

In this lab, you will learn how to update an Azure VNet using the Azure CLI.

Azure VNets allow Azure resources to securely communicate with each other and other networks.

Learning Objectives

In this lab, you will learn how to do the following:

Log in to the Azure CLI

Update an existing VNet

Confirm that the VNet was successfully created

Clean up the VNet

Login to azure :

```
az login -u $username -p $password
```

Understanding Azure Virtual Network Updating

Azure Virtual Network is the foundation of private networks in Microsoft Azure. Many Azure services support deployment to an Azure Virtual Network. This enables the resources to communicate with each other and other networks in a more secure way.

Various properties of an existing VNet can be updated in the Azure portal or programmatically using tools such as the Azure CLI. For instance, the VNet size can be updated to provide more IP addresses. Here are a few properties that can be updated:

--address-prefixes: The VNet address space CIDR (Classless Inter-Domain Routing)

--ddos-protection: Control whether DDoS protection is enabled.

--dns-servers: List of DNS server IP addresses to be assigned to the VNet

--enable-encryption: Enable encryption on the VNet

Before starting, use the following command to confirm that a VNet is successfully created for you:

```
$ az network vnet list -g $resource --query "[].{Name:name}"
[
  {
    "Name": "vnet5713152"
  }
]
$
```

This VNet already contains a subnet, named subnet01. You can confirm this by running the following query:

```
$ az network vnet subnet list -g $resource --vnet-name $vnetName --query "[].{Name:name}"
[
  {
    "Name": "subnet01"
  }
]
$
```

Now let's update this VNet, using the Azure CLI.

Updating an Azure Virtual Network

The following command updates the address space for our existing VNet:

```
$ az network vnet update --address-prefixes 10.0.0.0/23 --name $vnetName -g $resource
{
  "addressSpace": {
    "addressPrefixes": [
      "10.0.0.0/23"
    ]
  },
  "bgpCommunities": null,
```

The command updates our VNet address space from 10.0.0.0/24 (254 addresses) to 10.0.0.0/23 (512 addresses), making it a bigger VNet.

Here are the parameters for this command:

--resource-group: Name of the VNet resource group
--name: Name of the existing VNet to update
--address-prefixes: The new address prefix for the VNet in CIDR

Confirm the VNet is Updated

Use the following command to confirm that the VNet address space is updated:

```
$ az network vnet show --name $vnetName -g $resource
{
  "addressSpace": {
    "addressPrefixes": [
      "10.0.0.0/23"
    ]
  },
  "bgpCommunities": null,
  "ddosProtectionPlan": null,
  "dhcpOptions": {
    "dnsServers": []
  },
  "enableDdosProtection": false,
  "enableVmProtection": null,
  "encryption": null,
  "etag": "W/\"4ed66d24-113c-490a-b6f9-d310c369a9e9\"",
  "extendedLocation": null.
}
$ az network vnet show --name $vnetName --resource-group $resource --query "{addressPrefix:addressSpace.addressPrefixes}"
{
  "addressPrefix": [
    "10.0.0.0/23"
  ]
}
```

Check the Updates in the Azure Portal

Click on your VNet name in the list (you should see only one)

On the Overview page, confirm that the Address space reads 10.0.0.0/23

Note: The new VNet address space CIDR is 10.0.0.0/23, which gives you 512 IP addresses. Note that 5 IP addresses are reserved by Azure and can't be used.

Note: The existing subnets in the VNet stay unchanged.

Address space is updated for vnet .

The screenshot shows the Azure Portal interface for a virtual network named 'vnet5713152'. The 'Overview' tab is selected, displaying the following details:

- Resource group: user-sdrqkkupebtd
- Location: East US
- Subscription: cloudlabs48
- Subscription ID: 35973042-831e-4e87-8cae-c4cc21bb3ede
- Address space: 10.0.0.0/23
- DNS servers: Azure provided DNS service
- Flow timeout: Configure
- BGP community string: Configure
- Virtual network ID: cc832a3f-ad39-4451-bfd1-68854b68cdd

The 'Capabilities' section shows the following status:

- DDoS protection: Not configured
- Azure Firewall: Not configured
- Peerings: Not configured
- Microsoft Defender for Cloud: Not configured
- Private endpoints: Not configured