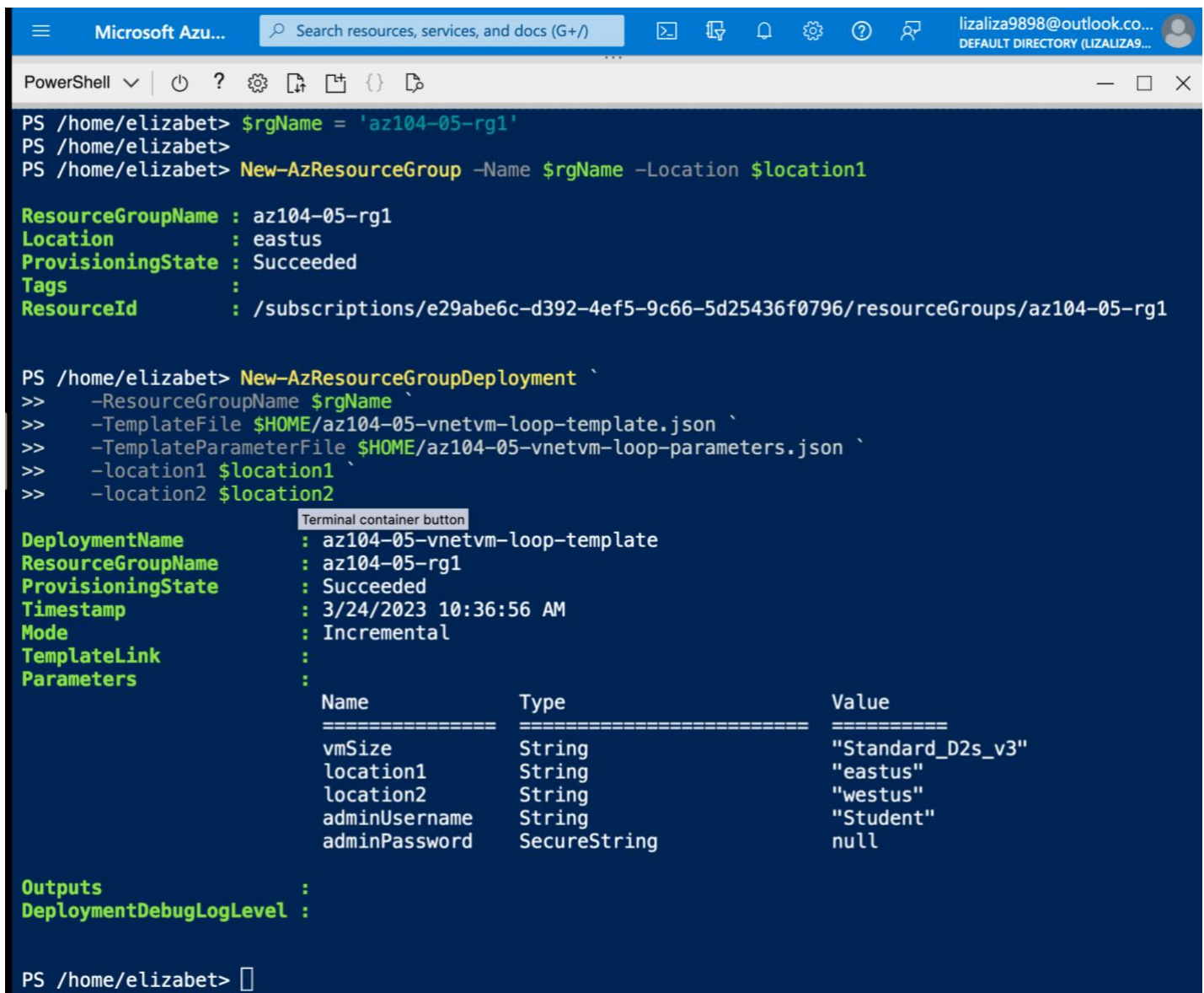


Lab 05 - Implement Intersite Connectivity

For conciseness, not every single step of the assignment is included here

Task 1: Provision the lab environment

1. Creating the resource group with the lab environment, as well as the three vnets with their VMs:



```
PS /home/elizabet> $rgName = 'az104-05-rg1'
PS /home/elizabet>
PS /home/elizabet> New-AzResourceGroup -Name $rgName -Location $location1

ResourceGroupName : az104-05-rg1
Location           : eastus
ProvisioningState  : Succeeded
Tags               :
ResourceId         : /subscriptions/e29abe6c-d392-4ef5-9c66-5d25436f0796/resourceGroups/az104-05-rg1

PS /home/elizabet> New-AzResourceGroupDeployment `
>> -ResourceGroupName $rgName `
>> -TemplateFile $HOME/az104-05-vnetvm-loop-template.json `
