All resources 📌 ···
Centennial College (CentennialCollegeEDU.onmicrosoft.com)

✕

+ Create ⚙ Manage view ∨ ↻ Refresh ↓ Export to CSV 🔗 Open query | ⊕ Assign tags 🗑 Delete

| Filter for any field... | Subscription equals **all** | Resource group equals **all** ✕ | Type equals **all** ✕ | Location equals **all** ✕ | ⧉ Add filter |

| 🛡 **0** Unsecure resources | 🍃 **0** Recommendations |

No grouping ∨ | ☰ List view ∨

Name ↑↓	Type ↑↓	Resource group ↑↓	Location ↑↓	Subscription ↑↓

No resources match your filters

Try changing or clearing your filters.

Clear filters

Learn more ↗

PowerShell ∨ | ⏻ ? ⚙ ⬚ ⬚ { } ⬚   — ⬚

```
PS /home/ayse> $location = 'eastus'
PS /home/ayse> $rgName = 'az104-06-rg1'
PS /home/ayse> New-AzResourceGroup -Name $rgName -Location $location

ResourceGroupName : az104-06-rg1
Location          : eastus
ProvisioningState : Succeeded
Tags              :
ResourceId        : /subscriptions/ae594e61-d56d-4c68-8a68-49a6291e74c2/resourceGroups/az104-06-rg1


PS /home/ayse> New-AzResourceGroupDeployment `
>>     -ResourceGroupName $rgName `
>>     -TemplateFile $HOME/az104-06-vms-loop-template.json `
>>     -TemplateParameterFile $HOME/az104-06-vms-loop-parameters.json
New-AzResourceGroupDeployment: Cannot retrieve the dynamic parameters for the cmdlet. Cannot find path '/home/ayse/
4-06-vms-loop-template.json' because it does not exist.
PS /home/ayse> New-AzResourceGroupDeployment `
>>     -ResourceGroupName $rgName `
>>     -TemplateFile $HOME/az104-06-vms-loop-template.json `
>>     -TemplateParameterFile $HOME/az104-06-vms-loop-parameters.json
```

```
PS /home/ayse> New-AzResourceGroupDeployment `
>>     -ResourceGroupName $rgName `
>>     -TemplateFile $HOME/az104-06-vms-loop-template.json `
>>     -TemplateParameterFile $HOME/az104-06-vms-loop-parameters.json


DeploymentName          : az104-06-vms-loop-template
ResourceGroupName       : az104-06-rg1
ProvisioningState       : Succeeded
Timestamp               : 11/4/2022 7:00:49 PM
Mode                    : Incremental
TemplateLink            :
Parameters              :
                          Name              Type                        Value
                          ================  ==========================  ==========
                          vmSize            String                      "Standard_DS1_v2"
                          vmName            String                      "az104-06-vm"
                          vmCount           Int                         4
                          adminUsername     String                      "Student"
                          adminPassword     SecureString                null


Outputs                 :
DeploymentDebugLogLevel :


PS /home/ayse>
```

All resources
Centennial College (CentennialCollegeEDU.onmicrosoft.com)

+ Create | Manage view ⌄ | ↻ Refresh | ↓ Export to CSV | ⤵ Open query | ⊘ Assign tags | 🗑 Delete

| Filter for any field... | Subscription equals **all** | Resource group equals **all** ✕ | Type equals **all** ✕ | Location equals **all** ✕ | ⛒ Add filter |

🛡 **0** Unsecure resources   ⚡ **0** Recommendations   No grouping ⌄   ≣ List view ⌄

Name ↑↓	Type ↑↓	Resource group ↑↓	Location ↑↓	Subscription ↑↓	
☐ az104-06-nic0	Network Interface	az104-06-rg1	East US	Azure for Students	⋯
☐ az104-06-nic1	Network Interface	az104-06-rg1	East US	Azure for Students	⋯
☐ az104-06-nic2	Network Interface	az104-06-rg1	East US	Azure for Students	⋯
☐ az104-06-nic3	Network Interface	az104-06-rg1	East US	Azure for Students	⋯
☐ az104-06-nsg01	Network security group	az104-06-rg1	East US	Azure for Students	⋯
☐ az104-06-nsg2	Network security group	az104-06-rg1	East US	Azure for Students	⋯
☐ az104-06-nsg3	Network security group	az104-06-rg1	East US	Azure for Students	⋯
☐ az104-06-vm0	Virtual machine	az104-06-rg1	East US	Azure for Students	⋯
☐ az104-06-vm0_OsDisk_1_0aaa8efff6594cs1b6ba5dd68d9a7e2a	Disk	AZ104-06-RG1	East US	Azure for Students	⋯
☐ az104-06-vm1	Virtual machine	az104-06-rg1	East US	Azure for Students	⋯
☐ az104-06-vm1_disk1_7ad97dc67df84f1fad504cd173fbf22a	Disk	AZ104-06-RG1	East US	Azure for Students	⋯
☐ az104-06-vm2	Virtual machine	az104-06-rg1	East US	Azure for Students	⋯
☐ az104-06-vm2_disk1_5b43fabe115947e8b6bdbd80131De66c	Disk	AZ104-06-RG1	East US	Azure for Students	⋯
☐ az104-06-vm3	Virtual machine	az104-06-rg1	East US	Azure for Students	⋯
☐ az104-06-vm3_disk1_e9ff9b3fe79347df85e9608224efa009	Disk	AZ104-06-RG1	East US	Azure for Students	⋯
☐ az104-06-vnet01	Virtual network	az104-06-rg1	East US	Azure for Students	⋯
☐ az104-06-vnet2	Virtual network	az104-06-rg1	East US	Azure for Students	⋯
☐ az104-06-vnet3	Virtual network	az104-06-rg1	East US	Azure for Students	⋯
☐ NetworkWatcher_eastus	Network Watcher	NetworkWatcherRG	East US	Azure for Students	⋯

