Lab 05 - Implement Intersite Connectivity

- Task 1: Provision the lab environment
- Task 2: Configure local and global virtual network peering

```
PS /home/krasi> ls

clouddrive  Microsoft

PS /home/krasi> $location1 = 'eastus'

PS /home/krasi>

PS /home/krasi> $location2 = 'westus'

PS /home/krasi>

PS /home/krasi> $rgName = 'az104-05-rg1'

PS /home/krasi>

PS /home/krasi> New-AzResourceGroup -Name $rgName -Location $location1


ResourceGroupName : az104-05-rg1

Location          : eastus

ProvisioningState : Succeeded

Tags              :

ResourceId        : /subscriptions/2aeafe0b-89b7-406a-9eea-89ec53737333/resourceGroups/az104-05-rg1




PS /home/krasi> New-AzResourceGroupDeployment `

>>    -ResourceGroupName $rgName `

>>    -TemplateFile $HOME/az104-05-vnetvm-loop-template.json `

>>    -TemplateParameterFile $HOME/az104-05-vnetvm-loop-parameters.json `

>>    -location1 $location1 `

>>    -location2 $location2


DeploymentName          : az104-05-vnetvm-loop-template

ResourceGroupName       : az104-05-rg1

ProvisioningState       : Succeeded

Timestamp               : 3/25/2023 11:14:51 PM
```

```
Mode            : Incremental

TemplateLink    :

Parameters      :

                Name        Type                    Value
                ==============  ========================  ==========
                vmSize      String              "Standard_D2s_v3"
                location1   String              "eastus"
                location2   String              "westus"
                adminUsername   String              "Student"
                adminPassword   SecureString            null


Outputs         :

DeploymentDebugLogLevel :




PS /home/krasi> $rgName = 'az104-05-rg1'

PS /home/krasi>

PS /home/krasi> $vnet0 = Get-AzVirtualNetwork -Name 'az104-05-vnet0' -ResourceGroupName $rgname

PS /home/krasi>

PS /home/krasi> $vnet1 = Get-AzVirtualNetwork -Name 'az104-05-vnet1' -ResourceGroupName $rgname

PS /home/krasi>

PS /home/krasi> Add-AzVirtualNetworkPeering -Name 'az104-05-vnet0_to_az104-05-vnet1' -VirtualNetwork $vnet0 -RemoteVirtualNetworkId $vnet1.Id




Name                : az104-05-vnet0_to_az104-05-vnet1

Id                  :
/subscriptions/2aeafe0b-89b7-406a-9eea-89ec53737333/resourceGroups/az104-05-rg1/providers/Microsoft.Network/virtualNetworks/az104-05-vnet0/virtualNetwor
kPeerings/az104-05-vnet0_to_az104-05-vnet1

Etag                : W/"cb6ef4c6-ad65-4a79-9a43-e7e86f15d409"

ResourceGroupName       : az104-05-rg1

VirtualNetworkName      : az104-05-vnet0

PeeringSyncLevel        : RemoteNotInSync

PeeringState            : Initiated

ProvisioningState       : Succeeded

RemoteVirtualNetwork        : {
```

                        "Id":
"/subscriptions/2aeafe0b-89b7-406a-9eea-89ec53737333/resourceGroups/az104-05-rg1/providers/Microsoft.Network/virtualNetworks/az104-05-vnet1"

                    }

AllowVirtualNetworkAccess   : True

AllowForwardedTraffic   : False

AllowGatewayTransit   : False

UseRemoteGateways   : False

RemoteGateways   : null

PeeredRemoteAddressSpace   : {

                    "AddressPrefixes": [

                      "10.51.0.0/22"

                    ]

                }

RemoteVirtualNetworkAddressSpace : {

                    "AddressPrefixes": [

                      "10.51.0.0/22"

                    ]

                }

PS /home/krasi>

PS /home/krasi> Add-AzVirtualNetworkPeering -Name 'az104-05-vnet1_to_az104-05-vnet0' -VirtualNetwork $vnet1 -RemoteVirtualNetworkId $vnet0.Id

Name   : az104-05-vnet1_to_az104-05-vnet0

Id   :
/subscriptions/2aeafe0b-89b7-406a-9eea-89ec53737333/resourceGroups/az104-05-rg1/providers/Microsoft.Network/virtualNetworks/az104-05-vnet1/virtualNetwor
kPeerings/az104-05-vnet1_to_az104-05-vnet0

Etag   : W/"362f278b-c51e-464d-b8db-4d85a2c9b951"

