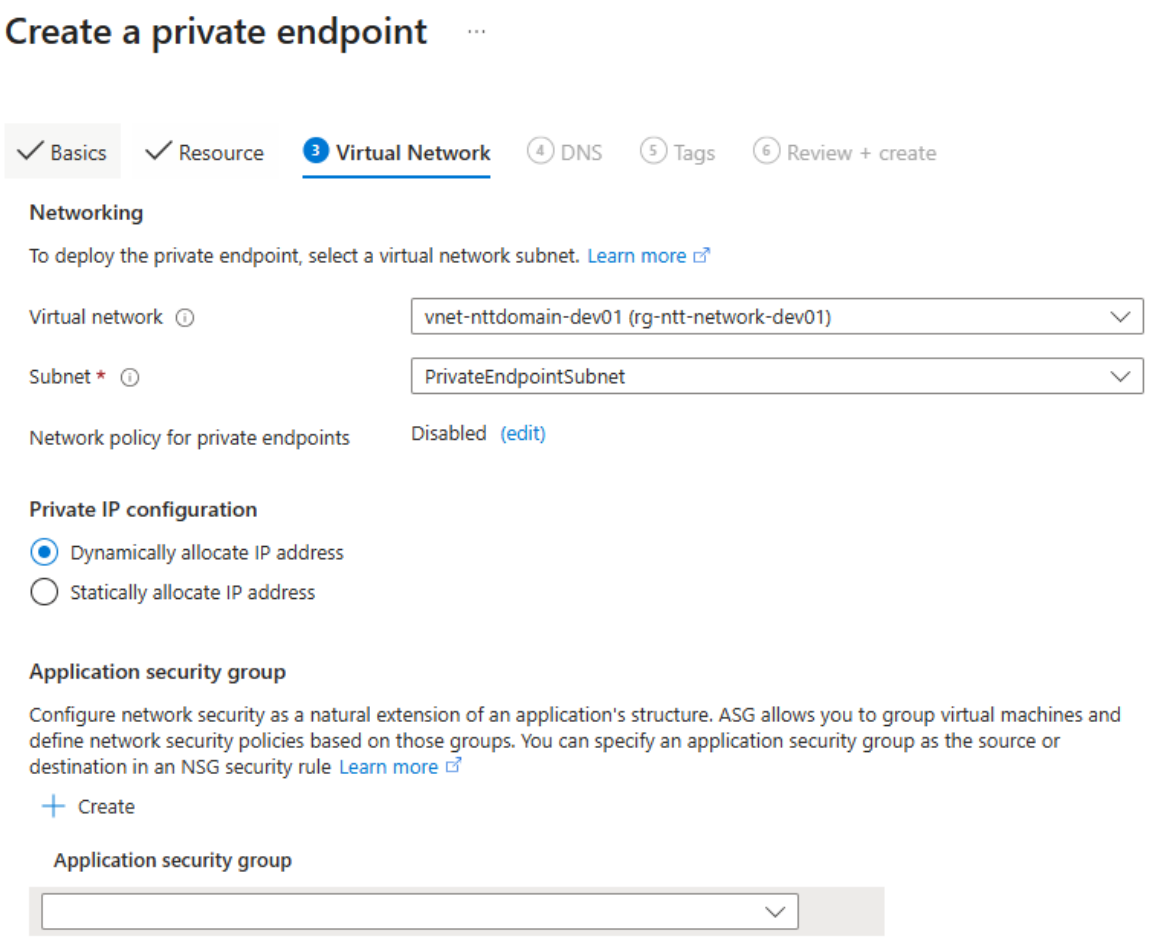
Create a private endpoint

✓ Basics 2 Resource 3 Virtual Network 4 DNS 5 Tags 6 Review + create

Private Link offers options to create private endpoints for different Azure resources, like your private link service, a SQL server, or an Azure storage account. Select which resource you would like to connect to using this private endpoint. Learn more

Subscription	Azure subscription 1 (89fd8d45-9f83-4f18-af2f-d99dac4acf15)
Resource type	Microsoft.MachineLearningServices/workspaces
Resource	azmlws-workspace-dev01

Target sub-resource * : amlworkspace

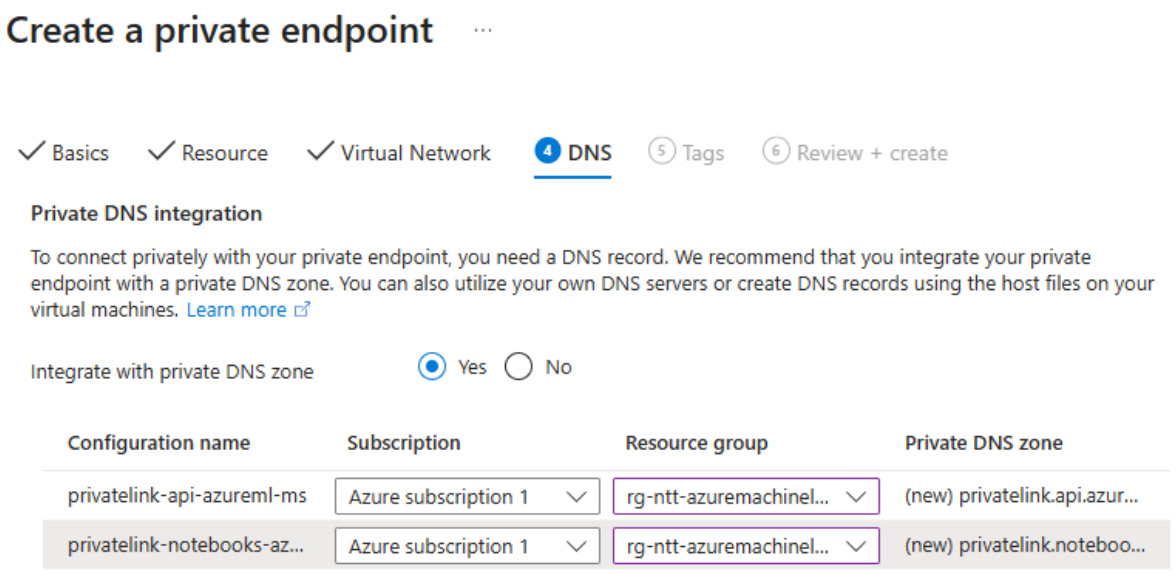


Please take note the private DNS zone for later testing:

Private DNS zone

privatelink.api.azureml.ms

privatelink.notebooks.azure.net

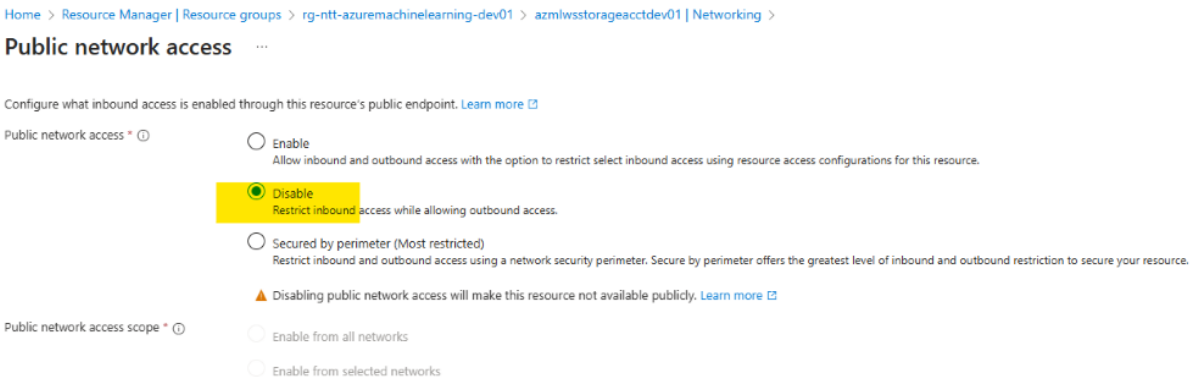


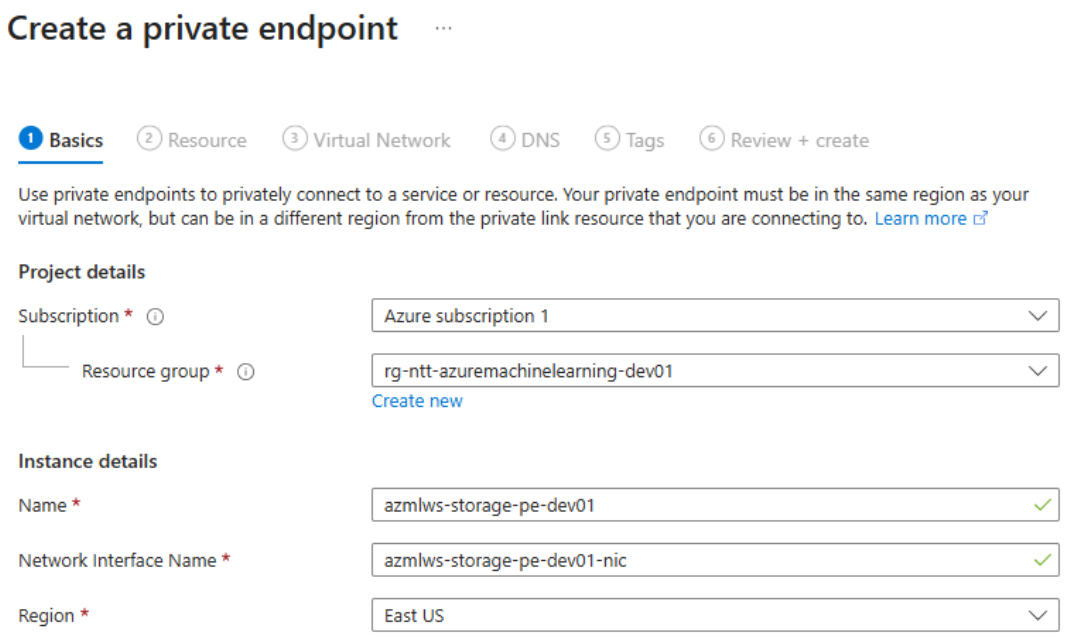
d. Click review + create

11. Create private endpoint for storage

a. Go to resource group > rg-ntt-azuremachinelearning-dev01 > click storage account azmlwsstorageacctdev01 > Security + networking > networking

b. Disable public access





Repeat the same step for target sub-resource that we need based on business requirement