Task 2 hub and spoke network topology

az104-06-vnet01 | Peerings ☆ ⋯

Virtual network

🔍 Search

- <> Overview
- ▤ Activity log
- 🔒 Access control (IAM)
- 🏷 Tags
- 🩺 Diagnose and solve problems

Settings

- <> Address space
- 🖊 Connected devices
- <> Subnets
- ✕ Bastion
- 🛡 DDoS protection
- 🔥 Firewall
- 🛡 Microsoft Defender for Cloud
- ⚙ Network manager
- ▭ DNS servers
- ⟨ Peerings
- 👥 Service endpoints
- ⟨⟩ Private endpoints
- ▥ Properties
- 🔒 Locks

➕ Add 🔄 Refresh | 🔄 Sync

🔍 Filter by name...   Peering status == **all**

Name ↑↓	Peering status ↑↓	Peer ↑↓	Gateway transit ↑↓	
☐ az104-06-vnet01_to_az104-0-⋯	Connected	az104-06-vnet2	Disabled	⋯
☐ az104-06-vnet1_to_az104-06-⋯	Connected	az104-06-vnet3	Disabled	⋯

Task3 test transitivity of virtual network peering

Network Watcher | Connection troubleshoot ...
Microsoft

Search

- Overview
- Get started

Monitoring

- Topology
- Connection monitor (classic)
- Connection monitor
- Network Performance Monitor

Network diagnostic tools

- IP flow verify
- NSG diagnostics
- Next hop
- Effective security rules
- VPN troubleshoot
- Packet capture
- Connection troubleshoot

Metrics

- Usage + quotas

Logs

Destination port * ⓘ

```
3389                                                      ✓
```

⌄ Advanced settings

Check

Status

⚠ Unreachable

Agent extension version

1.4

Source virtual machine

az104-06-vm2

Grid view   Topology view

Hops

Name	IP address	Status	Next hop IP address	RTT
🖥 az104-06-vm2	10.62.0.4	⛔	10.63.0.4	-
🖥 Destination (10...	10.63.0.4	✅	-	-

Probes Sent
30

Probes Failed
30

Task 4 configure routing in the hub and spoke topology

Run Command Script

RunPowerShellScript

✕

ℹ Script execution complete

PowerShell Script

```
1    Install-WindowsFeature RemoteAccess -IncludeManagementTools
```

Run

Output

```
Success Restart Needed Exit Code    Feature Result
------- -------------- ---------    --------------
True    No             Success      {Remote Access}
```

Run Command Script

RunPowerShellScript

> ℹ️ Script execution complete

PowerShell Script

```
1    Install-WindowsFeature -Name Routing -IncludeManagementTools -IncludeAllSubFeatu
2
3    Install-WindowsFeature -Name "RSAT-RemoteAccess-Powershell"
4
5    Install-RemoteAccess -VpnType RoutingOnly
6
7    Get-NetAdapter | Set-NetIPInterface -Forwarding Enabled
```

[Run]

Output

```
Success Restart Needed Exit Code      Feature Result
------- -------------- ---------      --------------
True    No             Success        {RAS Connection Manager Administration Kit...
True    No             NoChangeNeeded {}
```

🔷 az104-06-rt23 | Routes ☆ ···
Route table

Search	«	+ Add ⟳ Refresh	⊠ Give feedback

🔷 Overview

🗒 Activity log

🔏 Access control (IAM)

🔖 Tags

🩺 Diagnose and solve problems

Settings

🖼 Configuration

🔷 Routes

‹› Subnets

🔍 Search routes		
Name ↑↓	Address prefix ↑↓	Next hop type ↑↓
az104-06-route-vnet2-to-vnet3	10.63.0.0/20	VirtualAppliance

Microsoft.RouteTable-20221104163152 | Overview 📌 ···
Deployment

🔍 Search «

👥 Overview

📄 Inputs

📑 Outputs

📄 Template

🗑 Delete ⊘ Cancel ⬆ Redeploy ⬇ Download ↻ Refresh

✅ **Your deployment is complete**

Deployment name: Microsoft.RouteTable-20221104163152   Start time: 11/4/2022, 4:33:05 PM
Subscription: Azure for Students   Correlation ID: 8812776d-bb0a-417c-aec3-0f1a48681028 📋
Resource group: az104-06-rg1

⌄ **Deployment details**

⌃ **Next steps**

[Go to resource]

Give feedback

🗩 Tell us about your experience with deployment

Network Watcher | Connection troubleshoot ···
Microsoft

🔍 Search «

🖥 Overview

☁ Get started

Monitoring

🔲 Topology

🖥 Connection monitor (classic)

🔍 Connection monitor

🔷 Network Performance Monitor

Network diagnostic tools

🖩 IP flow verify

🔍 NSG diagnostics

🔶 Next hop

⬇ Effective security rules

🔷 VPN troubleshoot

🔷 Packet capture

🖥 Connection troubleshoot

Metrics

☰ Usage + quotas

Logs
☰

| 3389 | ✓ |

⌄ Advanced settings

[Check]

Status
✅ Reachable

Agent extension version
1.4

Source virtual machine
az104-06-vm3

Grid view   Topology view

Hops

Name	IP address	Status	Next hop IP address	RTT
🖥 az104-06-vm3	10.63.0.4	✅	10.60.0.4	-
🟩 az104-06-nic0	10.60.0.4	✅	10.62.0.4	-
🟩 az104-06-nic2	10.62.0.4	✅	-	-

Average Latency in milliseconds
3

Minimum Latency in milliseconds
3

Task 5 implement Azure Load Balancer