

NAME: SHAIK ABDUL KHADAR JILANI

ROLLNO: DXC262AB12038

BATCH: DXC-262-Analytics-B12-Azure

SUBMISSION: 8-6-2022

COMPANY: DXC TECHNOLOGY

DAY-8

## 1) Explain the steps with screenshots how to create Blob storage in Azure cloud?

First we need to go to Azure and search for storage accounts and click on create

Give the resource group name dxcrgr2317 and storage account name as dxstorage2804

The screenshot shows the 'Create a storage account' page in the Microsoft Azure portal. The 'Basic' tab is selected. The 'Subscription' is 'Azure-DXC262AB12Lab'. The 'Resource group' is 'dxcrgr2317'. The 'Storage account name' is 'dxstorage2804'. The 'Region' is '(US) East US'. The 'Performance' is 'Standard: Recommended for most scenarios (general-purpose)'. The 'Review + create' button is visible at the bottom.

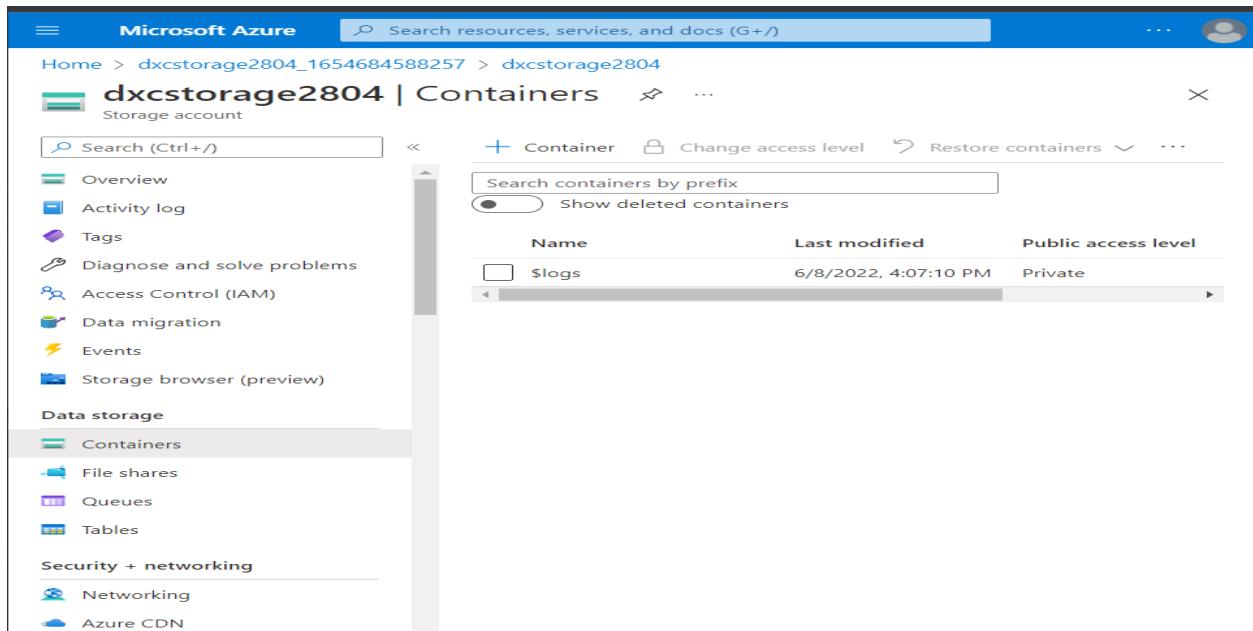
Field	Value
Subscription *	Azure-DXC262AB12Lab
Resource group *	dxcrgr2317
Storage account name *	dxstorage2804
Region *	(US) East US
Performance *	Standard: Recommended for most scenarios (general-purpose)

Keep all default advanced, Networking and keep on clicking next and click Review + create, We get validation to create