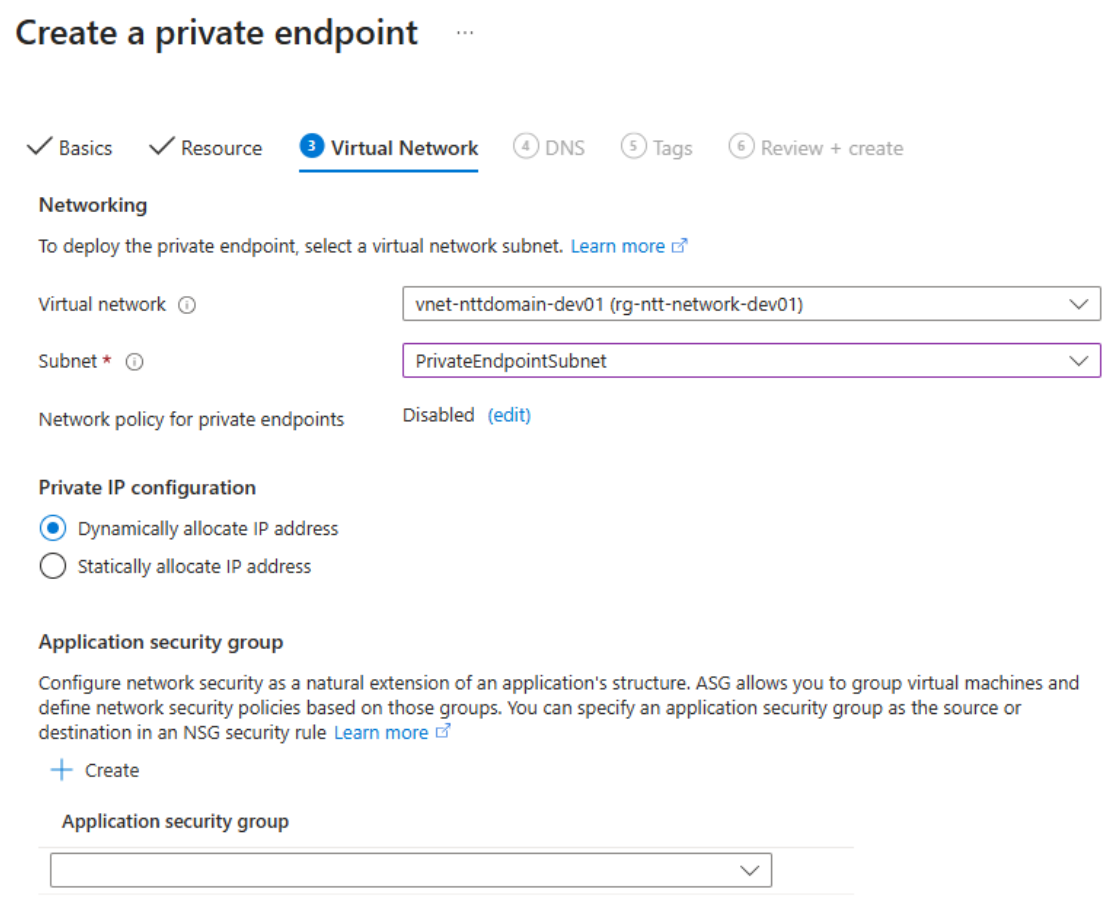
Create a private endpoint ...

✓ Basics | 2 Resource | 3 Virtual Network | 4 DNS | 5 Tags | 6 Review + create

Private Link offers options to create private endpoints for different Azure resources, like your private link service, a SQL server, or an Azure storage account. Select which resource you would like to connect to using this private endpoint. Learn more

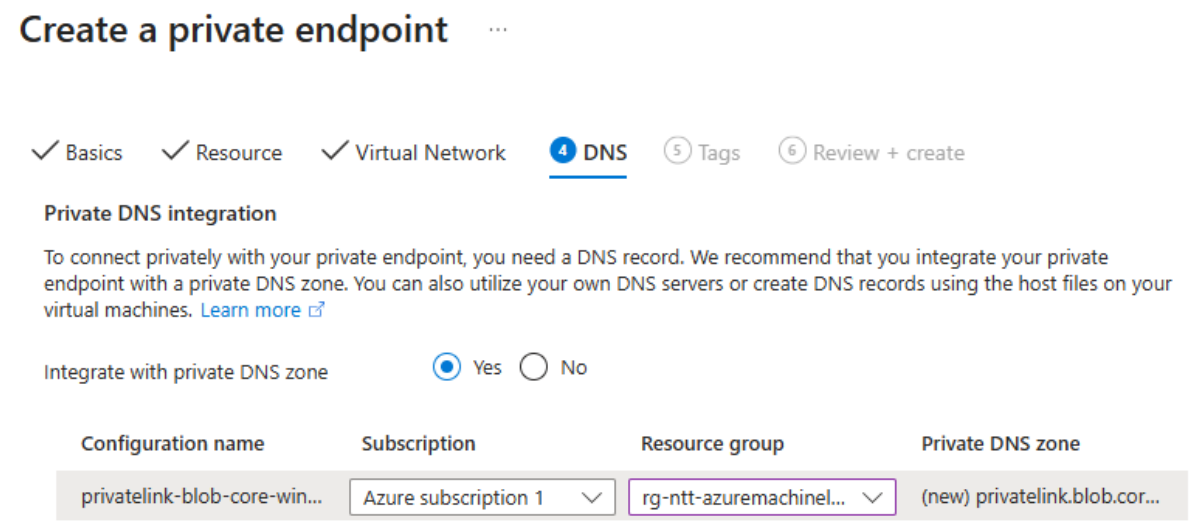
Subscription	Azure subscription 1 (89fd8d45-9f83-4f18-af2f-d99dac4acf15)
Resource type	Microsoft.Storage/storageAccounts
Resource	azmlwsstorageacctdev01
Target sub-resource *	blob

- blob
- table
- queue
- file
- web
- dfs



Please take note on the private DNS zone for testing later (example blob)

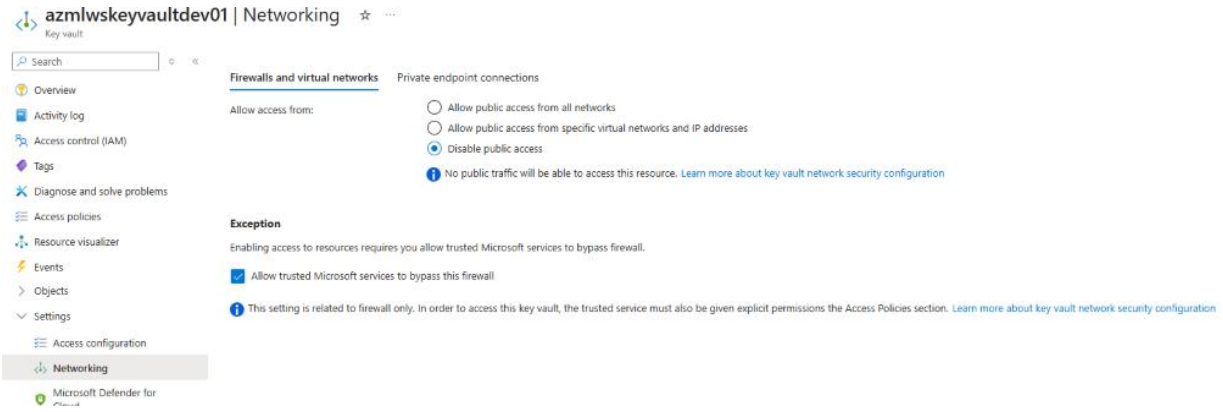
privatelink.blob.core.windows.net



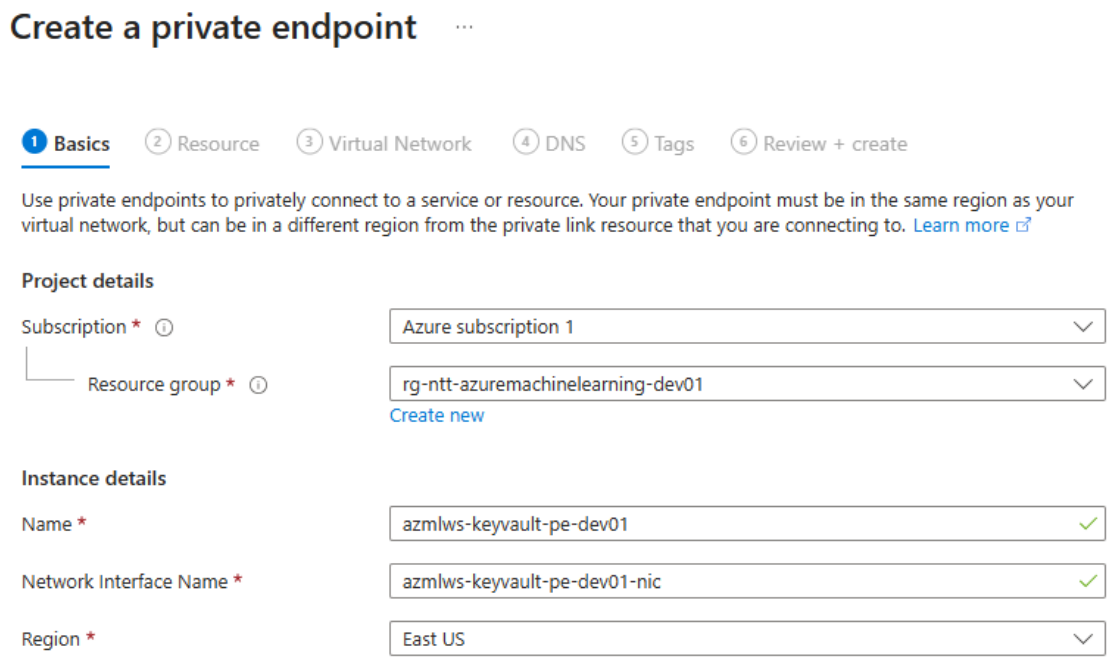
12. Create private endpoint for keyvault

    a. Go to resource group > rg-ntt-azuremachinelearning-dev01 > click keyvault azmlwskeyvaultdev01 > Settings > Networking

    b. Firewalls and virtual networks = disable public access



    c. Private endpoints connection > create



Create a private endpoint ...

✓ Basics | 2 Resource | 3 Virtual Network | 4 DNS | 5 Tags | 6 Review + create

Private Link offers options to create private endpoints for different Azure resources, like your private link service, a SQL server, or an Azure storage account. Select which resource you would like to connect to using this private endpoint. Learn more

Connection method
- (•) Connect to an Azure resource in my directory.
- ( ) Connect to an Azure resource by resource ID or alias.

Subscription * : Azure subscription 1

Resource type * : Microsoft.KeyVault/vaults

Resource * : azmlwskeyvaultdev01

Target sub-resource * : vault

Create a private endpoint ...

