

Lab 2

CST8912\_011

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Submitted to :

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# Practice creating and monitoring virtual networks on Azure cloud platform

## Introduction or Purpose

### Introduction:

A virtual cloud network refers to a system that has devices, virtual machines, servers, and data centers linked and controlled using wireless technology and software. With virtual cloud networking, an organization can expand their network as they see fit, without having to sacrifice efficiency and functionality.

(VNet) peering is established between pairs of virtual networks. Once a peering connection is established, they appear as one network for connectivity purposes. Devices in each network can communicate with devices in the other network using private IP addresses. The two networks can be in different regions. This is referred to as global peering. Global peering traffic also stays in CSPs private backbone network, and does not traverse the public internet, meaning it provides superior security and performance.

VNet peering is important in many scenarios. One example is when an organization has resources in different regions or subscriptions.

### Purpose:

In this lab, you will create a virtual network, including resources in the network, and then create a peering connection with a pre-created virtual network. You will verify that the peering connection allows you to communicate between virtual networks using private addresses.

## Steps covered in the lab

### Step 1:

#### Aim:

Create a Resource Group - CST8912-demo in Canada Central Region. Configure local and global virtual network peering

#### Steps:

Log into Azure portal homepage and select “Resource Groups” under “Azure Services”, Then choose “Creat”, then select “Azure for Students” under “Subscription” and fill in “CTS8912-demo” under “Resource group”, then select “(Canada) Canada Central” under “Region”.

Finally, click “Review + Create” then click “create”.

## **Step 2:**

**Aim:**

In the Azure portal, search for and select Virtual networks. Create one Virtual Network (cst8912\_vnet0) for Canada central region and two Virtual networks (cst8912\_vnet1 and cst8912\_vnet2) in EAST US region.

**Steps:**

Under Resource Group CTS8912-demo, choose “Create”. This will lead us to the “Marketplace”. Find “Virtual network” and choose “Creat”. Then create a “Virtual network name” and fill in the requested name for each virtual network in different reigions. Then turn to “IP addresses”. To create a peering network, we need to define different subnets for each virtual network. In my case, vnet0 – 10.0.0.0/16, vnet1 – 10.1.0.0/16, vnet2 – 10.2.0.0/16. Finally, click “Review + create” to create the Vnet.

After deployment, we can choose “Go to resource” to check our Vnets.

## **Step 3:**

**Aim:**

Reviewing Virtual Network Configuration

**Steps:**

Go to the resource group and click on one virtual network, we can see detailed information there.

## **Step 4:**

**Aim:**

On cst8912\_vnet0 virtual network blade click peering to peer with cst8912\_vnet1 and cst8912\_vnet2 and understand the Virtual Networking Peering Scenario and repeat the same step with vnet 1 and vnet 2.

Peering link name: cst8912\_vnet0\_to\_ cst8912\_vnet1

**Steps:**

Under “cst8912\_vnet0” choose “Peerings”, then choose “Add”. Set “Peering link name” under Remote virtual network summary and Local virtual network summary to “cst8912\_vnet0\_to\_ cst8912\_vnet1”, under “Virtual network” choose cst8912\_vnet1. Then add this peering.

### Step 5:

Aim:

On the cst8912-vnet0 virtual network blade, in the Settings section, click Peerings and then click + Add

Peering link name: cst8912\_vnet0\_to\_ cst8912\_vnet2

Steps:

Under “cst8912\_vnet0” choose “Peerings”, then choose “Add”. Set “Peering link name” under Remote virtual network summary and Local virtual network summary to “cst8912\_vnet0\_to\_ cst8912\_vnet2”, under “Virtual network” choose cst8912\_vnet2. Then add this peering.

### Step 6:

Aim:

Navigate back to the Virtual networks blade and, in the list of virtual networks, click cst8912-vnet1

Steps:

Just go to “cst8912-vnet1”.

### Step 7:

Aim:

On the cst8912-vnet1 virtual network blade, in the Settings section, click Peerings and then click + Add.

Peering link name: cst8912\_vnet1\_to\_ cst8912\_vnet2

Steps:

Under “cst8912\_vnet1” choose “Peerings”, then choose “Add”. Set “Peering link name” under Remote virtual network summary and Local virtual network summary to “cst8912\_vnet1\_to\_ cst8912\_vnet2”, under “Virtual network” choose cst8912\_vnet2. Then add this peering.

### Step 8:

Aim:

In the Azure portal, search for and select **Virtual machines**.

Steps:

In the Azure portal, search for and select **Virtual machines**.

### Step 9:

**Aim:**

In the list of virtual machines, create VM0 in Canada Central on Vnet 0 and VM1 and VM2 in East US (use Windows Server 2022 Datacenter) image on Vnet1 and Vnet 2 respectively.

**Steps:**

Set VM's resource group to "CST8912-demo", set Virtual machine name to "VM0", then set region and choose image "Windows Server 2022 Datacenter", choose "Standard B1S" for this VM, create username and password. Then configure the virtual network to cst8912\_vnet0. Finally create this VM. Do the same process to VM1 and VM2 but aware of the region and network.

### **Step 10:**

**Aim:**

Select VM0 and connect using RDP signing in with username and password

**Steps:**

Under "VM0" choose "Connect", then use the Public IP address to connect through RDP.

### **Step 11:**

**Aim:**

Within the RDP, right-click start button and click powershell.