>> -TemplateParameterFile $HOME/az104-05-vnetvm-loop-parameters.json `
>> -location1 $location1 `
>> -location2 $location2

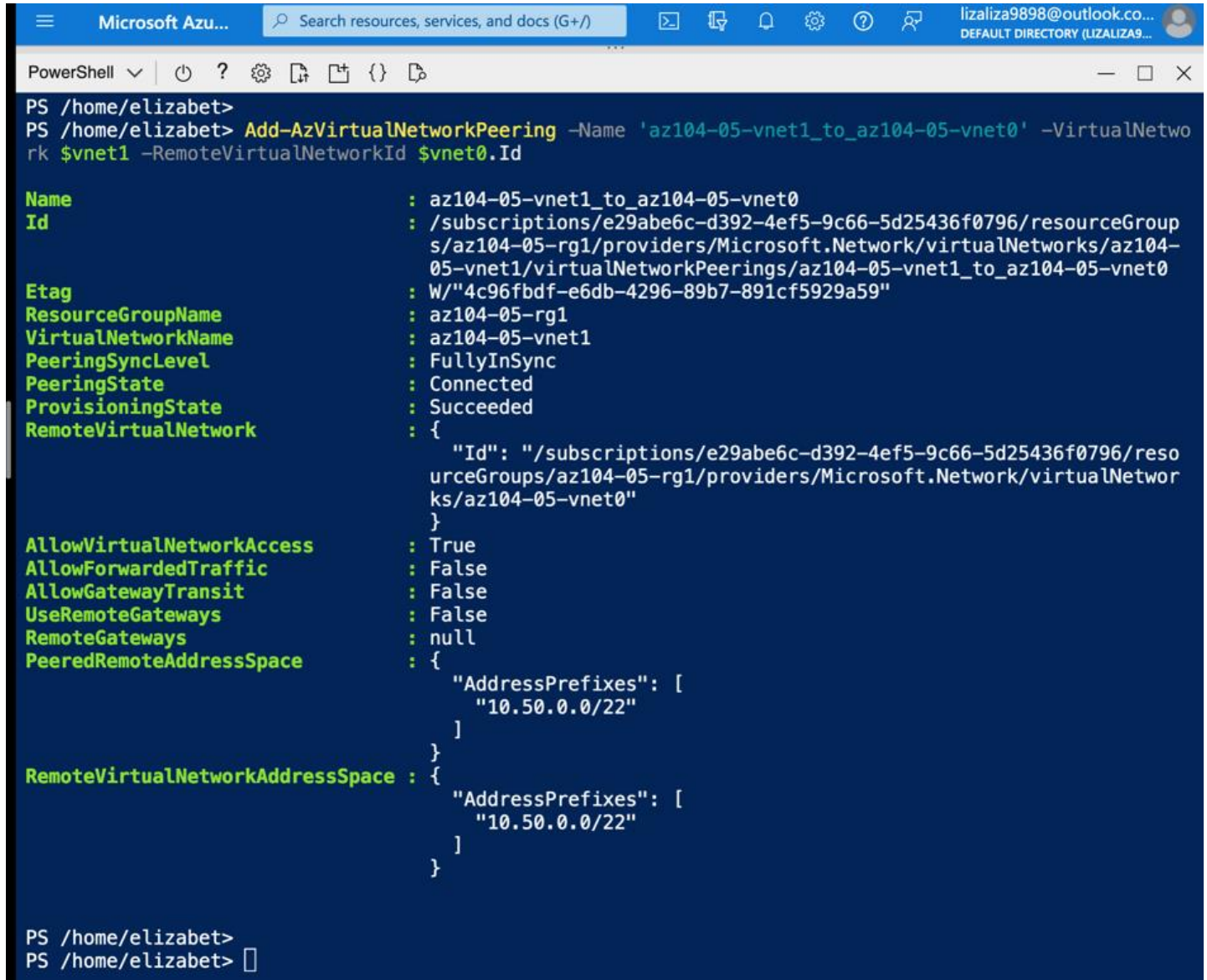
DeploymentName      : az104-05-vnetvm-loop-template
ResourceGroupName  : az104-05-rg1
ProvisioningState  : Succeeded
Timestamp          : 3/24/2023 10:36:56 AM
Mode               : Incremental
TemplateLink       :
Parameters         :
                    Name      Type      Value
                    =====
                    vmSize    String   "Standard_D2s_v3"
                    location1 String   "eastus"
                    location2 String   "westus"
                    adminUsername String   "Student"
                    adminPassword SecureString null

Outputs            :
DeploymentDebugLogLevel :

PS /home/elizabet> 
```