✓ Basics | ✓ Resource | 3 Virtual Network | 4 DNS | 5 Tags | 6 Review + create

Networking

To deploy the private endpoint, select a virtual network subnet. Learn more

Virtual network : vnet-nttdomain-dev01 (rg-ntt-network-dev01)

Subnet * : PrivateEndpointSubnet

Network policy for private endpoints : Disabled (edit)

Private IP configuration

- (•) Dynamically allocate IP address
- ( ) Statically allocate IP address

Application security group

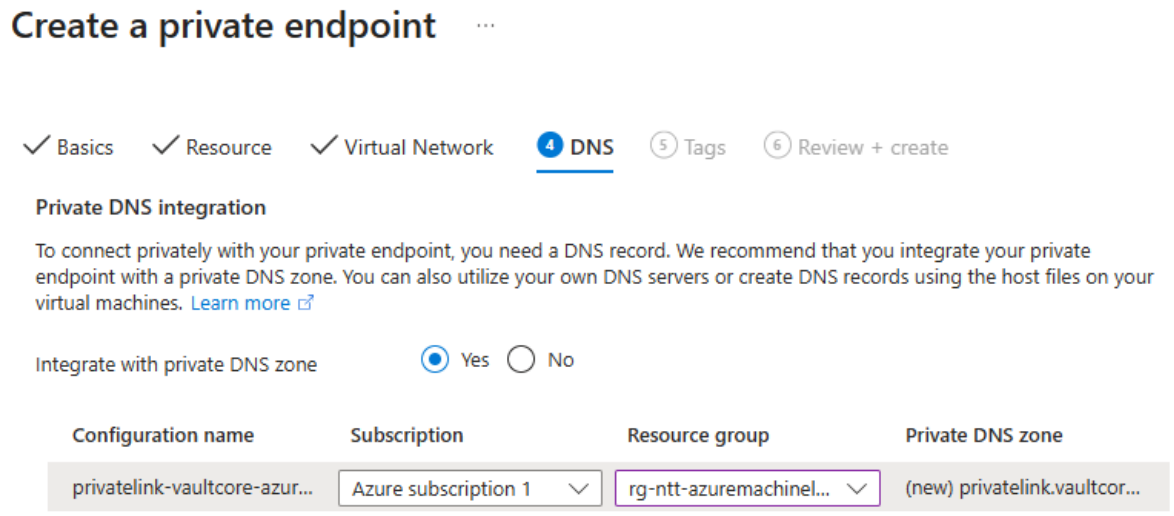
Configure network security as a natural extension of an application's structure. ASG allows you to group virtual machines and define network security policies based on those groups. You can specify an application security group as the source or destination in an NSG security rule Learn more

+ Create

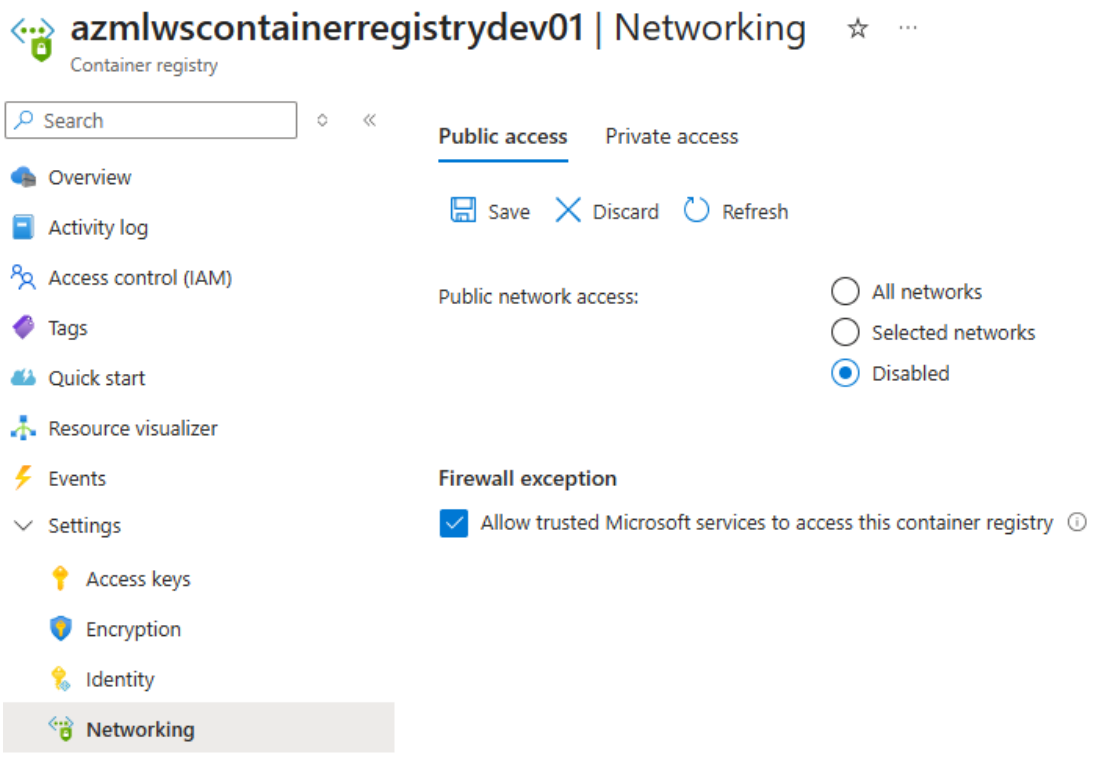
Application security group

Please take note on the private DNS zone for testing later

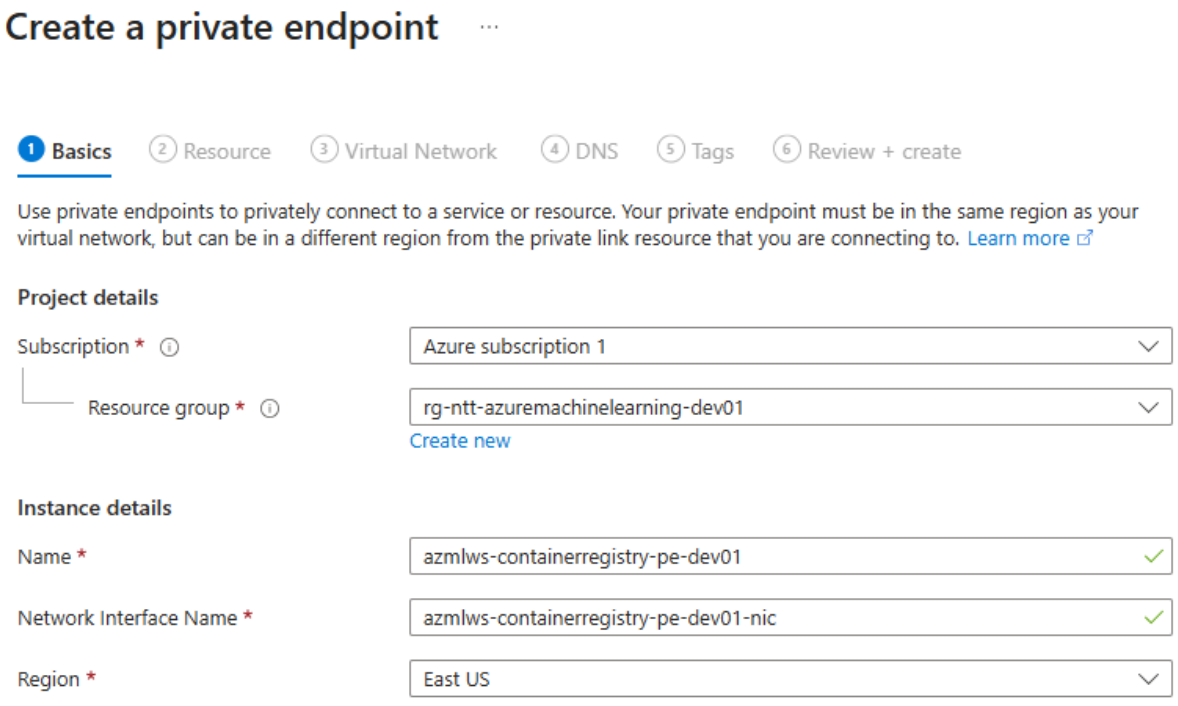
privatelink.vaultcore.azure.net



13. Create private endpoints for container registry
    a. Go to resource group > rg-ntt-azuremachinelearning-dev01 > azmlwscontainerregistrydev01 > Settings > Networking
    b. Public access = Disabled



c. Private access = create a private endpoints



Create a private endpoint

Basics | 2 Resource | 3 Virtual Network | 4 DNS | 5 Tags | 6 Review + create

Private Link offers options to create private endpoints for different Azure resources, like your private link service, a SQL server, or an Azure storage account. Select which resource you would like to connect to using this private endpoint. Learn more

Subscription	Azure subscription 1 (89fd8d45-9f83-4f18-af2f-d99dac4acf15)
Resource type	Microsoft.ContainerRegistry/registries
Resource	azmlwscontainerregistrydev01
Target sub-resource *	registry

Create a private endpoint

Basics | Resource | 3 Virtual Network | 4 DNS | 5 Tags | 6 Review + create

Networking

To deploy the private endpoint, select a virtual network subnet. Learn more

Virtual network	vnet-nttdomain-dev01 (rg-ntt-network-dev01)
Subnet *	PrivateEndpointSubnet
Network policy for private endpoints	Disabled (edit)

Private IP configuration

- (•) Dynamically allocate IP address
- ( ) Statically allocate IP address

Application security group

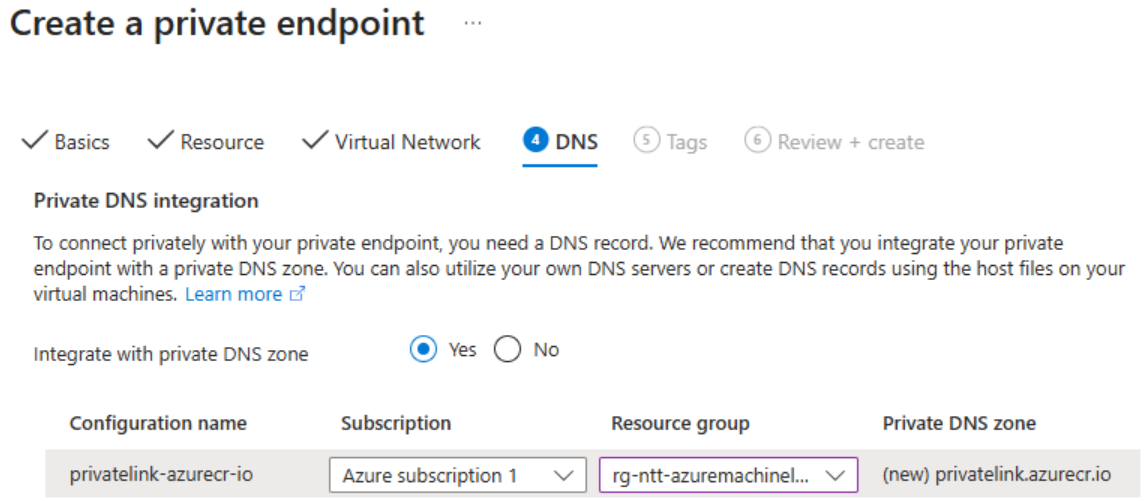
Configure network security as a natural extension of an application's structure. ASG allows you to group virtual machines and define network security policies based on those groups. You can specify an application security group as the source or destination in an NSG security rule Learn more