**Steps:**

Open powershell as requested.

### **Step 12 & 13:**

**Aim:**

In the Windows PowerShell console window, run the following to test connectivity to **vm1** (use private ip) over TCP port 3389:

**Test-NetConnection -ComputerName "ip" -Port 3389 -InformationLevel 'Detailed'**

Example: `Test-NetConnection -ComputerName 10.52.0.4 -Port 3389 -InformationLevel 'Detailed'`

Examine the output of the command and verify that the connection was successful.

**Steps:**

Under "VM1" Overview, find the private IP address, and test the connection on VM0.

## Step 14:

Aim:

Repeat the same step to connect Vm0 to Vm2 and Vm1 to Vm2 and test the connection

Steps:

Under VM0 & VM2 Overview, find the public & private IP address, and test the connection on VM0 & VM1.

## Step 15:

Aim:

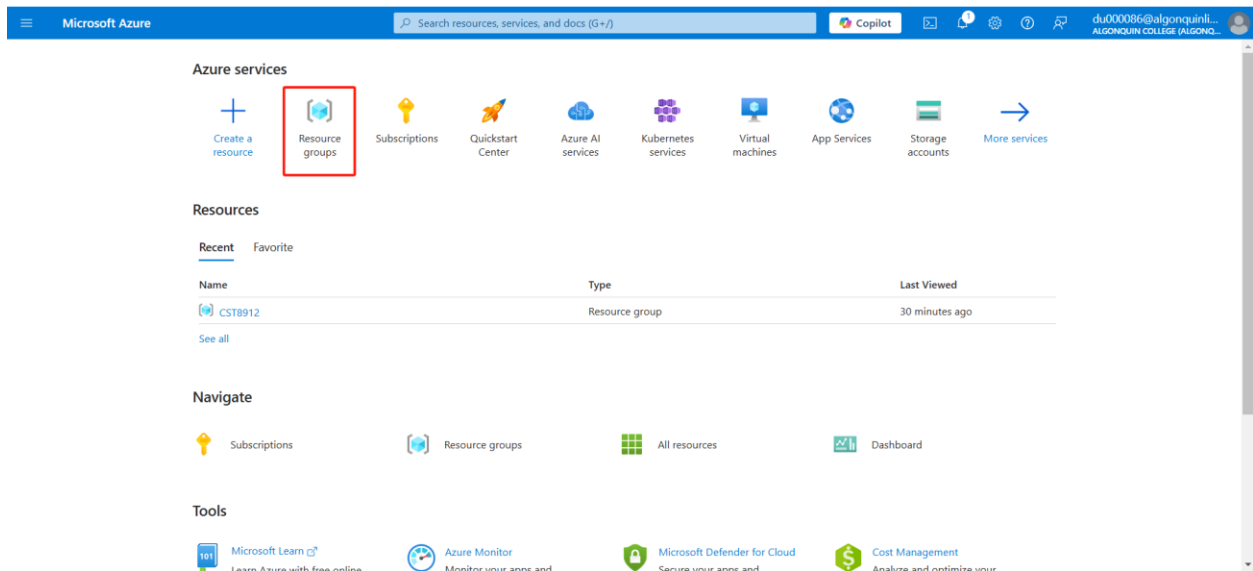
After demo delete all the resources created during this lab and create a lab report documenting all the steps with screenshots

Steps:

Go to Resource group, and delete the whole Resource group.

## Results

### Step 1:



Microsoft Azure

Search resources, services, and docs (G +/)

Copilot

du000086@algonquinli...  
ALGONQUIN COLLEGE (ALGONQ...

Home >

Resource groups

Algonquin College (AlgonquinLivecom.onmicrosoft.com)

+ Create

Manage view

Refresh

Export to CSV

Open query

Assign tags

Filter for any field...

Subscription equals all

Location equals all

Add filter

Showing 1 to 1 of 1 records.

No grouping

List view

Name	Subscription	Location
CST8912	Azure for Students	Canada Central

< Previous Page 1 of 1 Next >

Give feedback

Microsoft Azure

Search resources, services, and docs (G +/)

Copilot

du000086@algonquinli...  
ALGONQUIN COLLEGE (ALGONQ...

Home > Resource groups >

Create a resource group

Basics Tags Review + create

Resource group - A container that holds related resources for an Azure solution. The resource group can include all the resources for the solution, or only those resources that you want to manage as a group. You decide how you want to allocate resources to resource groups based on what makes the most sense for your organization. [Learn more](#)

Project details

Subscription \*

Resource group \*

Resource details

Region \*

Azure for Students

CST8912-demo

(Canada) Canada Central

Review + create

< Previous

Next: Tags >

Microsoft Azure

Search resources, services, and docs (G+J)

Copilot

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ALGONQUIN COLLEGE (ALSONQ...

[Home](#) > [Resource groups](#) >

Create a resource group ...

Validation passed.

Basics

Tags

Review + create

Basics

Subscription

Resource group

Region

Azure for Students

CST8912-demo

Canada Central

Tags

None

Create

< Previous

Next >

Download a template for automation

## Step 2:

Microsoft Azure

Search resources, services, and docs (G+J)

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ALGONQUIN COLLEGE (ALSONQ...

[Home](#) > [Resource groups](#) > [CST8912-demo](#) >

Marketplace ...