Task 2: Configure local and global virtual network peering

2. Configuring the peering did not work through the interface, so I did that using the Shell:



```
Microsoft Azure Portal
Search resources, services, and docs (G+/)
lizaliza9898@outlook.co...
DEFAULT DIRECTORY (LIZALIZA9...)

PowerShell
PS /home/elizabet>
PS /home/elizabet> Add-AzVirtualNetworkPeering -Name 'az104-05-vnet1_to_az104-05-vnet0' -VirtualNetworkId $vnet1 -RemoteVirtualNetworkId $vnet0.Id

Name : az104-05-vnet1_to_az104-05-vnet0
Id : /subscriptions/e29abe6c-d392-4ef5-9c66-5d25436f0796/resourceGroups/az104-05-rg1/providers/Microsoft.Network/virtualNetworks/az104-05-vnet1/virtualNetworkPeerings/az104-05-vnet1_to_az104-05-vnet0
Etag : W/"4c96fbdf-e6db-4296-89b7-891cf5929a59"
ResourceGroupName : az104-05-rg1
VirtualNetworkName : az104-05-vnet1
PeeringSyncLevel : FullyInSync
PeeringState : Connected
ProvisioningState : Succeeded
RemoteVirtualNetwork : {
  "Id": "/subscriptions/e29abe6c-d392-4ef5-9c66-5d25436f0796/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/elizabet>
PS /home/elizabet>
```

- That's what I did for all peerings.

3. Assuring the peerings are visible:

Home > Virtual networks > az104-05-vnet1

az104-05-vnet1 | Peerings

Virtual network

Search

+ Add Refresh Sync

Connected devices

Subnets

Bastion

DDoS protection

Firewall

Microsoft Defender for Cloud

Network manager

DNS servers

Peerings

Service endpoints

Filter by name...

Peering status == all

<input type="checkbox"/>	Name ↑↓	Peering status ↑↓	Peer ↑↓	Gateway transit ↑↓	
<input type="checkbox"/>	az104-05-vnet1_to_az1...	Connected	az104-05-vnet0	Disabled	...
<input type="checkbox"/>	az104-05-vnet1_to_az1...	Connected	az104-05-vnet2	Disabled	...