+ Create

Application security group

Please take note on the private DNS zone for testing later

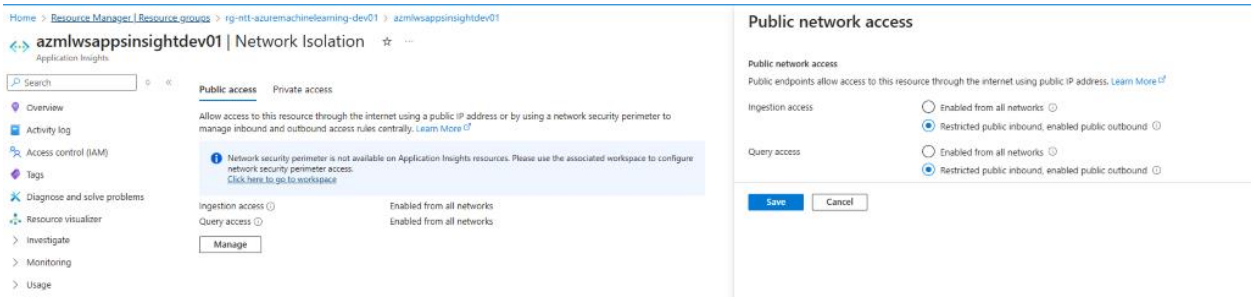
privatelink.azurecr.io



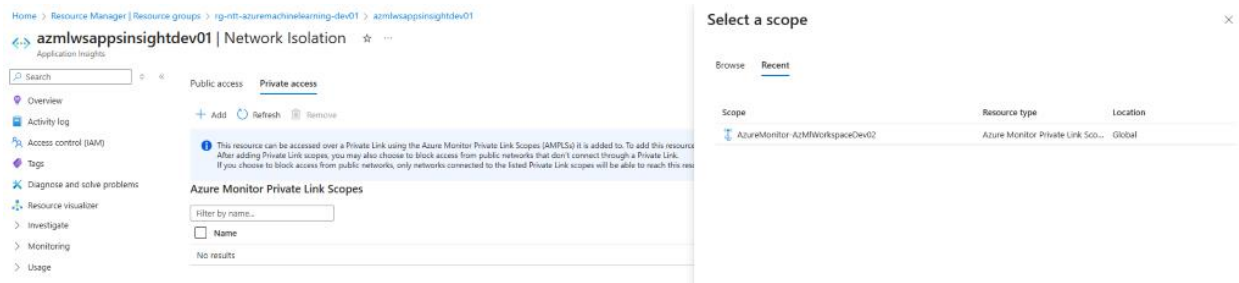
14. Create private endpoints for application insight

    a. Go to resource group > rg-ntt-azuremachinelearning-dev01 > azmlwsappsinsightdev01 > Configure > Network Isolation

    b. Public access = disabled



    c. Private access = create private endpoints



15. Create a compute cluster for container registry, else you will see this error

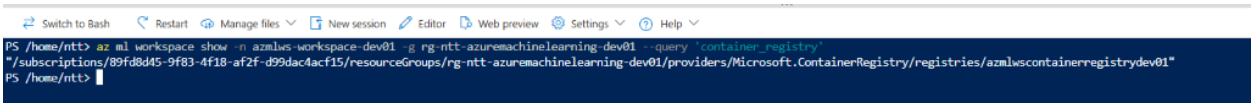
Container registry Code: ImageBuildComputeNotValid Message: If Container Registry is behind the virtual network, Container Registry cannot build your image. Set the imageBuildCompute property to build your image. See https://docs.microsoft.com/azure/machine-learning/how-to-secure-workspace-vnet#enable-azure-container-registry-acr

a. AzureML uses the compute cluster to build the docker image. So we need to create a compute cluster (Reference: https://learn.microsoft.com/en-us/azure/machine-learning/how-to-secure-workspace-vnet?view=azureml-api-2&tabs=required%2Cpe%2Ccli#enable-azure-container-registry-acr)

b. Open cloud shell on your azure portal > Verify the aml compute cluster (use this command): **az ml compute list -g rg-ntt-azuremachinelearning-dev01 -w azmlws-workspace-dev01 --query "[].{name:name,type:type}"**

```
PS /home/ntt> az ml compute list -g rg-ntt-azuremachinelearning-dev01 -w azmlws-workspace-dev01 --query "[].{name:name,type:type}"

[]
PS /home/ntt>
```

c. If see blank array meaning that n aml compute cluster, we have to create it. Use this command to verify the container registry = az ml workspace show -n azmlws-workspace-dev01 -g rg-ntt-azuremachinelearning-dev01 --query 'container_registry'



d. Set up an image-build AML compute, create an Azure Machine Learning AML compute cluster in the same VNet as your workspace-dependent resources. This cluster can then be set as the default image-build compute and will be used to build every image in your workspace from that point onwards:

   i. PS /home/ntt> **az ml compute create -n azmlwscomputeclusterdev01 -g rg-ntt-azuremachinelearning-dev01 -w azmlws-workspace-dev01 --type AmlCompute --size Standard_DS3_v2 --min-instances 0 --max-instances 1**

```
PS /home/ntt> az ml compute delete -n azmlwscomputeclusterdev01 -g rg-ntt-azuremachinelearning-dev01 -w azmlws-workspace-dev01 --yes
PS /home/ntt> az ml compute create -n azmlwscomputeclusterdev01 -g rg-ntt-azuremachinelearning-dev01 -w azmlws-workspace-dev01 --type AmlCompute --size Standard_DS3_v2 --min-instances 0 --ma
x-instances 1
{
  "enable_node_public_ip": true,
  "id": "/subscriptions/89fd8d45-9f83-4f18-af2f-d99dac4acf15/resourceGroups/rg-ntt-azuremachinelearning-dev01/providers/Microsoft.MachineLearningServices/workspaces/azmlws-workspace-dev01/c
omputes/azmlwscomputeclusterdev01",
  "idle_time_before_scale_down": 120,
  "location": "eastus",
  "max_instances": 1,
  "min_instances": 0,
  "name": "azmlwscomputeclusterdev01",
  "network_settings": {},
  "provisioning_state": "Succeeded",
  "resourceGroup": "rg-ntt-azuremachinelearning-dev01",
  "size": "Standard_DS3_v2",
  "ssh_public_access_enabled": true,
  "tier": "dedicated",
  "type": "amlcompute"
}
PS /home/ntt>
```

ii. Final verify the aml compute cluster (use this command): **az ml compute list -g rg-ntt-azuremachinelearning-dev01 -w azmlws-workspace-dev01 --query "[].{name:name,type:type}"**

```
PS /home/ntt> az ml compute list -g rg-ntt-azuremachinelearning-dev01 -w azmlws-workspace-dev01 --query "[].{name:name,type:type}"
[
  {
    "name": "azmlwscomputeclusterdev01",
    "type": "amlcompute"
  }
]
PS /home/ntt>
```

16. Create private DNS resolver

a. Search for DNS Private Resolver > Create. During creation you will create another 2 subnet for DnsResolver subnet inbound and outbound. Make sure to create under the same VNet else you need to make connection between VNet-to-VNet

Create a DNS private resolver ...

Basics | Inbound Endpoints | Outbound Endpoints | Ruleset | Tags | Review + Create

Instance details

Private resolver is a regional service. Only virtual networks and rulesets in the same region can use this private resolver.

Name * ntt-network-dnsprivateresolver-dev01

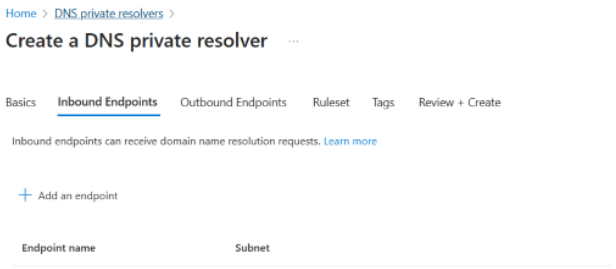
Region * (US) East US

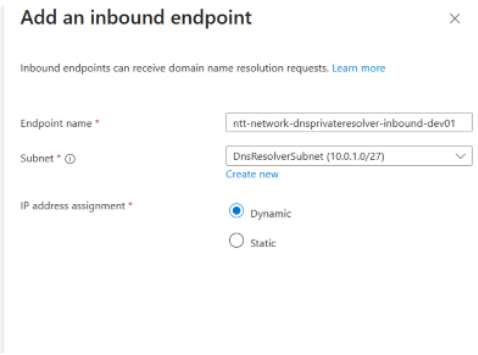
DNS private resolver and virtual network must exist in the same location, so the region selected here will affect the available virtual networks for selection.