ResourceGroupName   : az104-05-rg1

VirtualNetworkName   : az104-05-vnet1

PeeringSyncLevel   : FullyInSync

PeeringState   : Connected

ProvisioningState   : Succeeded

RemoteVirtualNetwork   : {

```
                       "Id":
"/subscriptions/2aeafe0b-89b7-406a-9eea-89ec53737333/resourceGroups/az104-05-rg1/providers/Microsoft.Network/virtualNetworks/az104-05-vnet0"

                       }

AllowVirtualNetworkAccess      : True

AllowForwardedTraffic          : False

AllowGatewayTransit            : False

UseRemoteGateways              : False

RemoteGateways                 : null

PeeredRemoteAddressSpace        : {

                      "AddressPrefixes": [

                        "10.50.0.0/22"

                      ]

                      }

RemoteVirtualNetworkAddressSpace : {

                      "AddressPrefixes": [

                        "10.50.0.0/22"

                      ]

                      }




PS /home/krasi> $rgName = 'az104-05-rg1'

PS /home/krasi>

PS /home/krasi> $vnet0 = Get-AzVirtualNetwork -Name 'az104-05-vnet0' -ResourceGroupName $rgname

PS /home/krasi>

PS /home/krasi> $vnet2 = Get-AzVirtualNetwork -Name 'az104-05-vnet2' -ResourceGroupName $rgname

PS /home/krasi>

PS /home/krasi> Add-AzVirtualNetworkPeering -Name 'az104-05-vnet0_to_az104-05-vnet2' -VirtualNetwork $vnet0 -RemoteVirtualNetworkId $vnet2.Id


Name                 : az104-05-vnet0_to_az104-05-vnet2

Id                   :
/subscriptions/2aeafe0b-89b7-406a-9eea-89ec53737333/resourceGroups/az104-05-rg1/providers/Microsoft.Network/virtualNetworks/az104-05-vnet0/virtualNetwor
kPeerings/az104-05-vnet0_to_az104-05-vnet2

Etag                 : W/"49714d1c-1439-4cf3-9229-7d0a3329e0b4"

ResourceGroupName    : az104-05-rg1
```

VirtualNetworkName   : az104-05-vnet0

PeeringSyncLevel   : RemoteNotInSync

PeeringState   : Initiated

ProvisioningState   : Succeeded

RemoteVirtualNetwork   : {

                    "Id":
"/subscriptions/2aeafe0b-89b7-406a-9eea-89ec53737333/resourceGroups/az104-05-rg1/providers/Microsoft.Network/virtualNetworks/az104-05-vnet2"

                    }

AllowVirtualNetworkAccess   : True

AllowForwardedTraffic   : False

AllowGatewayTransit   : False

UseRemoteGateways   : False

RemoteGateways   : null

PeeredRemoteAddressSpace   : {

                    "AddressPrefixes": [

                      "10.52.0.0/22"

                    ]

                    }

RemoteVirtualNetworkAddressSpace : {

                    "AddressPrefixes": [

                      "10.52.0.0/22"

                    ]

                    }

PS /home/krasi>

PS /home/krasi> Add-AzVirtualNetworkPeering -Name 'az104-05-vnet2_to_az104-05-vnet0' -VirtualNetwork $vnet2 -RemoteVirtualNetworkId $vnet0.Id

Name   : az104-05-vnet2_to_az104-05-vnet0

Id   :
/subscriptions/2aeafe0b-89b7-406a-9eea-89ec53737333/resourceGroups/az104-05-rg1/providers/Microsoft.Network/virtualNetworks/az104-05-vnet2/virtualNetwor
kPeerings/az104-05-vnet2_to_az104-05-vnet0

Etag   : W/"dbdef7ef-d707-4db8-97c6-0a69a6723cce"