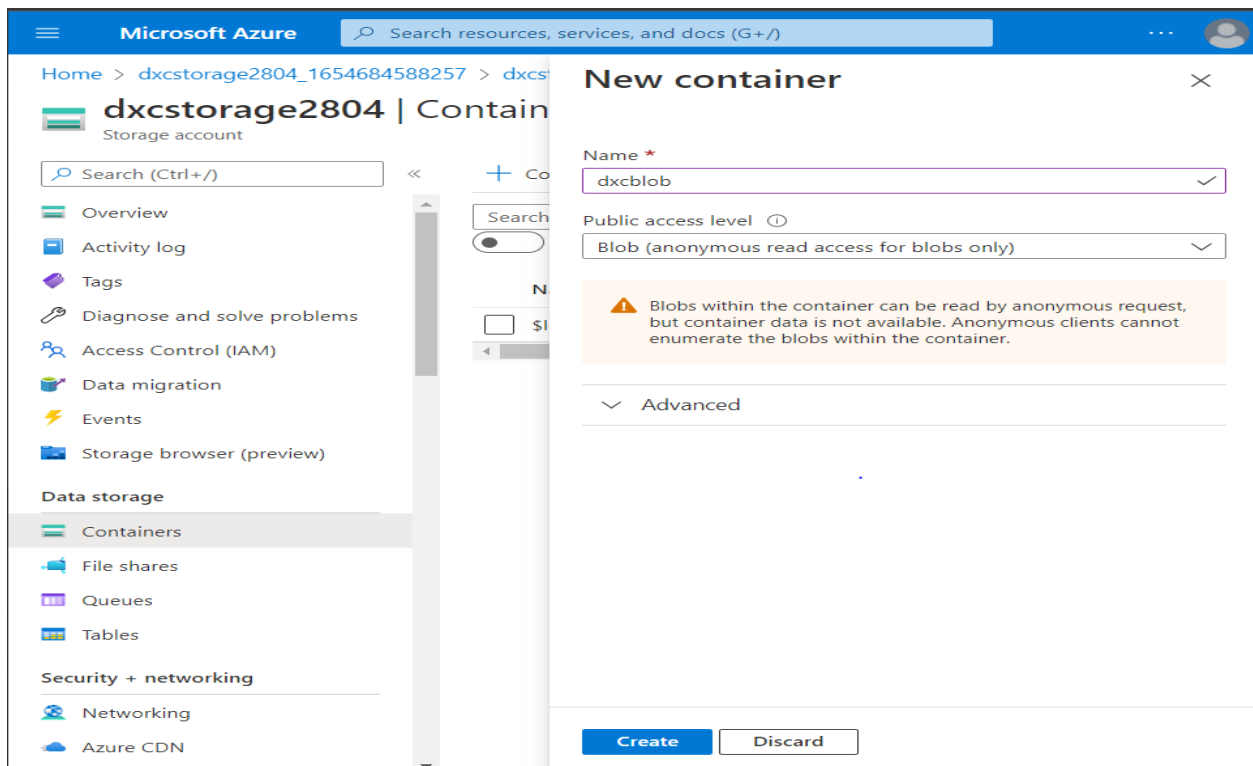
The screenshot shows the 'Create a storage account' page in the Microsoft Azure portal, with the 'Review + create' tab selected. A green banner indicates 'Validation passed'. The 'Basics' section shows the subscription, resource group, location, storage account name, deployment model, performance, and replication. The 'Advanced' section shows 'Secure transfer', 'Allow storage account key access', and 'Allow cross-tenant replication', all enabled.

Section	Field	Value
Basics	Subscription	Azure-DXC262AB12Lab
	Resource Group	dxcrgr2317
	Location	eastus
	Storage account name	dxstorage2804
	Deployment model	Resource manager
	Performance	Standard
Advanced	Secure transfer	Enabled
	Allow storage account key access	Enabled
	Allow cross-tenant replication	Enabled

After that we will get Your Deployment is complete and go to Resource in that Click on Containers-> + Container