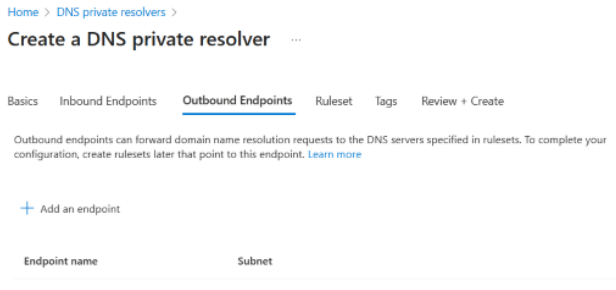
Virtual Network

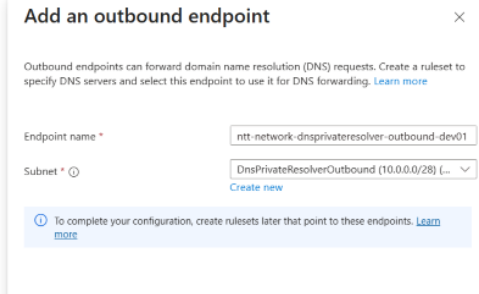
Select a virtual network for your private resolver and endpoints. Learn more

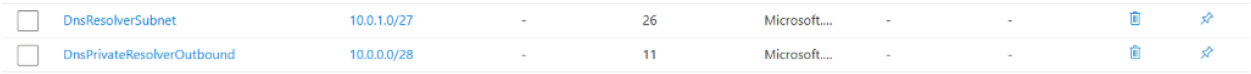
Virtual Network * vnet-nttdomain-dev01 (rg-ntt-network-dev01)











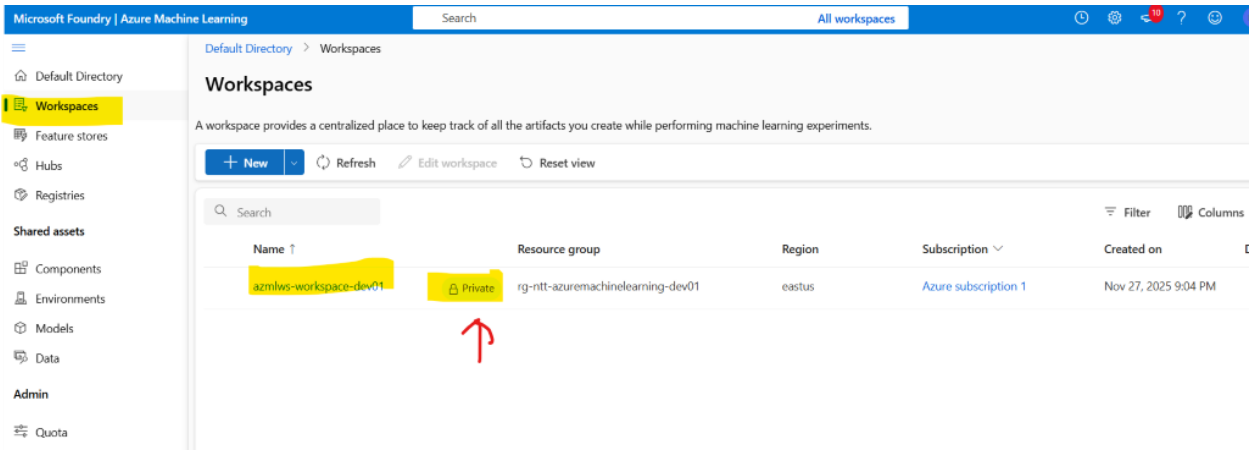
b. Click review + create. Later step we do DNS forwarding ruleset. To do that you need to make sure you already have DNS Server VM / On-Premises / Microsoft Entra Domain Services

17. Testing accessing azure machine learning

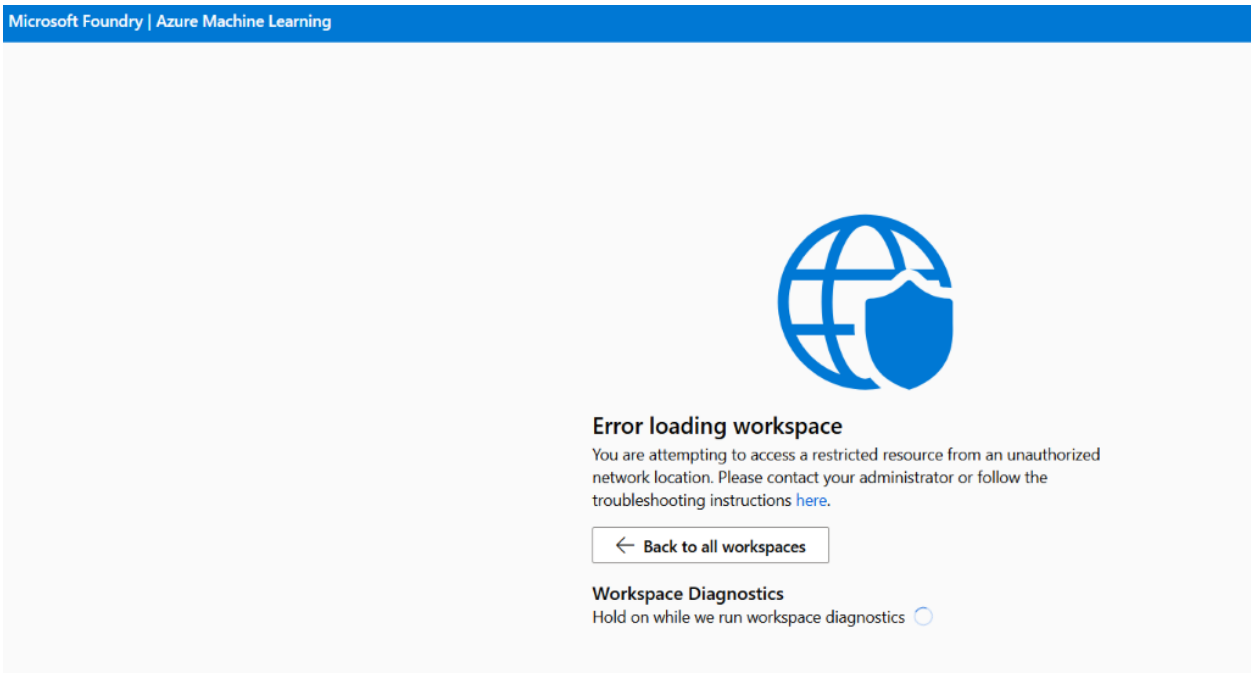
a. Go to https://ml.azure.com/

b. Login > click workspace > you should see the workspace name that we've create BUT it should show as private

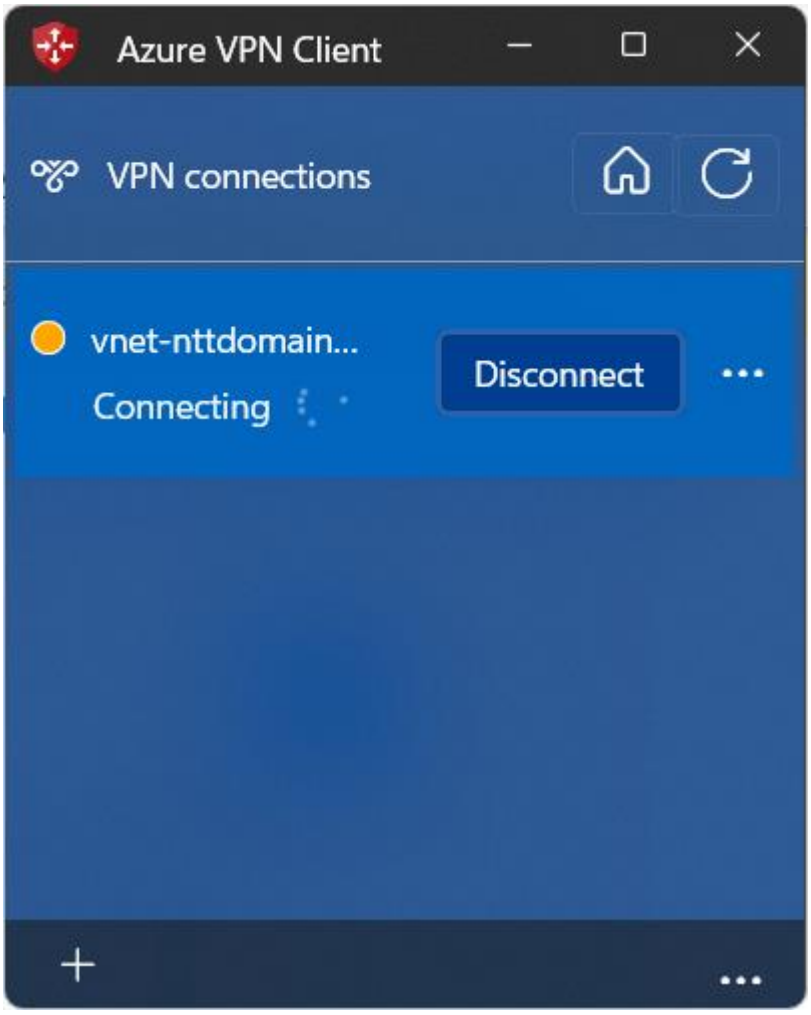
c. Click to open the workspace azmlws-workspace-dev01

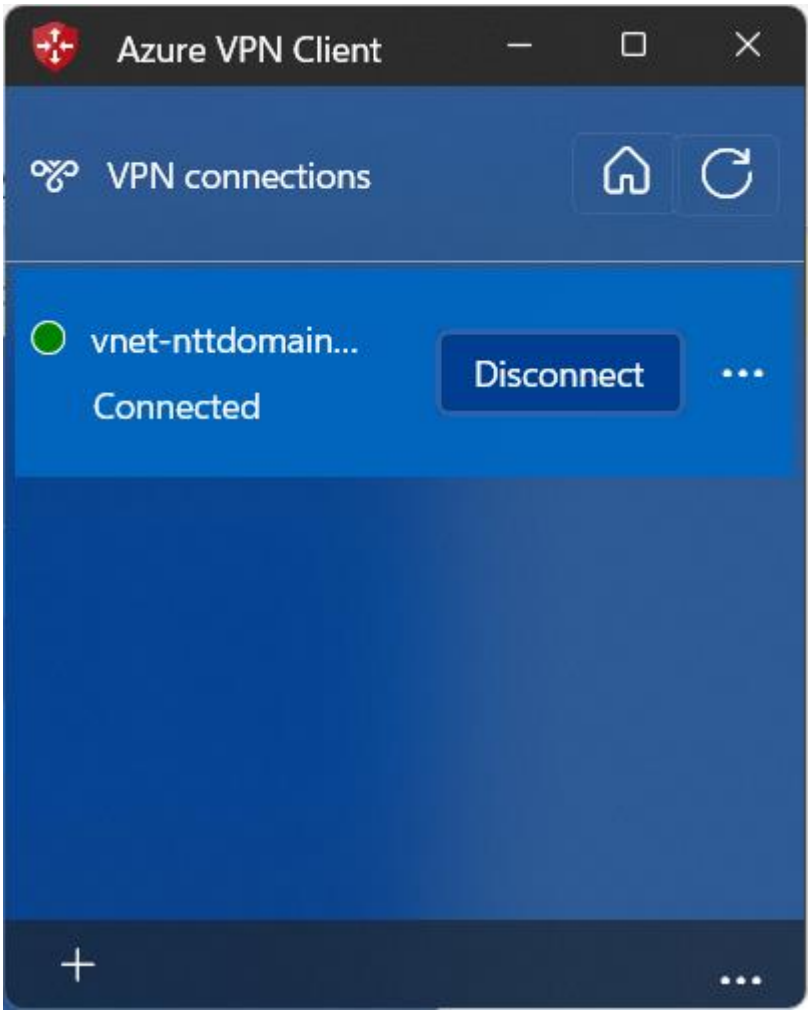


d. (Assume you are in public network) when you open the workspace you should see error that you are not allow to access private resources from public network – meaning that the test was success.