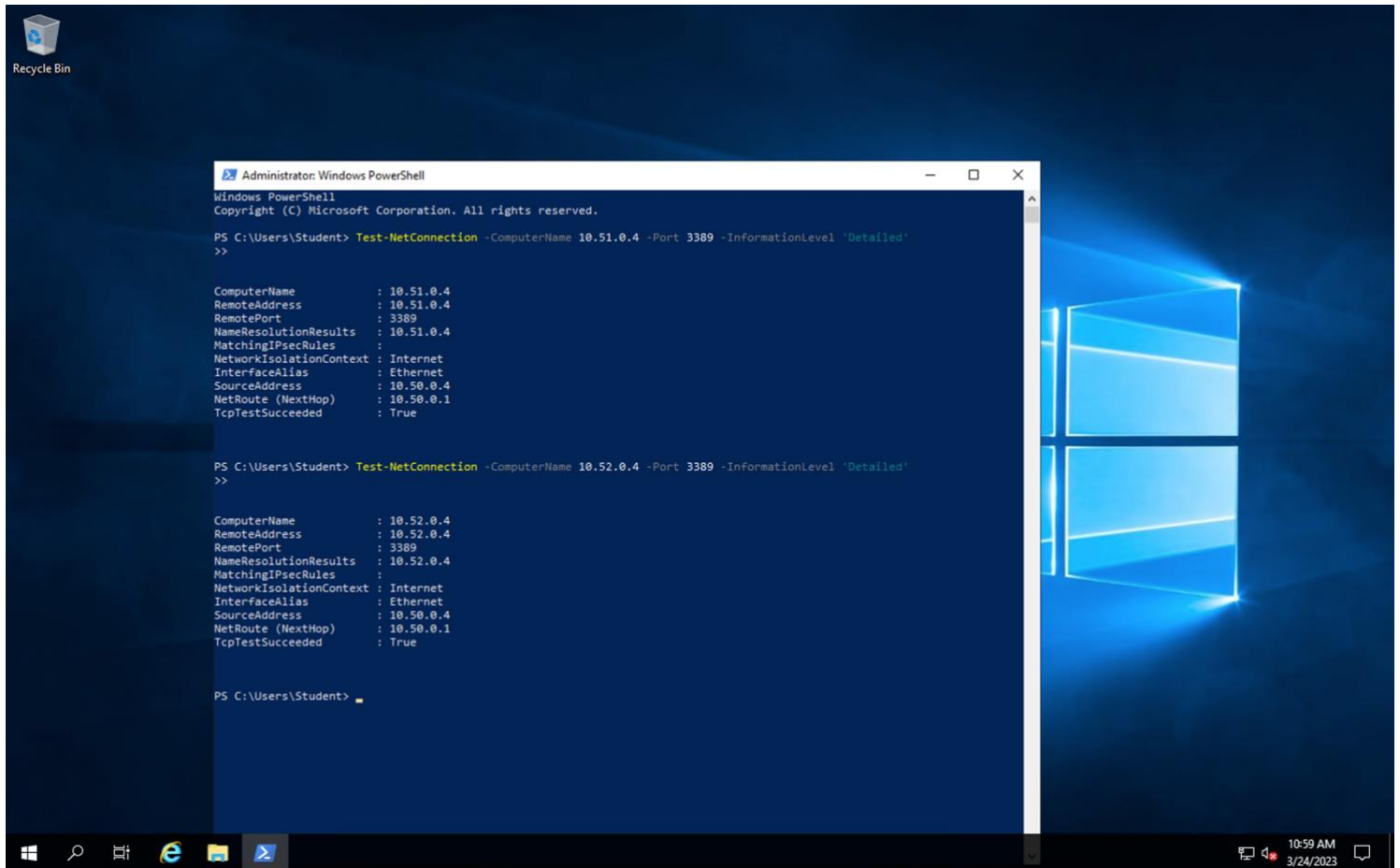
PowerShell

```
UseRemoteGateways : False
RemoteGateways     : null
PeeredRemoteAddressSpace : {
    "AddressPrefixes": [
        "10.51.0.0/22"
    ]
}
RemoteVirtualNetworkAddressSpace : {
    "AddressPrefixes": [
        "10.51.0.0/22"
    ]
}
```