Get Started

Service Providers

Management

Private Marketplace

Private Offer Management

My Marketplace

Categories

virtual network

Pricing : All

Operating System : All

Publisher Type : All

Product Type : All

Publisher name : All

☐ Azure services only

Showing 1 to 20 of 1119 results for 'virtual network'. [Clear search](#)

Virtual network gateway

Microsoft

Azure Service

The VPN device in your Azure virtual network and used with site-to-site and VNet-to-VNet VPN connections.

Create

Virtual network

Microsoft

Azure Service

Create a logically isolated section in Microsoft Azure and securely connect it outward.

Create

CloudGuard Network Security for Azure Virtual

Check Point

Azure Application

Provides industry-leading threat prevention, secure connectivity, and multi-layered network security.

Starts at Free

Create

Network interface

Microsoft

Azure Service

Create a Microsoft Azure Network Interface that allows you to connect a Virtual Machine to a Virtual Network.

Create

Network connection

Microsoft

Azure Service

Network connections enable dev boxes to connect to your virtual networks.

Create

Networking (418)

Security (333)

Compute (241)

Virtual network

is Marketplace helpful?



Microsoft Azure

Search resources, services, and docs (G+J)

Copilot

du000086@algonquinli...  
ALGONQUIN COLLEGE (ALSONQ...

Home > Resource groups > CST8912-demo > Marketplace > Virtual network >

Create virtual network ...

BasicsSecurityIP addressesTagsReview + create

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription \*  
Resource group \*  
Create new

Instance details

Virtual network name \*  
Region \* ⓘ  
Deploy to an Azure Extended Zone

PreviousNextReview + create

Give feedback

Microsoft Azure

Search resources, services, and docs (G+J)

Copilot

du000086@algonquinli...  
ALGONQUIN COLLEGE (ALSONQ...

Home > CST8912-demo > Marketplace >

Create virtual network ...

BasicsSecurityIP addressesTagsReview + create

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription \*  
Resource group \*  
Create new

Instance details

Virtual network name \*  
Region \* ⓘ  
Deploy to an Azure Extended Zone

PreviousNextReview + create

Give feedback

Microsoft Azure

Search resources, services, and docs (G+J)

Copilot

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ALGONQUIN COLLEGE (ALGONQ...

Home > CST8912-demo > Marketplace >

Create virtual network ...

Basics Security IP addresses Tags Review + create

assigns the resource an IP address from the subnet. [Learn more](#)

+ Add a subnet

10.1.0.0/16

10.1.0.0

/16

10.1.0.0 - 10.1.255.255 65,536 addresses

Delete address space

Subnets	IP address range	Size	NAT gateway
default	10.1.0.0 - 10.1.0.255	/24 (256 addresses)	-

Add IPv4 address space

Previous

Next

Review + create

Give feedback

Microsoft Azure

Search resources, services, and docs (G+J)

Copilot

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ALGONQUIN COLLEGE (ALGONQ...

Home > CST8912-demo > Marketplace >

Create virtual network ...

Basics Security IP addresses Tags Review + create

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription \*

Azure for Students

Resource group \*

CST8912-demo

Create new

Instance details

Virtual network name \*

cst8912\_vnet2

Region \* ⓘ

(US) East US

Deploy to an Azure Extended Zone

Previous

Next

Review + create

Give feedback

Microsoft Azure

Search resources, services, and docs (G+J)

Copilot

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ALGONQUIN COLLEGE (ALGONQ...)

Home >

**CST8912-demo** Resource group

Search

+ Create Manage view Delete resource group Refresh Export to CSV Open query Assign tags Move Delete Export template

Overview

Activity log

Access control (IAM)

Tags

Resource visualizer

Events

Settings

Cost Management

Monitoring

Automation

Help

Essentials

Resources Recommendations

Filter for any field... Type equals all Location equals all Add filter

Showing 1 to 3 of 3 records. Show hidden types No grouping List view

Name	Type	Location
cst8912_vnet0	Virtual network	Canada Central
cst8912_vnet1	Virtual network	East US
cst8912_vnet2	Virtual network	East US

< Previous Page 1 of 1 Next >

Give feedback

### Step 3:

Microsoft Azure

Search resources, services, and docs (G+J)

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ALGONQUIN COLLEGE (ALGONQ...)

Home > CST8912-demo >

**cst8912\_vnet0** Virtual network

Search

Move Delete Refresh Give feedback

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Settings

Monitoring

Automation

Help

Essentials

Resource group (move) : CST8912-demo

Location (move) : Canada Central

Subscription (move) : Azure for Students

Subscription ID : 22f60889-0ad3-47d4-9d41-7d026e7ff990

Address space : 10.0.0.0/16

DNS servers : Azure provided DNS service

Flow timeout : Configure

BGP community string : Configure

Virtual network ID : 9174e35e-6d1f-4316-b2fe-a04c06bf58eb

Tags (edit) : Add tags

Topology Properties Capabilities (5) Recommendations Tutorials

**DDoS protection**  
Configure additional protection from distributed denial of service attacks.  
● Not configured

**Azure Firewall**  
Protect your network with a stateful L3-L7 firewall.  
● Not configured

**Peerings**  
Seamlessly connect two or more virtual networks.  
● Not configured

**Microsoft Defender for Cloud**  
Strengthen the security posture of your environment.

Drăguta autănuinte

### Step 4:

Microsoft Azure

Search resources, services, and docs (G+J)

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ALGONQUIN COLLEGE (ALSONQ...