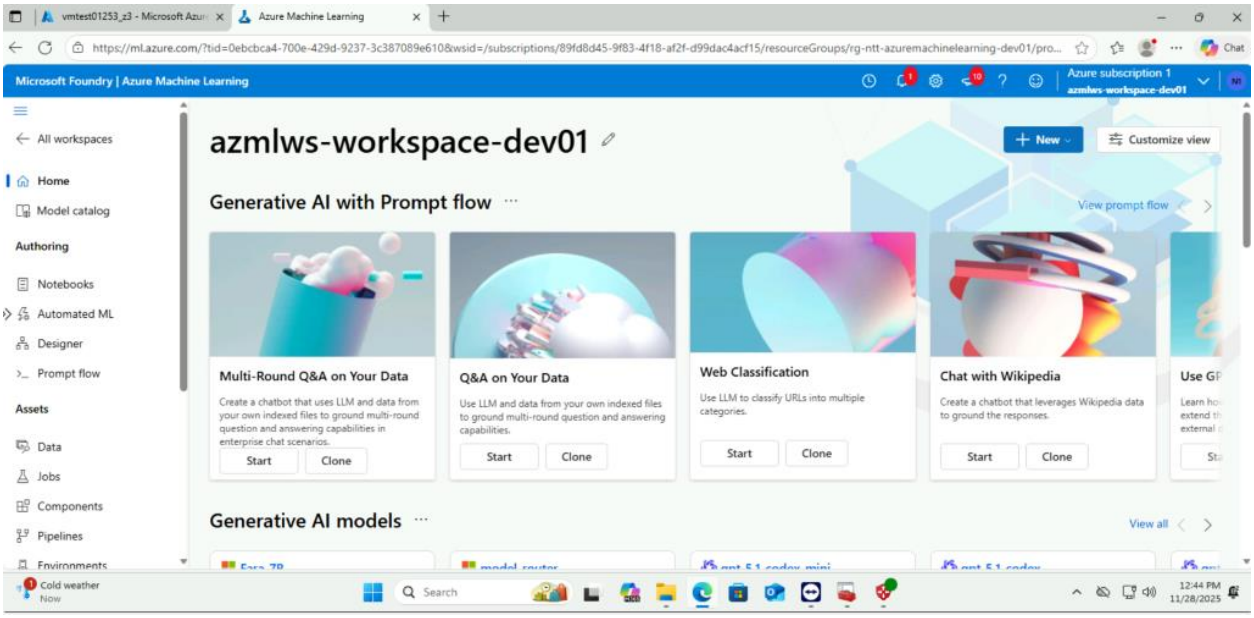
e. To make it work we need to connect to azure VPN that we've configured (Azure VPN Gateways + P2S). The outcome we should be able to open the private workspace

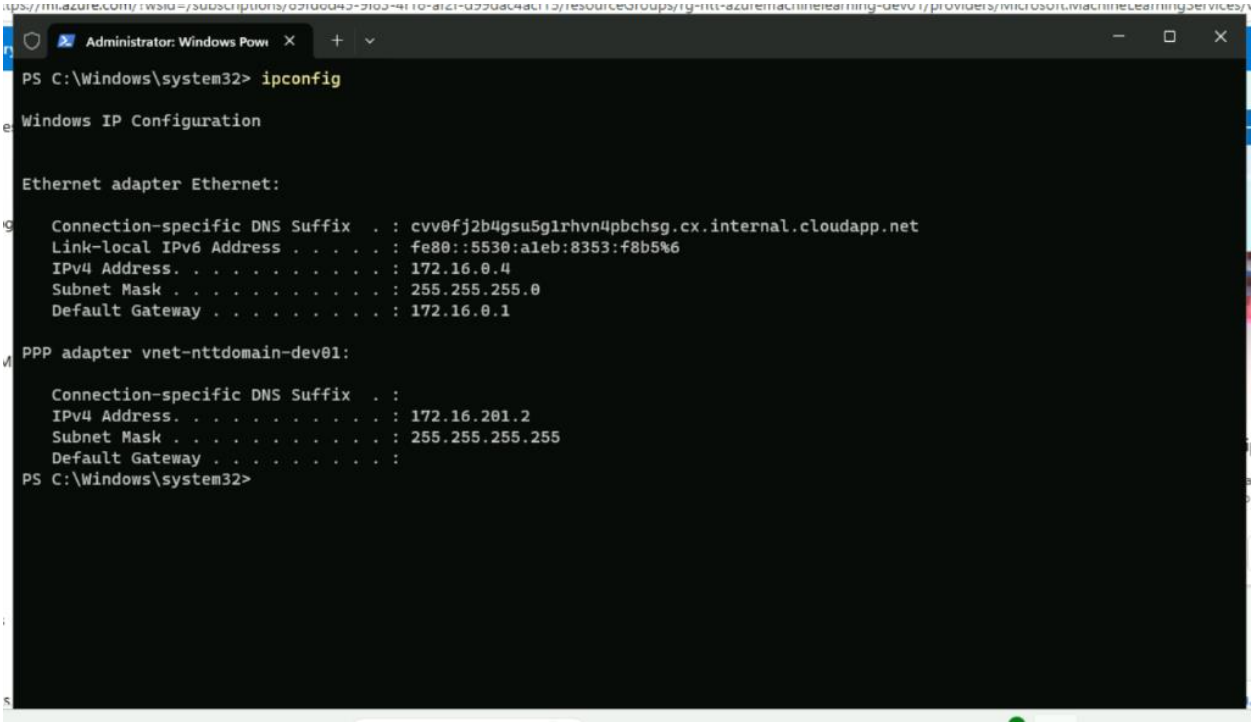

Azure VPN Client
VPN connections
vnet-nttdomain...
Connecting
Disconnect



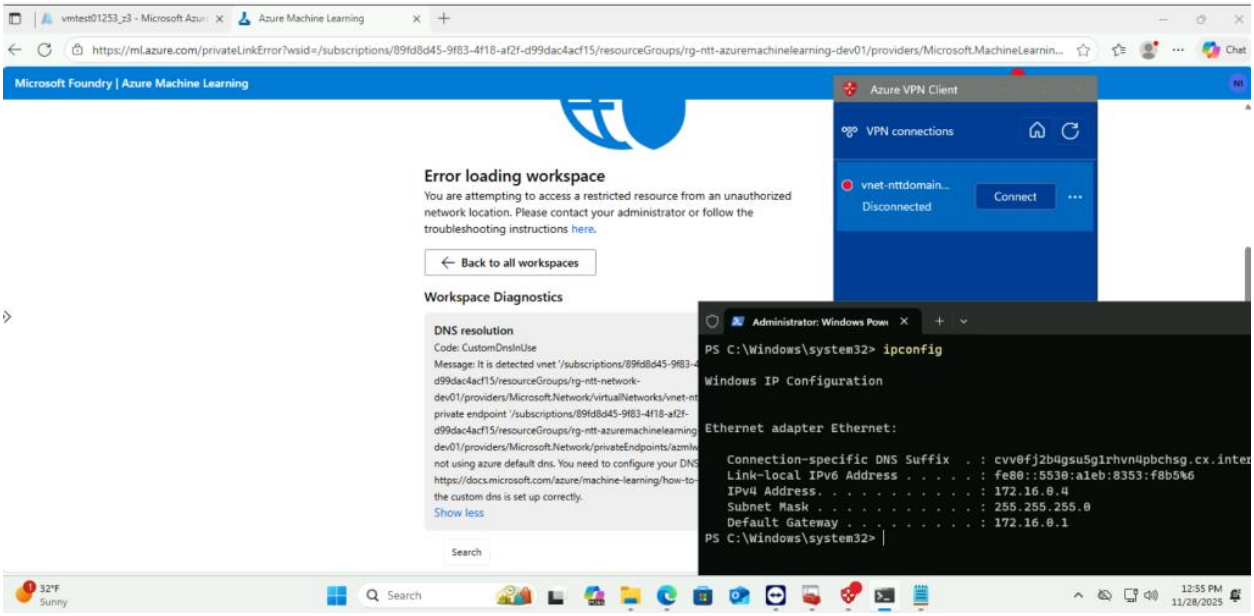
f. Open https://ml.azure.com

g. Open the private workspace (NOTES: You may facing access issue maybe local or domain firewall, DNS private resolver issue, DNS forwarding ruleset issue, NSG issue)