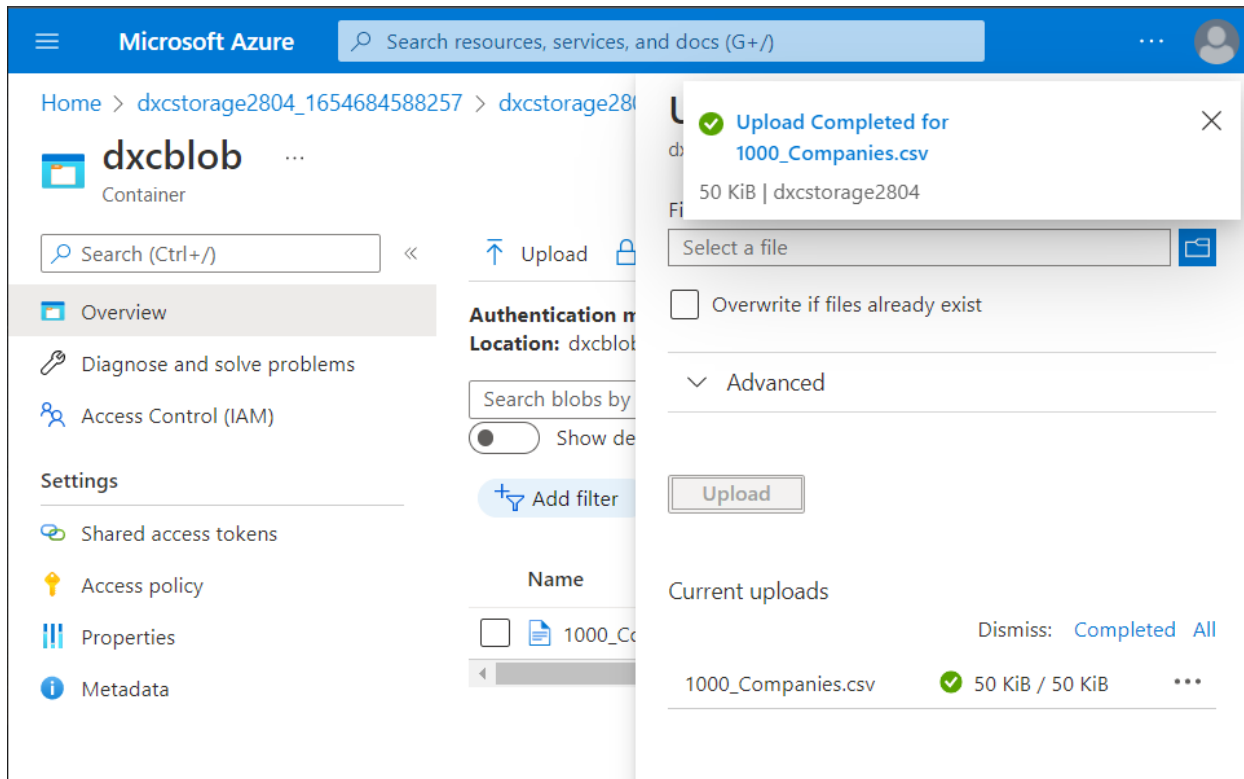


After that give the name of the container dxcblob and Public access level as Blob and Create