Home > CST8912-demo > cst8912\_vnet0

cst8912\_vnet0 | Peerings

Virtual network

Search

+ Add Refresh Export to CSV Delete Sync

Connected devices

Subnets

Bastion

DDoS protection

Firewall

Microsoft Defender for Cloud

Network manager

DNS servers

Peerings

Service endpoints

Private endpoints

Properties

Locks

Monitoring

Automation

Virtual network peering enables you to seamlessly connect two or more virtual networks in Azure. The virtual networks appear as one for connectivity purposes. [Learn more](#)

Filter by name...

Showing all 0 items

<input type="checkbox"/>	Name ?	Peering sync status ?	Peering state ?	Remote virtu... ?	Virtu... ?
Add a peering to get started					

Give feedback

https://portal.azure.com/#@AlgonquinLivecom.onmicrosoft.com/resource/subscriptions/22f60889-0ad3-47d4-9d41-7d326e7f990/resourceGroups/CST8912-demo/providers/Microsoft.Network/virtualNetworks/cst8912\_vnet0/peerings

Microsoft Azure

Search resources, services, and docs (G+J)

Copilot

du000086@algonquinli...  
ALGONQUIN COLLEGE (ALSONQ...

Home > CST8912-demo > cst8912\_vnet0 | Peerings >

Add peering

cst8912\_vnet0

Virtual network peering enables you to seamlessly connect two or more virtual networks in Azure. This will allow resources in either virtual network to directly connect and communicate with resources in the peered virtual network.

Remote virtual network summary

Peering link name \*  
cst8912\_vnet0\_to\_cst8912\_vnet1

Virtual network deployment model   
☒ Resource manager  
☐ Classic

I know my resource ID   
☐

Subscription \*  
Azure for Students

Virtual network \*  
cst8912\_vnet1 (CST8912-demo)

Remote virtual network peering settings

Allow 'cst8912\_vnet1' to access ☒

Add Cancel

Give feedback

Microsoft Azure

Search resources, services, and docs (G+J)

Copilot

du000086@algonquinli...  
ALGONQUIN COLLEGE (ALSONQ...

Home > CST8912-demo > cst8912\_vnet0 | Peerings >

Add peering

cst8912\_vnet0

Local virtual network summary

Peering link name \*

cst8912\_vnet0\_to\_cst8912\_vnet1

Local virtual network peering settings

Allow 'cst8912\_vnet0' to access 'cst8912\_vnet1' ☒

Allow 'cst8912\_vnet0' to receive forwarded traffic from 'cst8912\_vnet1' ☒

Allow gateway or route server in 'cst8912\_vnet0' to forward traffic to 'cst8912\_vnet1' ☐

Enable 'cst8912\_vnet0' to use 'cst8912\_vnet1's' remote gateway or route server ☐

Add

Cancel

Give feedback

## Step 5:

Microsoft Azure

Search resources, services, and docs (G+J)

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du000086@algonquinli...  
ALGONQUIN COLLEGE (ALSONQ...

Home > CST8912-demo > cst8912\_vnet0 | Peerings >

Add peering

cst8912\_vnet0

Virtual network peering enables you to seamlessly connect two or more virtual networks in Azure. This will allow resources in either virtual network to directly connect and communicate with resources in the peered virtual network.

Remote virtual network summary

Peering link name \*

cst8912\_vnet0\_to\_cst8912\_vnet2

Virtual network deployment model ☒ Resource manager  
☐ Classic

I know my resource ID ☐

Subscription \*

Azure for Students

Virtual network \*

cst8912\_vnet2 (CST8912-demo)

Remote virtual network peering settings

Allow 'cst8912\_vnet2' to access ☒

Add

Cancel

Give feedback

Microsoft Azure

Search resources, services, and docs (G+J)

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Home > CST8912-demo > cst8912\_vnet0

cst8912\_vnet0 | Peerings

Virtual network

Search

idsg

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

+ Add Refresh Export to CSV Delete Sync

Virtual network peering enables you to seamlessly connect two or more virtual networks in Azure. The virtual networks appear as one for connectivity purposes. [Learn more](#)

Filter by name...

Showing all 2 items

<input type="checkbox"/>	Name	Peering sync status	Peering state	Remote virtu...	Virtu...
<input type="checkbox"/>	cst8912_vnet0_to_cst8912_vnet1	Fully Synchronized	Connected	cst8912_vnet1	Disabled
<input type="checkbox"/>	cst8912_vnet0_to_cst8912_vnet2	Fully Synchronized	Connected	cst8912_vnet2	Disabled

Give feedback

## Step 6:

Microsoft Azure

Search resources, services, and docs (G+J)

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du000086@algonquinli... ALGONQUIN COLLEGE

Home > CST8912-demo >

cst8912\_vnet1

Virtual network

Search

Move Delete Refresh Give feedback

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

JSON View

Essentials

Resource group (move) : CST8912-demo

Location (move) : East US

Subscription (move) : Azure for Students

Subscription ID : 22f60889-0ad3-47d4-9d41-7d026e7ff990

Address space : 10.1.0.0/16

DNS servers : Azure provided DNS service

Flow timeout : Configure

BGP community string : Configure

Virtual network ID : a81bfa5c-085a-47ee-a0ec-462ef607cd02

Tags (edit) : Add tags

Topology Properties Capabilities (5) Recommendations Tutorials

DDoS protection

Configure additional protection from distributed denial of service attacks.

