

## Lab 05 - Implement Intersite Connectivity

The objective of this lab is to create a lab environment that reflects the on-premises network topology of Contoso, which has datacenters in Boston, New York, and Seattle. These datacenters are connected through a mesh wide-area network, allowing for full connectivity between them. Our task is to implement this topology in the lab environment and ensure its functionality.

To complete this assignment, we will need to complete three tasks.

***Task 1 involves provisioning the lab environment to mirror Contoso's on-premises network topology. We will deploy three virtual machines, each into a separate virtual network, with two of them in the same Azure region and the third one in another Azure region.***

```
Microsoft Azure | Search resources, services, and docs (G+/) | vladimirvelkovski@live.c... | DEFAULT DIRECTORY (VLADIMIR...)

PowerShell | ? | [ ] | { } | [ ]

VERBOSE: Authenticating to Azure ...
VERBOSE: Building your Azure drive ...
PS /home/vladimir> $location1 = 'eastus'
PS /home/vladimir>
PS /home/vladimir> $location2 = 'westus'
PS /home/vladimir>
PS /home/vladimir> $rgName = 'az104-05-rg1'
PS /home/vladimir> New-AzResourceGroup -Name $rgName -Location $location1

ResourceGroupName : az104-05-rg1
Location           : eastus
ProvisioningState   : Succeeded
Tags               :
ResourceId         : /subscriptions/c031718c-8f31-4c8d-ae56-634904ec50f9/resourceGroups/az104-05-rg1

PS /home/vladimir> 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           : 3/23/2023 1:33:33 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 :
```

**Task 2 requires us to configure local and global virtual network peering to ensure communication between the different datacenters.**

Microsoft Azure | Search resources, services, and docs (G+)

Home > az104-05-vnet0

### az104-05-vnet0 | Peerings

Virtual network

Search

Tags

Diagnose and solve problems

Settings

- Address space
- Connected devices

Filter by name... Peering status == all

Name ↑↓	Peering status ↑↓	Peer ↑↓	Gateway transit ↑↓	
az104-05-vnet0_to_az104-05-vnet1	Connected	az104-05-vnet1	Disabled	...
az104-05-vnet0_to_az104-05-vnet2	Connected	az104-05-vnet2	Disabled	...

Microsoft Azure | Search resources, services, and docs (G+)

Home > az104-05-vnet1

### az104-05-vnet1 | Peerings

Virtual network

Search

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Filter by name... Peering status == all

Name ↑↓	Peering status ↑↓	Peer ↑↓	Gateway transit ↑↓	
az104-05-vnet1_to_az104-05-vnet0	Connected	az104-05-vnet0	Disabled	...
az104-05-vnet1_to_az104-05-vnet2	Connected	az104-05-vnet2	Disabled	...

***In Task 3 we will need to test intersite connectivity to confirm that the network is functioning as expected.***

```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

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>
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>
```

```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

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           : 10.51.0.4
NetRoute (NextHop)      : 10.51.0.1
TcpTestSucceeded        : True

PS C:\Users\Student>
```