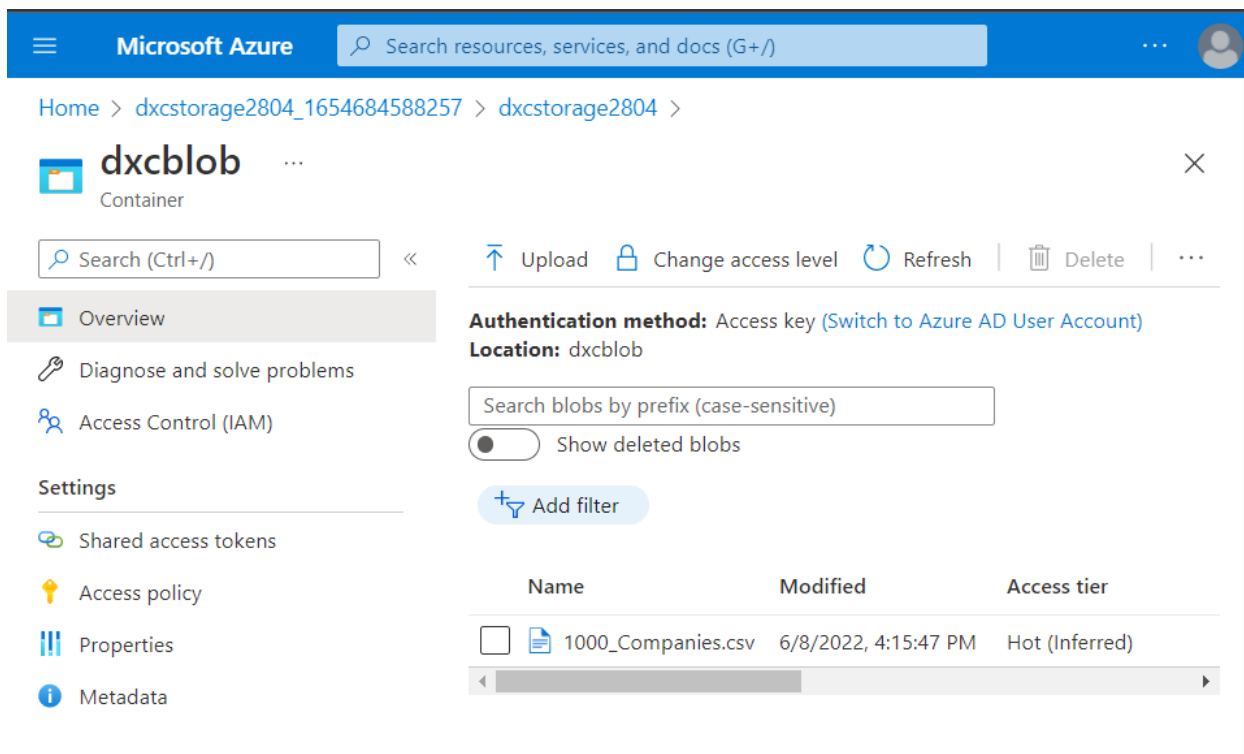


We get the dxcblob container storage click on it

We will get options to upload whatever file we need click on upload and select any file from the pc and upload



When we click on the dxcblob we get to find the file



2) Explain the steps with screenshots how to create Virtual machine & how to connect from

(i) Local Computer - CMD method ?

(ii) Using Azure cloud Shell?

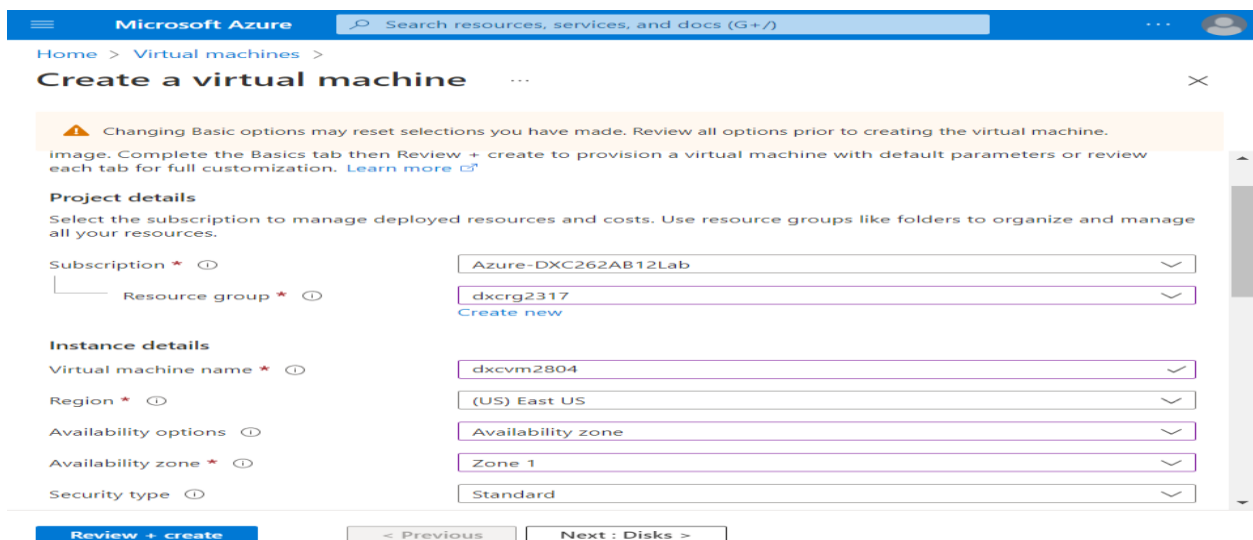
(iii) Also using Azure Bastion ?