Not configured

Azure Firewall

Protect your network with a stateful L3-L7 firewall.

Not configured

Peerings

Seamlessly connect two or more virtual networks.

1 networks

Microsoft Defender for Cloud

Strengthen the security posture of your environment.

Private endpoints

## Step 7:

Microsoft Azure

Search resources, services, and docs (G+J)

Copilot

du000086@algonquinli...  
ALGONQUIN COLLEGE

Home > CST8912-demo > cst8912\_vnet1

cst8912\_vnet1 | Peerings

Virtual network

Search

+ Add Refresh Export to CSV Delete Sync

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

Virtual network peering enables you to seamlessly connect two or more virtual networks in Azure. The virtual networks appear as one for connectivity purposes. [Learn more](#)

Filter by name...

Showing all 1 items

	Name	Peering sync status	Peering state	Remote virtu...	Virtu...
	cst8912_vnet0_to_cst8912_vnet1	Fully Synchronized	Connected	cst8912_vnet0	Disabled

Give feedback

https://portal.azure.com/#@AlgonquinLivecom/onmicrosoft.com/resource/subscriptions/22f60889-0ad3-47d4-9d41-7d326e7f1990/resourceGroups/CST8912-demo/providers/Microsoft.Network/virtualNetworks/cst8912\_vnet1/peerings

Microsoft Azure

Search resources, services, and docs (G+J)

Copilot

du000086@algonquinli...  
ALGONQUIN COLLEGE

Home > CST8912-demo > cst8912\_vnet1 | Peerings >

Add peering

cst8912\_vnet1

Local virtual network summary

Peering link name \*  
cst8912\_vnet1\_to\_cst8912\_vnet2

Local virtual network peering settings

Allow 'cst8912\_vnet1' to access 'cst8912\_vnet2' ☒

Allow 'cst8912\_vnet1' to receive forwarded traffic from 'cst8912\_vnet2' ☒

Allow gateway or route server in 'cst8912\_vnet1' to forward traffic to 'cst8912\_vnet2' ☐

Enable 'cst8912\_vnet1' to use 'cst8912\_vnet2's' remote gateway or route server ☐

Add

Cancel

Give feedback

Microsoft Azure

Search resources, services, and docs (G+J)

Copilot

du000086@algonquinli...  
ALGONQUIN COLLEGE

Home > CST8912-demo > cst8912\_vnet1

cst8912\_vnet1 | Peerings

Virtual network

Search

+ Add Refresh Export to CSV Delete Sync

Filter by name...

Showing all 2 items

<input type="checkbox"/>	Name	Peering sync status	Peering state	Remote virtu...	Virtu...
<input type="checkbox"/>	cst8912_vnet0_to_cst8912_vnet1	Fully Synchronized	Connected	cst8912_vnet0	Disabled
<input type="checkbox"/>	cst8912_vnet1_to_cst8912_vnet2	Fully Synchronized	Connected	cst8912_vnet2	Disabled

Give feedback

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

Added virtual network peering

Successfully added virtual network peering 'cst8912\_vnet1\_to\_cst8912\_vnet2' to 'cst8912\_vnet2'.

Added virtual network peering

Successfully added virtual network peering 'cst8912\_vnet1\_to\_cst8912\_vnet2' to 'cst8912\_vnet1'.

Microsoft Azure

Search resources, services, and docs (G+J)

Copilot

du000086@algonquinli...  
ALGONQUIN COLLEGE

Home > CST8912-demo > cst8912\_vnet1 | Peerings >

Add peering

cst8912\_vnet1

Virtual network peering enables you to seamlessly connect two or more virtual networks in Azure. This will allow resources in either virtual network to directly connect and communicate with resources in the peered virtual network.

Remote virtual network summary

Peering link name \*  
cst8912\_vnet1\_to\_cst8912\_vnet2

Virtual network deployment model ☒ Resource manager  
☐ Classic

I know my resource ID ☐

Subscription \*  
Azure for Students

Virtual network \*  
cst8912\_vnet2 (CST8912-demo)

Remote virtual network peering settings

Allow 'cst8912\_vnet2' to access ☒

Add

Cancel

Give feedback



## Step 8:

The screenshot shows the Microsoft Azure portal's 'Create a resource' page. The top navigation bar includes the Microsoft Azure logo, a search bar, and user information. The main content area is divided into two columns: 'Popular Azure services' and 'Popular Marketplace products'. The 'Virtual machine' service is highlighted with a red box. The left sidebar shows a list of categories, and the bottom right corner has a 'Give feedback' link.