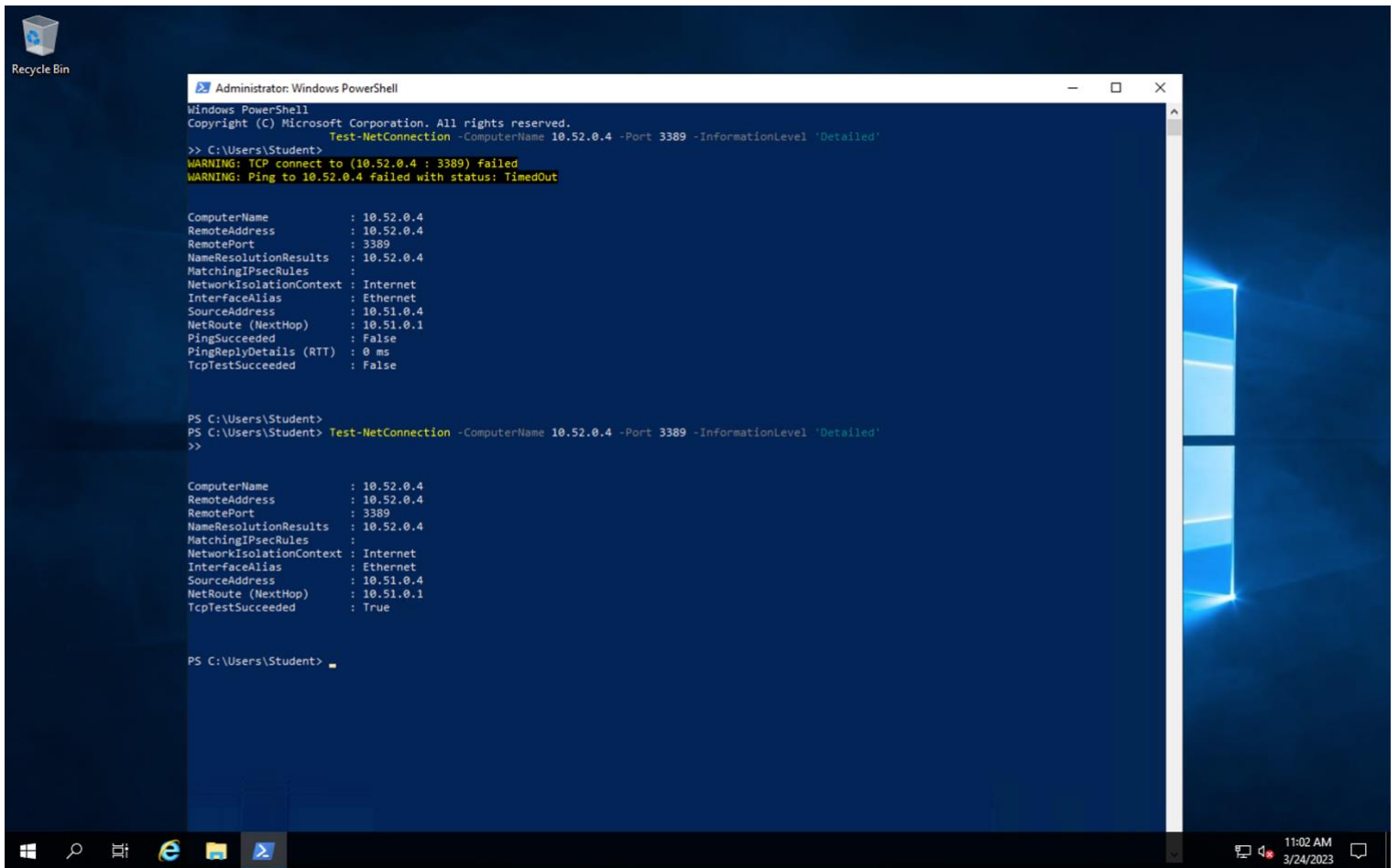
PS /home/elizabet>

Task 3: Test intersite connectivity

- Using RDP, I tested the connection to **az104-05-vm1** and **az104-05-vm2** from **az104-05-vm0**.



5. And the connection to **az104-05-vm2** from **az104-05-vm1**:



The screenshot shows a Windows desktop with a Recycle Bin icon on the left. A PowerShell window titled 'Administrator: Windows PowerShell' is open. The window displays the following text:

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

>> C:\Users\Student> Test-NetConnection -ComputerName 10.52.0.4 -Port 3389 -InformationLevel 'Detailed'
WARNING: TCP connect to (10.52.0.4 : 3389) failed
WARNING: Ping to 10.52.0.4 failed with status: TimedOut

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
PingSucceeded          : False
PingReplyDetails (RTT) : 0 ms
TcpTestSucceeded       : False

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          : 10.51.0.4
NetRoute (NextHop)     : 10.51.0.1
PingSucceeded          : True
PingReplyDetails (RTT) : 0 ms
TcpTestSucceeded       : True

PS C:\Users\Student>
```

The taskbar at the bottom shows the Windows logo, search icon, task view icon, and several application icons. The system tray on the right shows the date and time as 11:02 AM on 3/24/2023.

*The first time it failed because I pasted the command too early - before the shell was fully loaded. After running the command again, the test was successful.