In azure search virtual machine and click ok

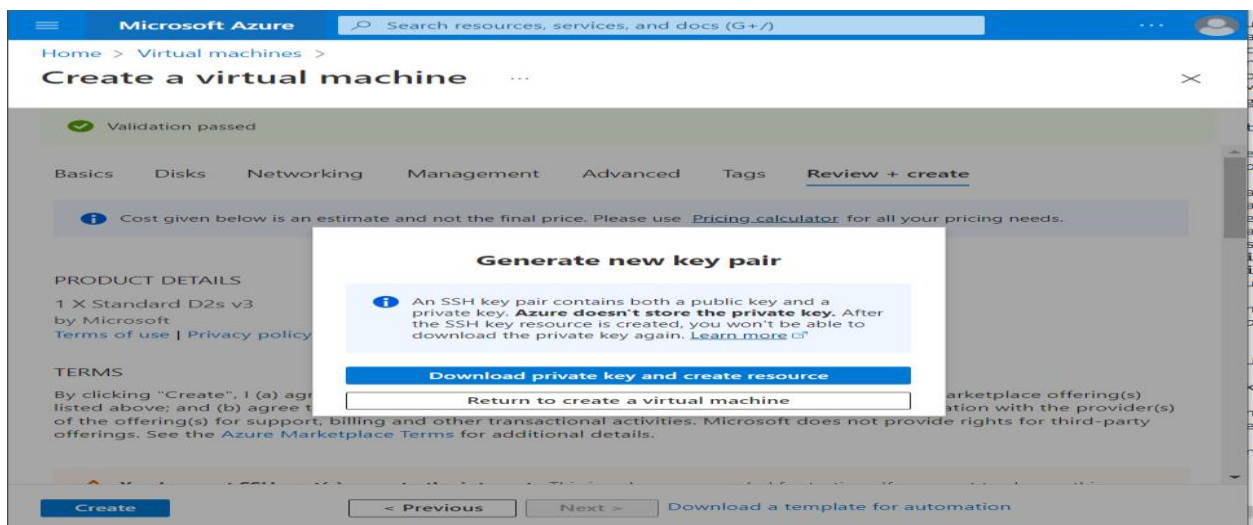
+ Create->Create azure virtual machine

Write the resource group and account name and availability zone-> zone 1

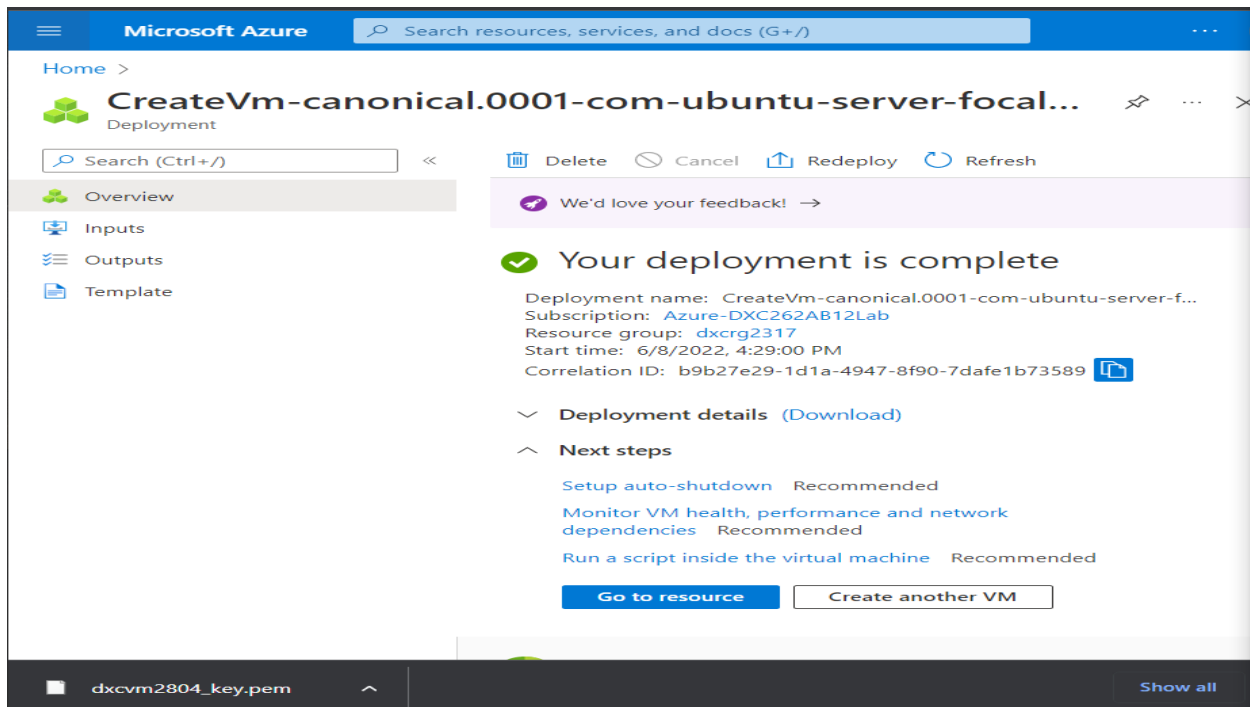
And all other are default and click next