Microsoft Azure

Search resources, services, and docs (G+J)

Copilot

du000086@algonquinli... ALGONQUIN COLLEGE

Home >

Create a resource

Get Started

Search services and marketplace

Getting started? Try our Quickstart Center

Recently created

Categories

- AI + Machine Learning
- Analytics
- Blockchain
- Compute
- Containers
- Databases
- Developer Tools
- DevOps
- Identity
- Integration
- Internet of Things
- IT & Management Tools
- Media

Popular Azure services See more in All services

- Virtual machine**  
Create Docs MS Learn
- Web App  
Create Docs MS Learn
- SQL Database  
Create Docs MS Learn
- Function App  
Create Docs
- Key Vault  
Create Docs MS Learn
- Data Factory  
Create Docs MS Learn
- Template deployment (deploy using custom templates)  
Create Docs MS Learn

Popular Marketplace products See more in Marketplace

- Windows Server 2019 Datacenter  
Create Learn more
- Ubuntu Server 20.04 LTS  
Create Learn more
- Ubuntu Server 22.04 LTS  
Create Learn more
- Red Hat Enterprise Linux 7.4  
Create Learn more
- Essentials 50K  
Set up + subscribe Learn more
- MongoDB Atlas (pay-as-you-go)  
Set up + subscribe Learn more
- Microsoft Defender for Endpoint  
Create Learn more

Give feedback

## Step 9:

Microsoft Azure

Search resources, services, and docs (G+J)

Copilot

du000086@algonquinli...  
ALGONQUIN COLLEGE

Home > Create a resource >

Create a virtual machine ...

Help me create a low cost VM

Help me create a VM optimized for high availability

Help me choose the right VM size for my workload

BasicsDisksNetworkingManagementMonitoringAdvancedTagsReview + create

Create a virtual machine that runs Linux or Windows. Select an image from Azure marketplace or use your own customized image. Complete the Basics tab then Review + create to provision a virtual machine with default parameters or review each tab for full customization. [Learn more](#)

This subscription may not be eligible to deploy VMs of certain sizes in certain regions.

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription \* Azure for Students

Resource group \* CST8912-demo  
[Create new](#)

Instance details

Virtual machine name \* VM0

< PreviousNext : Disks >Review + create

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Microsoft Azure

Search resources, services, and docs (G+J)

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ALGONQUIN COLLEGE

Home > Create a resource >

Create a virtual machine ...

Help me create a low cost VM

Help me create a VM optimized for high availability

Help me choose the right VM size for my workload

Region \* (Canada) Canada Central

Availability options \* Availability zone

Zone options \*

- Self-selected zone  
Choose up to 3 availability zones, one VM per zone
- Azure-selected zone (Preview)  
Let Azure assign the best zone for your needs

Availability zone \* Zone 1

You can now select multiple zones. Selecting multiple zones will create one VM per zone. [Learn more](#)

Security type \* Trusted launch virtual machines  
[Configure security features](#)

Image \* Windows Server 2022 Datacenter: Azure Edition - x64 Gen2  
[See all images](#) | [Configure VM generation](#)

VM architecture \*

- Arm64
- x64

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Home > Create a resource >

Create a virtual machine

Help me create a low cost VM

Help me create a VM optimized for high availability

Help me choose the right VM size for my workload

Enable Hibernation

ⓘ

Hibernate is not supported by the size that you have selected. Choose a size that is compatible with Hibernation to enable this feature. [Learn more](#)

Administrator account

Username \*

yuntliandu

✓

Password \*

\*\*\*\*\*

✓

Confirm password \*

\*\*\*\*\*

✓

Inbound port rules

Select which virtual machine network ports are accessible from the public internet. You can specify more limited or granular network access on the Networking tab.

Public inbound ports \*

None

Allow selected ports

Select inbound ports \*

RDP (3389)

▼

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Next: Disks >

Review + create

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Home > Create a resource >

Create a virtual machine

Help me create a low cost VM

Help me create a VM optimized for high availability

Help me choose the right VM size for my workload

When creating a virtual machine, a network interface will be created for you.

Virtual network \*

cst8912\_vnet0

▼

Create new

Subnet \*

default (10.0.0.0/24)

▼

Manage subnet configuration

Public IP

(new) VM0-ip

▼

Create new

NIC network security group

None

Basic

Advanced

Public inbound ports \*

None

Allow selected ports

Select inbound ports \*

RDP (3389)

▼

⚠ This will allow all IP addresses to access your virtual machine. This is only recommended for testing. Use the Advanced controls in the Networking tab for

< Previous

Next: Management >

Review + create

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Home > Resource groups > CST8912-demo

Overview

Activity log

Access control (IAM)

Tags

Resource visualizer

Events

Settings

Cost Management

Monitoring

Automation

Help

Essentials

Resources Recommendations

Filter for any field...

Type equals all

Location equals all

Add filter

Showing 1 to 18 of 18 records. Show hidden types

No grouping

List view

Name	Type	Location
VM0	Virtual machine	Canada Central
VM0-ip	Public IP address	Canada Central
VM0-nsg	Network security group	Canada Central
vm0880_z1	Network interface	Canada Central
VM0_OsDisk_1_9d1508de2eb54f608f9a016658391a8b	Disk	Canada Central
VM1	Virtual machine	East US
VM1-ip	Public IP address	East US

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## Step 10:

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Home > Resource groups > CST8912-demo > VM0

Virtual machine

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Connect

Networking

Settings

Availability + scale

Security

Backup + disaster recovery

Operations

Monitoring

Automation

Help

Help me copy this VM in any region

Connect

Connect via Bastion

Start

Restart

Stop

Hibernate

Capture

Delete

Refresh

Open in mobile

Feedback

CLI / PS

Resource group (move) : CST8912-demo

Status : Running

Location : Canada Central (Zone 1)