ResourceGroupName   : az104-05-rg1

```
VirtualNetworkName           : az104-05-vnet2

PeeringSyncLevel             : FullyInSync

PeeringState                 : Connected

ProvisioningState            : Succeeded

RemoteVirtualNetwork         : {

                                 "Id":
"/subscriptions/2aeafe0b-89b7-406a-9eea-89ec53737333/resourceGroups/az104-05-rg1/providers/Microsoft.Network/virtualNetworks/az104-05-vnet0"

                               }

AllowVirtualNetworkAccess    : True

AllowForwardedTraffic        : False

AllowGatewayTransit          : False

UseRemoteGateways            : False

RemoteGateways               : null

PeeredRemoteAddressSpace     : {

                                 "AddressPrefixes": [

                                   "10.50.0.0/22"

                                 ]

                               }

RemoteVirtualNetworkAddressSpace : {

                                 "AddressPrefixes": [

                                   "10.50.0.0/22"

                                 ]

                               }




PS /home/krasi> $rgName = 'az104-05-rg1'

PS /home/krasi>

PS /home/krasi> $vnet1 = Get-AzVirtualNetwork -Name 'az104-05-vnet1' -ResourceGroupName $rgname

PS /home/krasi>

PS /home/krasi> $vnet2 = Get-AzVirtualNetwork -Name 'az104-05-vnet2' -ResourceGroupName $rgname

PS /home/krasi>

PS /home/krasi> Add-AzVirtualNetworkPeering -Name 'az104-05-vnet1_to_az104-05-vnet2' -VirtualNetwork $vnet1 -RemoteVirtualNetworkId $vnet2.Id
```

```
Name                    : az104-05-vnet1_to_az104-05-vnet2

Id                      :
/subscriptions/2aeafe0b-89b7-406a-9eea-89ec53737333/resourceGroups/az104-05-rg1/providers/Microsoft.Network/virtualNetworks/az104-05-vnet1/virtualNetwor
kPeerings/az104-05-vnet1_to_az104-05-vnet2

Etag                    : W/"26237a0c-0dd3-4e7a-b9cb-f82ad05de10a"

ResourceGroupName       : az104-05-rg1

VirtualNetworkName       : az104-05-vnet1

PeeringSyncLevel        : RemoteNotInSync

PeeringState            : Initiated

ProvisioningState       : Succeeded

RemoteVirtualNetwork    : {

                            "Id":
"/subscriptions/2aeafe0b-89b7-406a-9eea-89ec53737333/resourceGroups/az104-05-rg1/providers/Microsoft.Network/virtualNetworks/az104-05-vnet2"

                          }

AllowVirtualNetworkAccess : True

AllowForwardedTraffic    : False

AllowGatewayTransit      : False

UseRemoteGateways        : False

RemoteGateways           : null

PeeredRemoteAddressSpace : {

                            "AddressPrefixes": [

                              "10.52.0.0/22"

                            ]

                          }

RemoteVirtualNetworkAddressSpace : {

                            "AddressPrefixes": [

                              "10.52.0.0/22"

                            ]

                          }



PS /home/krasi>

PS /home/krasi> Add-AzVirtualNetworkPeering -Name 'az104-05-vnet2_to_az104-05-vnet1' -VirtualNetwork $vnet2 -RemoteVirtualNetworkId $vnet1.Id
```

```
Name                    : az104-05-vnet2_to_az104-05-vnet1

Id                      :
/subscriptions/2aeafe0b-89b7-406a-9eea-89ec53737333/resourceGroups/az104-05-rg1/providers/Microsoft.Network/virtualNetworks/az104-05-vnet2/virtualNetwor
kPeerings/az104-05-vnet2_to_az104-05-vnet1

Etag                    : W/"29b50eb7-c365-4101-8df3-9c01fbb5a589"

ResourceGroupName       : az104-05-rg1

VirtualNetworkName      : az104-05-vnet2

PeeringSyncLevel        : FullyInSync

PeeringState            : Connected

ProvisioningState       : Succeeded

RemoteVirtualNetwork    : {

                            "Id":
"/subscriptions/2aeafe0b-89b7-406a-9eea-89ec53737333/resourceGroups/az104-05-rg1/providers/Microsoft.Network/virtualNetworks/az104-05-vnet1"

                          }

AllowVirtualNetworkAccess   : True

AllowForwardedTraffic       : False

AllowGatewayTransit         : False

UseRemoteGateways           : False

RemoteGateways              : null

PeeredRemoteAddressSpace     : {

                                "AddressPrefixes": [

                                  "10.51.0.0/22"

                                ]

                              }

RemoteVirtualNetworkAddressSpace : {

                                "AddressPrefixes": [

                                  "10.51.0.0/22"

                                ]

                              }




PS /home/krasi>
```

- Task 3: Test intersite connectivity

PS C:\Users\Student> Test-NetConnection -ComputerName 10.51.0.4 -Port 3389 -InformationLevel 'Detailed'

ComputerName   : 10.51.0.4
RemoteAddress   : 10.51.0.4
RemotePort   : 3389
NameResolutionResults : 10.51.0.4
MatchingIPsecRules   :
NetworkIsolationContext : Internet
InterfaceAlias   : Ethernet
SourceAddress   : 10.50.0.4
NetRoute (NextHop)   : 10.50.0.1
TcpTestSucceeded   : True

PS C:\Users\Student> Test-NetConnection -ComputerName 10.52.0.4 -Port 3389 -InformationLevel 'Detailed'

ComputerName   : 10.52.0.4
RemoteAddress   : 10.52.0.4
RemotePort   : 3389
NameResolutionResults : 10.52.0.4
MatchingIPsecRules   :
NetworkIsolationContext : Internet
InterfaceAlias   : Ethernet
SourceAddress   : 10.50.0.4
NetRoute (NextHop)   : 10.50.0.1
TcpTestSucceeded   : True

PS C:\Users\Student>