Review + Create and click on create after validation passed click create we get generate new key pair download private key and create resource



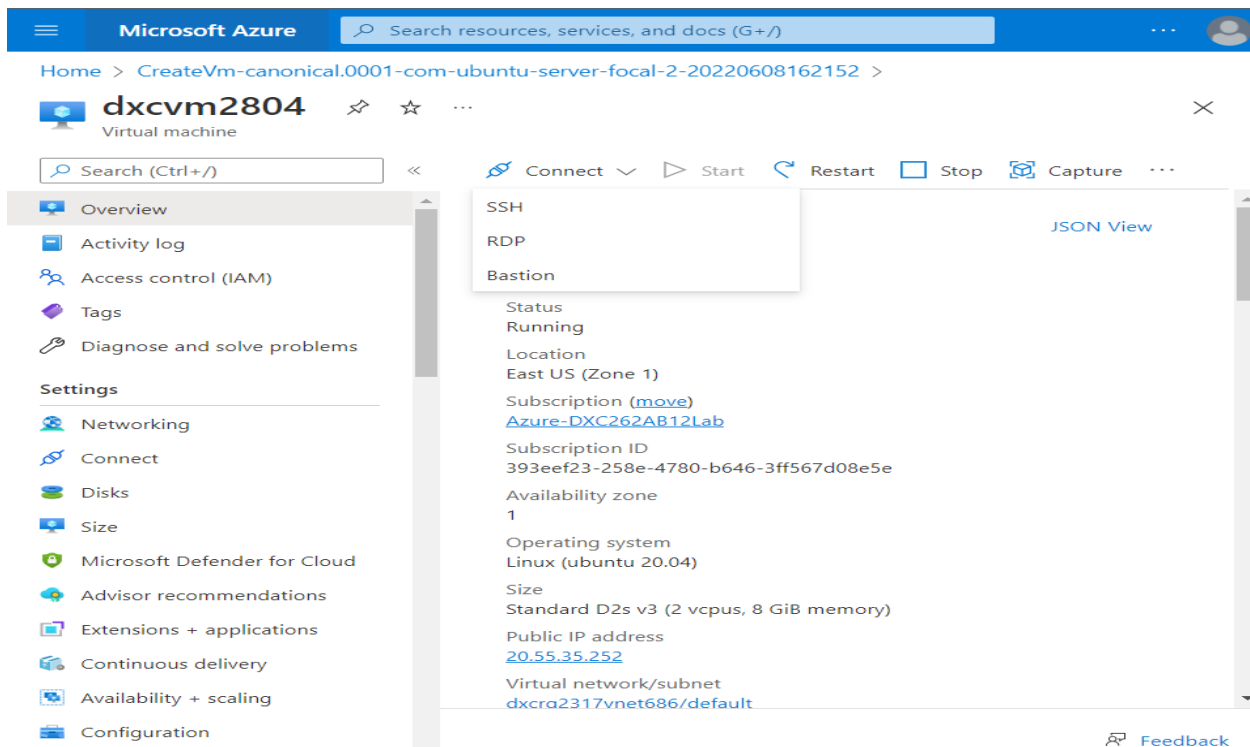
Now go to resources



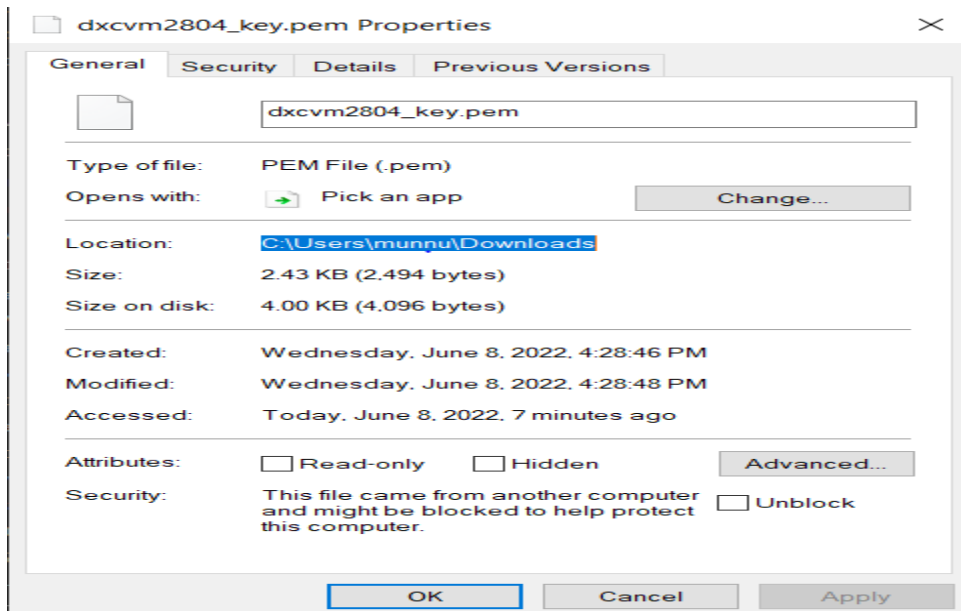
Connect->SSH

copy the 4th options and paste in notepad

ssh -i <private key path> azureuser@20.55.35.252



Open the properties of the downloaded file and copy the location



Open the command prompt and go to that location

```
>cd C:\Users\munnu\Downloads\
```

```
>ssh -i C:\Users\munnu\Downloads\dxcvm2804_key.pem azureuser@20.55.35.252
```