Subscription (move) : Azure for Students

Subscription ID : 22f60889-0ad3-47d4-9d41-7d026e7ff990

Availability zone : 1

Tags (edit) : Add tags

Operating system : Windows (Windows Server 2022 Datacenter Azure Edition)

Size : Standard B1s (1 vcpu, 1 GiB memory)

Public IP address : 20.220.172.48

Virtual network/subnet : cst8912-vmnet0/default

DNS name : Not configured

Health state : -

Time created : 1/21/2025, 10:40 PM UTC

Properties

Monitoring

Capabilities (8)

Recommendations

Tutorials

Virtual machine

Computer name : VM0

Operating system : Windows (Windows Server 2022 Datacenter Azure Edition)

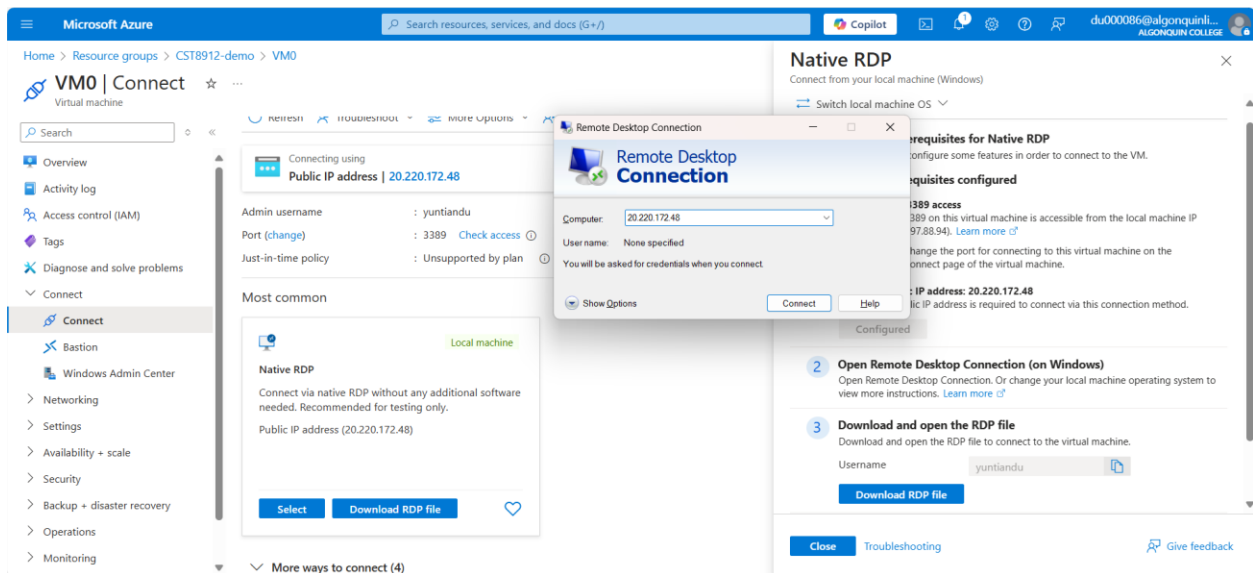
VM generation : V2

Networking

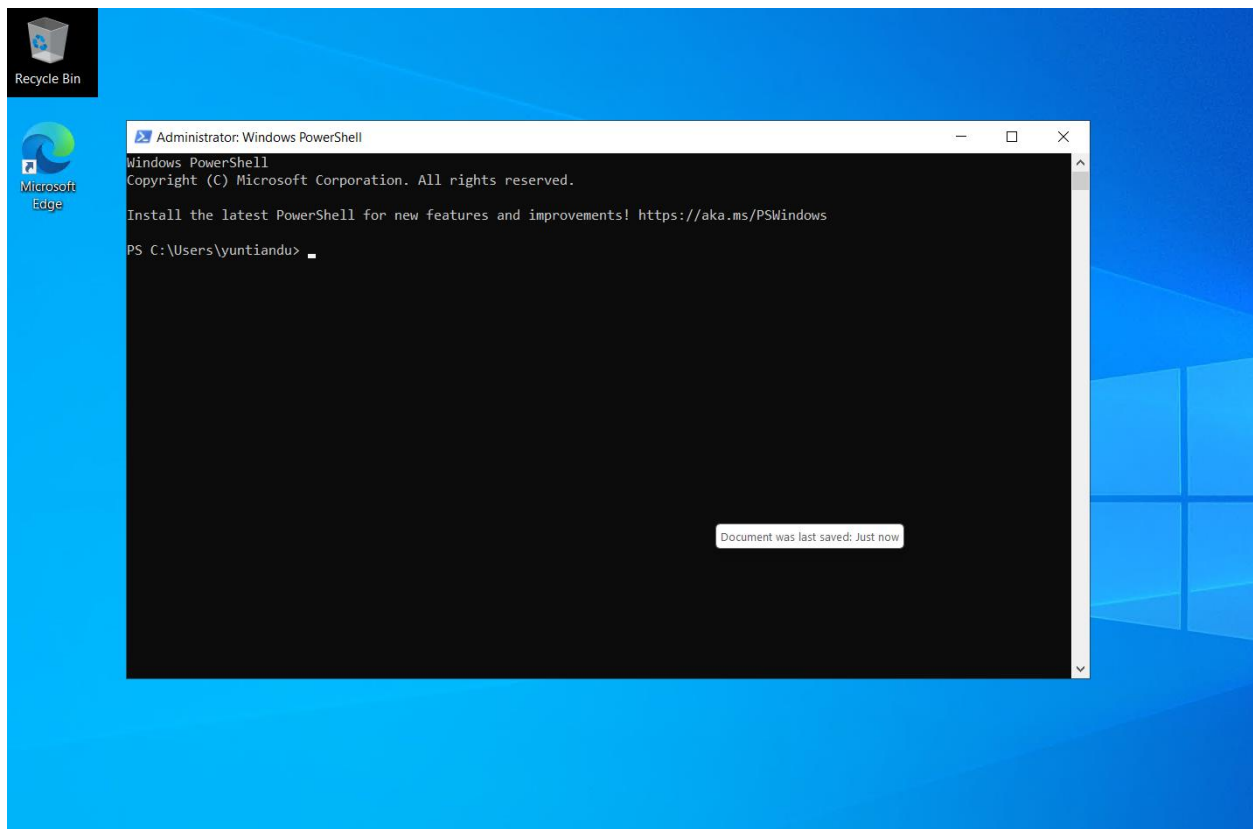
Public IP address : 20.220.172.48 (Network interface vm0880\_z1)