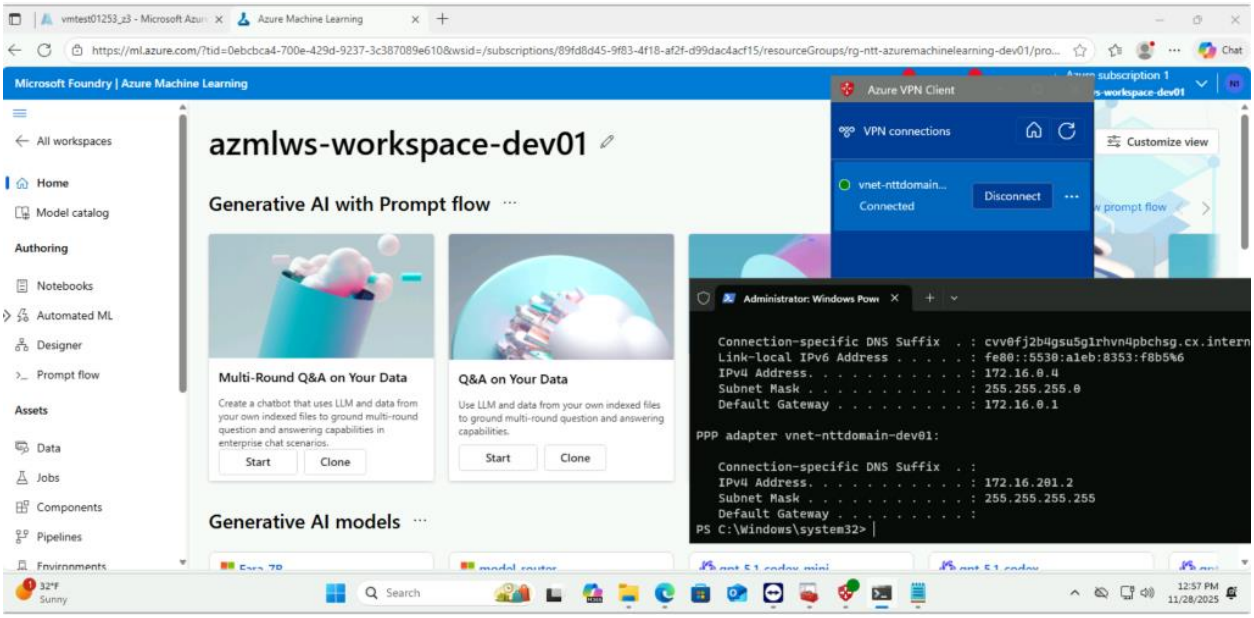




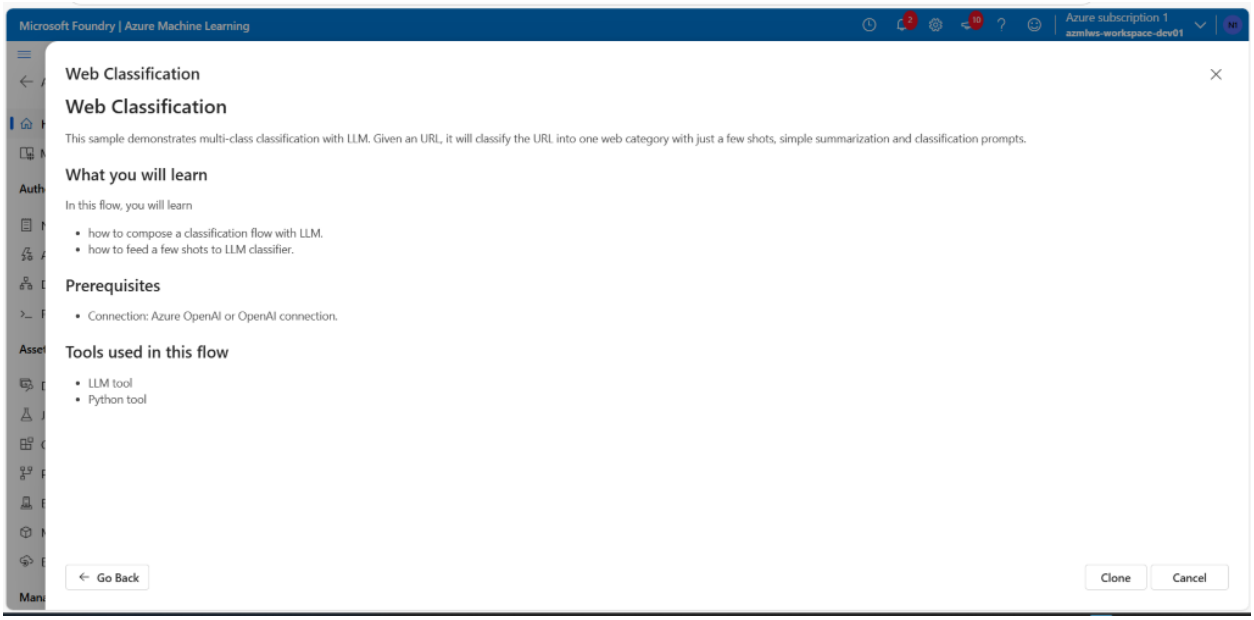
If not connect to VPN – So it is expected that we cannot access to our Azure Machine Learning Workspace:

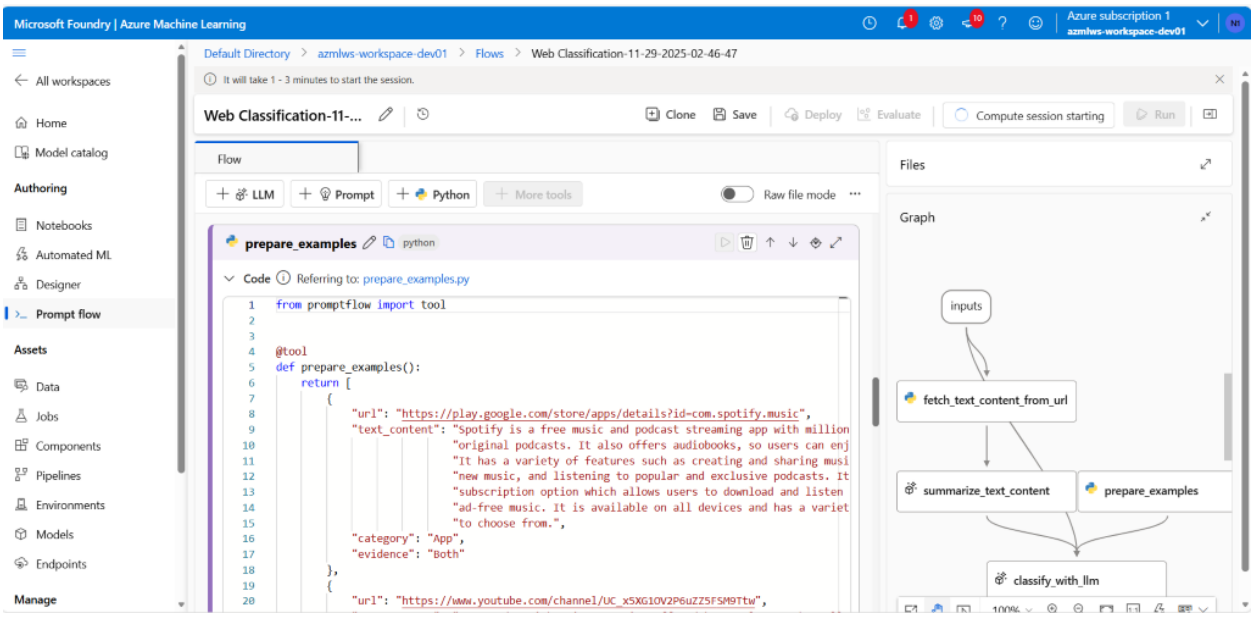


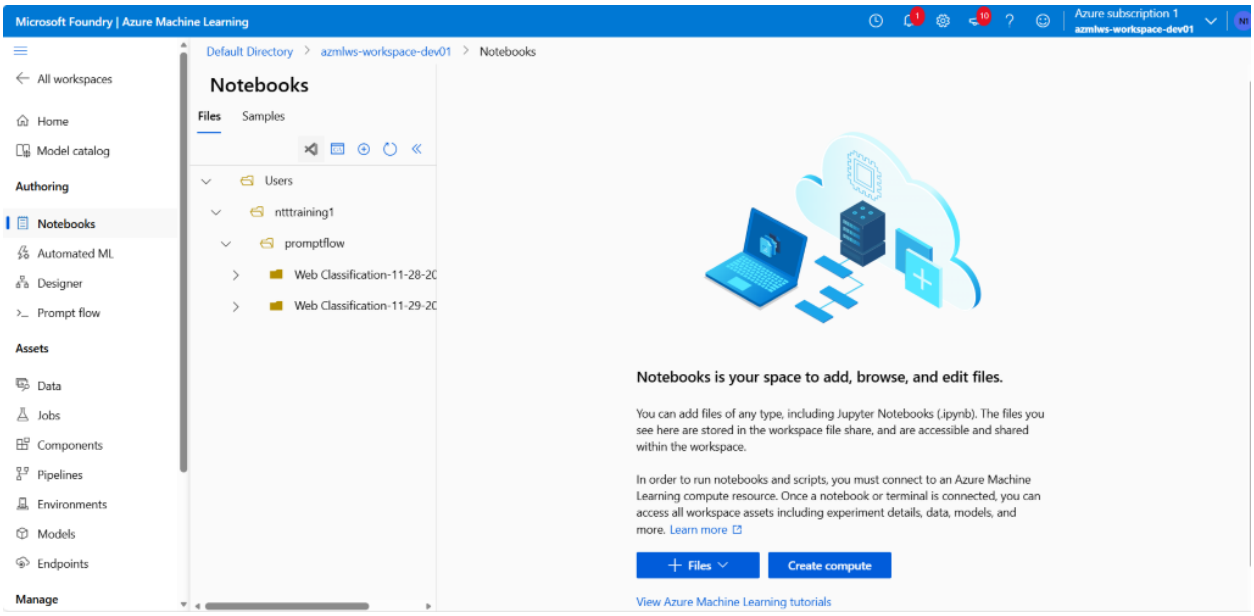
If connect to VPN – It is expected that we should be able to connect to VPN:

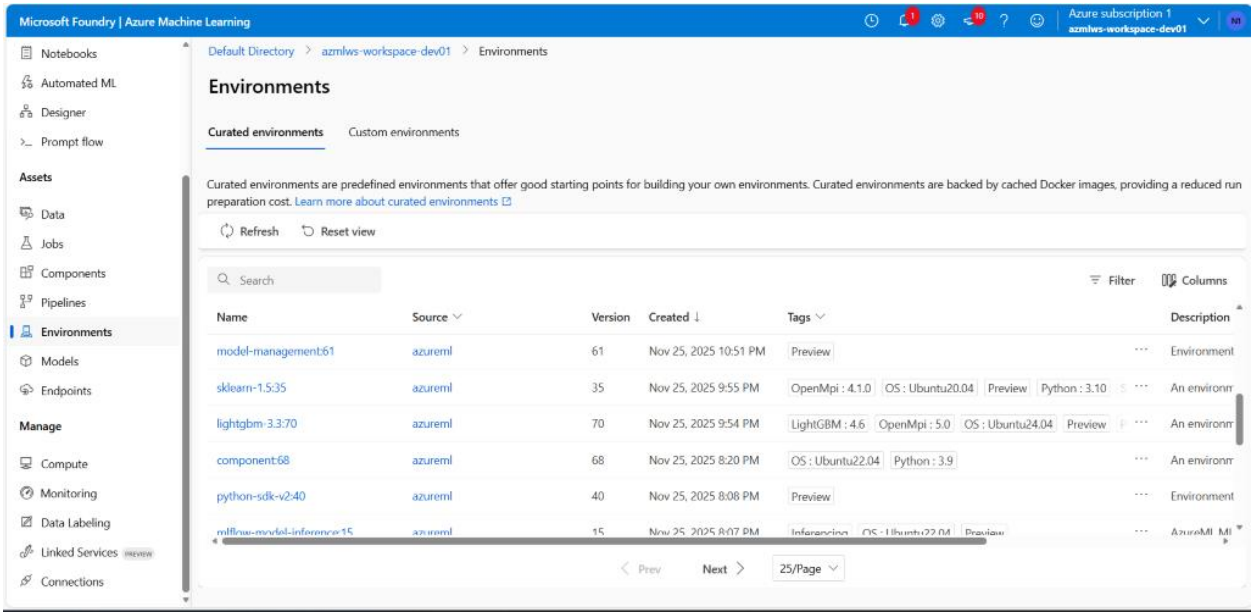


Testing azure machine learning workspace by running web classification project:


Microsoft Foundry | Azure Machine Learning
Azure subscription 1
azmlws-workspace-dev01
Web Classification
Web Classification
This sample demonstrates multi-class classification with LLM. Given an URL, it will classify the URL into one web category with just a few shots, simple summarization and classification prompts.
What you will learn
In this flow, you will learn
how to compose a classification flow with LLM.
how to feed a few shots to LLM classifier.
Prerequisites
Connection: Azure OpenAI or OpenAI connection.
Tools used in this flow
LLM tool
Python tool
Go Back
Clone
Cancel