Public IP address (IPv6) : -

Private IP address : 10.0.0.4



## Step 11:



## Step 12 & 13:

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Home > Resource groups > CST8912-demo >

VM1 Virtual machine

Search

Help me copy this VM in any region

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Connect

Networking

Settings

Availability + scale

Security

Backup + disaster recovery

Operations

Monitoring

Automation

Help

Properties

Monitoring

Capabilities (8)

Recommendations

Tutorials

Virtual machine

Computer name VM1

Operating system Windows (Windows Server 2022 Datacenter Azure Edition)

VM generation V2

VM architecture x64

Agent status Ready

Agent version 2.7.41491.1139

Hibernation Disabled

Host group -

Host -

Proximity placement group -

Colocation status N/A

Capacity reservation group -

Disk controller type SCSI

Networking

Public IP address 20.84.56.204 ( Network interface vm122\_z2 )

Public IP address (IPv6) -

Private IP address 10.1.0.4

Private IP address (IPv6) -

Virtual network/subnet cst8912\_vnet1/default

DNS name Configure

Size

Size Standard B1s

vCPUs 1

RAM 1 GiB

Source image details

Source image publisher MicrosoftWindowsServer

Source image offer WindowsServer

Administrator: Windows PowerShell

Windows PowerShell

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Install the latest PowerShell for new features and improvements! <https://aka.ms/PSWindows>

PS C:\Users\yuntiandu> Test-NetConnection -ComputerName 10.1.0.4 -Port 3389 -InformationLevel 'Detailed'

ComputerName : 10.1.0.4

RemoteAddress : 10.1.0.4

RemotePort : 3389

NameResolutionResults : 10.1.0.4

MatchingIPsecRules :

NetworkIsolationContext : Internet

InterfaceAlias : Ethernet

SourceAddress : 10.0.0.4

NetRoute (NextHop) : 10.0.0.1

TcpTestSucceeded : True

PS C:\Users\yuntiandu>

Step 14:

```
PS C:\Users\yuntiandu> Test-NetConnection -ComputerName 10.2.0.4 -Port 3389 -InformationLevel 'Detailed'
```

```
ComputerName      : 10.2.0.4
RemoteAddress     : 10.2.0.4
RemotePort        : 3389
NameResolutionResults : 10.2.0.4
MatchingIPsecRules :
NetworkIsolationContext : Internet
InterfaceAlias     : Ethernet
SourceAddress      : 10.0.0.4
NetRoute (NextHop) : 10.0.0.1
TcpTestSucceeded   : True
```

20.84.56.204 - Remote Desktop Connection

Select Administrator: Windows PowerShell

Recy

```
ComputerName      : 10.2.0.4
RemoteAddress     : 10.2.0.4
RemotePort        : 3389
NameResolutionResults : 10.2.0.4
MatchingIPsecRules :
NetworkIsolationContext : Internet
InterfaceAlias     :
SourceAddress      :
NetRoute (NextHop) :
TcpTestSucceeded   : True
```

PS C:\Users\yuntiandu> \_

**Step 15:**

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Home > Resource groups >

### Resource groups

Algonquin College

+ Create Manage view ...

Filter for any field...

Name ↑

- CST8911
- CST8912
- CST8912-demo
- DefaultResourceGroup-EUS
- NetworkWatcherRG

Page 1 of 1

### CST8912-demo

Resource group

Search

+ Create Manage view ...

Refresh Export to CSV Open query Assign tags

Overview

- Activity log
- Access control (IAM)
- Tags
- Resource visualizer
- Events
- Settings
- Cost Management
- Monitoring
- Automation
- Help

Essentials

Resources Recommendations

Filter for any field... Type equals all Location equals all Add filter

Showing 1 to 18 of 18 records. Show hidden types No grouping List view

Name	Type	Location
cst8912_vnet0	Virtual network	Canada Central
cst8912_vnet1	Virtual network	East US
cst8912_vnet2	Virtual network	East US
VM0	Virtual machine	Canada Central
VM0-ip	Public IP address	Canada Central
VM0-nsg	Network security group	Canada Central
vm0880 >1	Network Interface	Canada Central

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## References

None.