Microsoft Foundry | Azure Machine Learning
Azure subscription 1
azmlws-workspace-dev01
Default Directory > azmlws-workspace-dev01 > Flows > Web Classification-11-29-2025-02-46-47
It will take 1 - 3 minutes to start the session.
Web Classification-11-...
Clone
Save
Deploy
Evaluate
Compute session starting
Run
All workspaces
Home
Model catalog
Authoring
Notebooks
Automated ML
Designer
Prompt flow
Assets
Data
Jobs
Components
Pipelines
Environments
Models
Endpoints
Manage
Flow
LLM
Prompt
Python
More tools
Raw file mode
Files
Graph
prepare_examples
python
Code
Referring to: prepare_examples.py
from promptflow import tool
@tool
def prepare_examples():
return [
{
"url": "https://play.google.com/store/apps/details?id=com.spotify.music",
"text_content": "Spotify is a free music and podcast streaming app with million
"original podcasts. It also offers audiobooks, so users can enj
"It has a variety of features such as creating and sharing musi
"new music, and listening to popular and exclusive podcasts. It
"subscription option which allows users to download and listen
"ad-free music. It is available on all devices and has a variet
"to choose from.",
"category": "App",
"evidence": "Both"
},
{
"url": "https://www.youtube.com/channel/UC_x5XG1OV2P6uZZ5FSM9Ttw",
inputs
fetch_text_content_from_url
summarize_text_content
prepare_examples
classify_with_llm


Microsoft Foundry | Azure Machine Learning
Azure subscription 1
azmlws-workspace-dev01
Default Directory > azmlws-workspace-dev01 > Notebooks
All workspaces
Home
Model catalog
Authoring
Notebooks
Automated ML
Designer
Prompt flow
Assets
Data
Jobs
Components
Pipelines
Environments
Models
Endpoints
Manage
Notebooks
Files
Samples
Users
ntttraining1
promptflow
Web Classification-11-28-20
Web Classification-11-29-20
Notebooks is your space to add, browse, and edit files.
You can add files of any type, including Jupyter Notebooks (.ipynb). The files you see here are stored in the workspace file share, and are accessible and shared within the workspace.
In order to run notebooks and scripts, you must connect to an Azure Machine Learning compute resource. Once a notebook or terminal is connected, you can access all workspace assets including experiment details, data, models, and more. Learn more
Files
Create compute
View Azure Machine Learning tutorials


Microsoft Foundry | Azure Machine Learning
Azure subscription 1
azmlws-workspace-dev01
Notebooks
Automated ML
Designer
Prompt flow
Assets
Data
Jobs
Components
Pipelines
Environments
Models
Endpoints
Manage
Compute
Monitoring
Data Labeling
Linked Services
Connections
Default Directory > azmlws-workspace-dev01 > Environments
Environments
Curated environments
Custom environments
Curated environments are predefined environments that offer good starting points for building your own environments. Curated environments are backed by cached Docker images, providing a reduced run preparation cost. Learn more about curated environments
Refresh
Reset view
Search
Filter
Columns
Name
Source
Version
Created
Tags
Description
model-management:61
azureml
61
Nov 25, 2025 10:51 PM
Preview
Environment
sklearn-1.5:35
azureml
35
Nov 25, 2025 9:55 PM
OpenMpi : 4.1.0
OS : Ubuntu20.04
Preview
Python : 3.10
lightgbm-3.3:70
azureml
70
Nov 25, 2025 9:54 PM
LightGBM : 4.6
OpenMpi : 5.0
OS : Ubuntu24.04
Preview
component:68
azureml
68
Nov 25, 2025 8:20 PM
OS : Ubuntu22.04
Python : 3.9
python-sdk-v2:40
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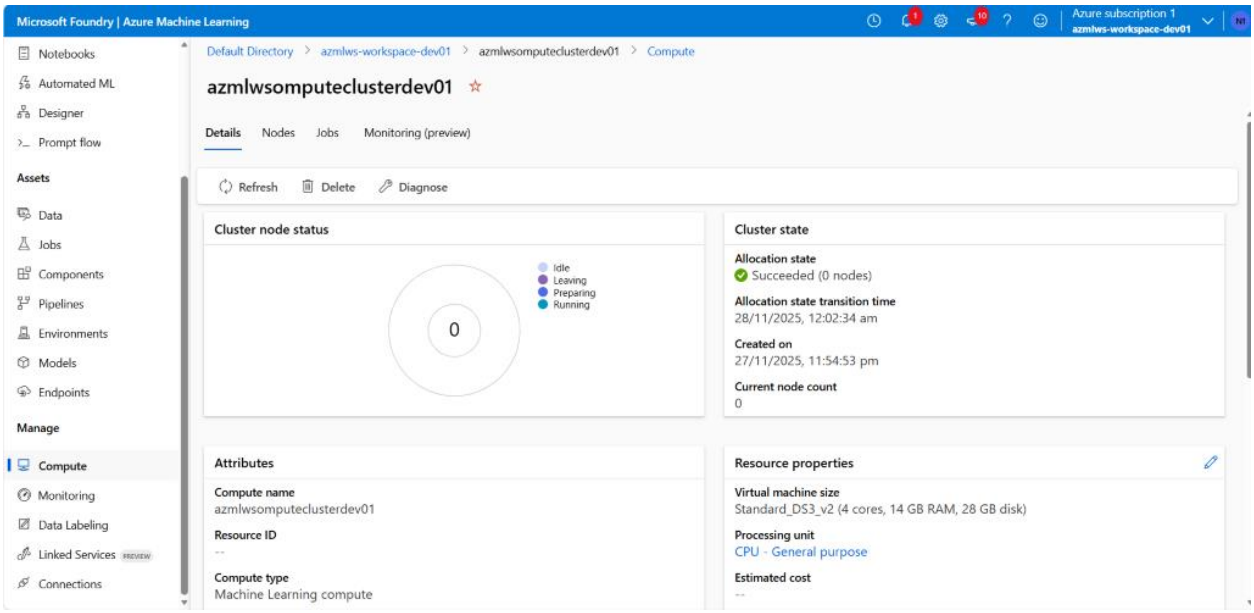
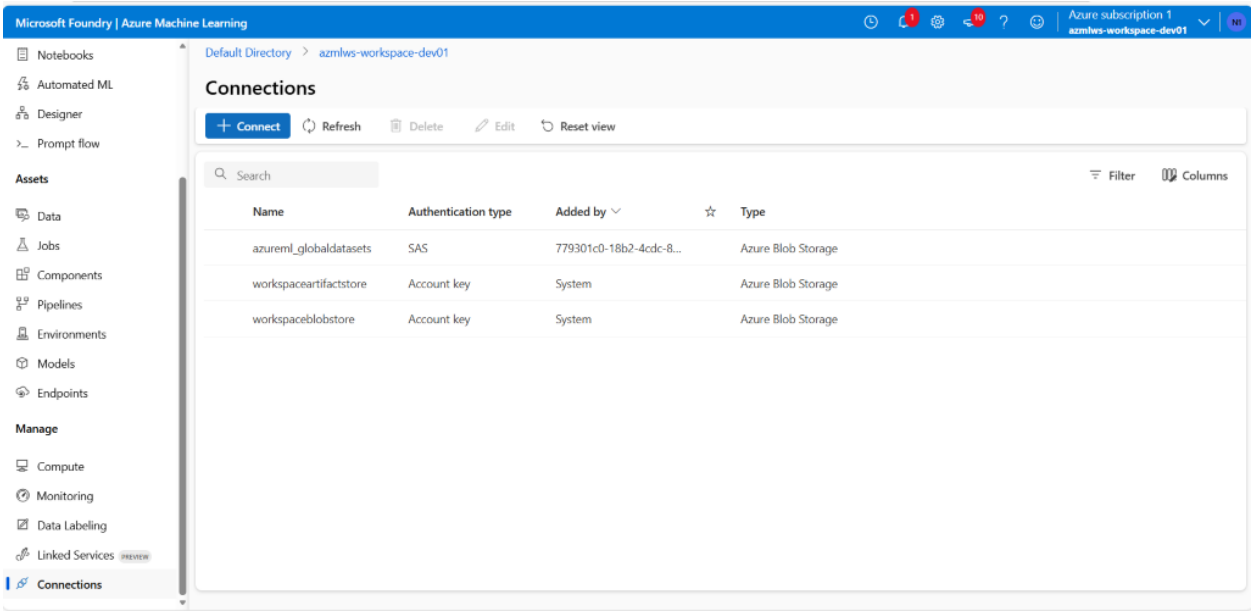
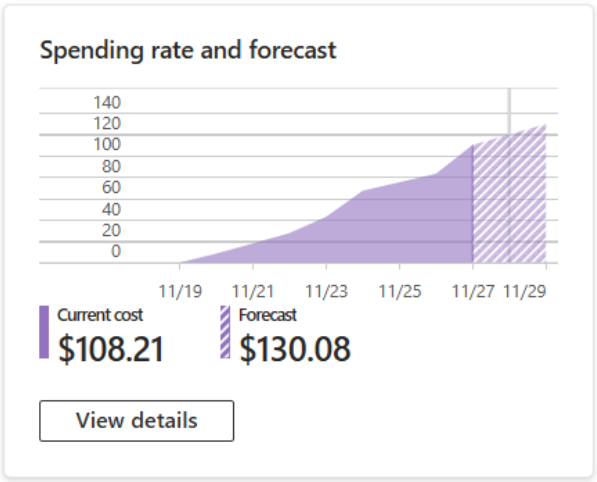
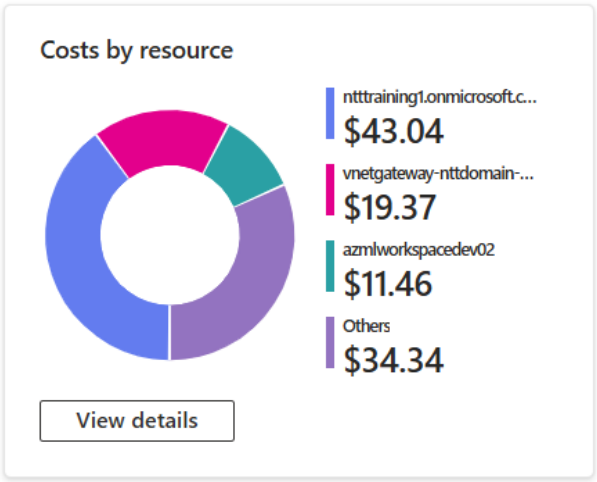




Finally I spend USD108.21 to complete this project





The best part is my secure score is 100%