-then type yes

-we get

```
azureuser@dxcvm2804:~$
```

```
azureuser@dxcvm2804: ~
Microsoft Windows [Version 10.0.19043.1706]
(c) Microsoft Corporation. All rights reserved.

C:\Users\munnu>cd C:\Users\munnu\Downloads\

C:\Users\munnu\Downloads>ssh -i C:\Users\munnu\Downloads\dxcvm2804_key.pem azureuser@20.55.35.252
Welcome to Ubuntu 20.04.4 LTS (GNU/Linux 5.13.0-1025-azure x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

System information as of Wed Jun  8 11:11:54 UTC 2022

System load:  0.0               Processes:    118
Usage of /:   4.9% of 28.90GB   Users logged in: 0
Memory usage: 3%               IPv4 address for eth0: 10.0.0.4
Swap usage:   0%

 * Super-optimized for small spaces - read how we shrank the memory
   footprint of MicroK8s to make it the smallest full K8s around.

   https://ubuntu.com/blog/microk8s-memory-optimisation

1 update can be applied immediately.
To see these additional updates run: apt list --upgradable

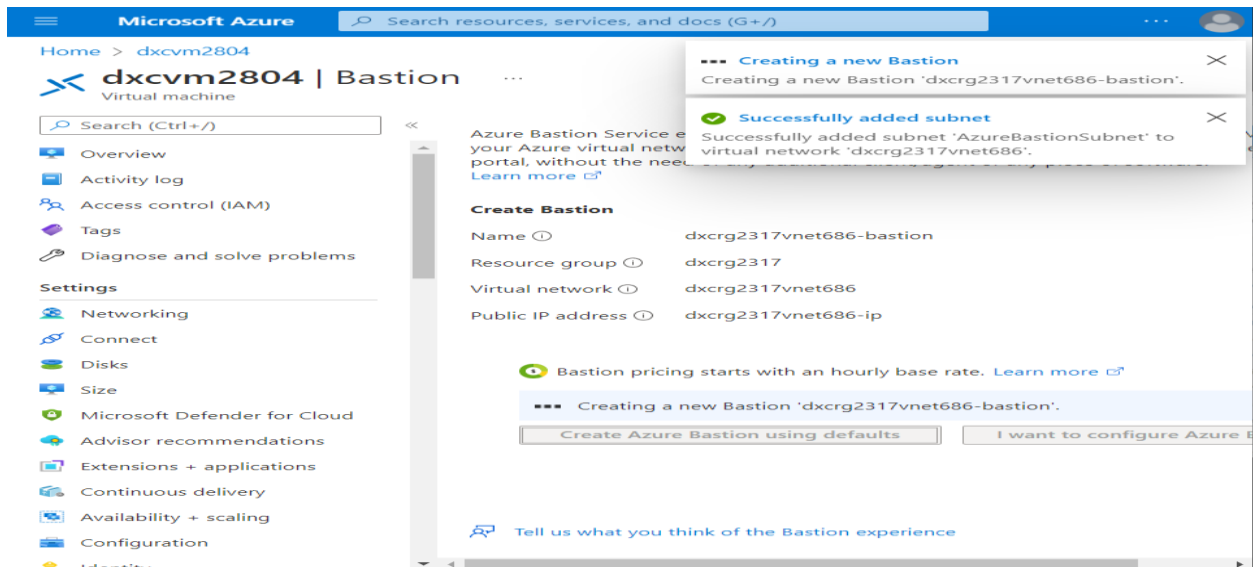
The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

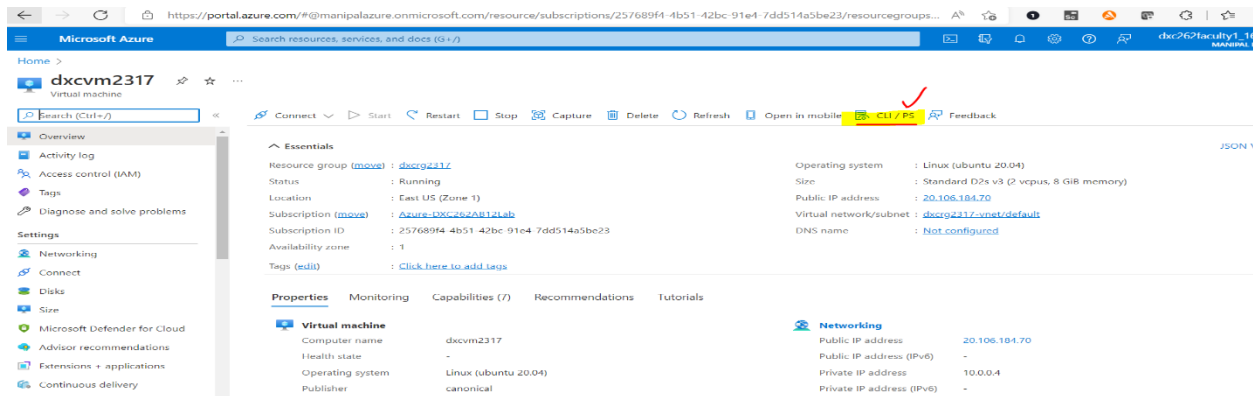
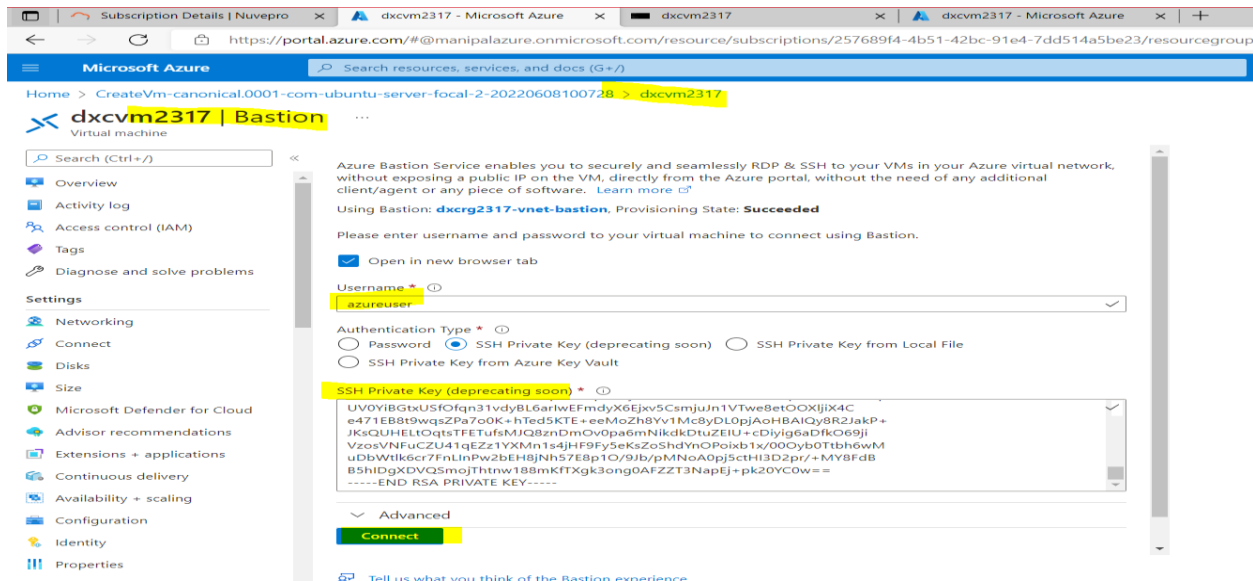
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

azureuser@dxcvm2804:~$
```

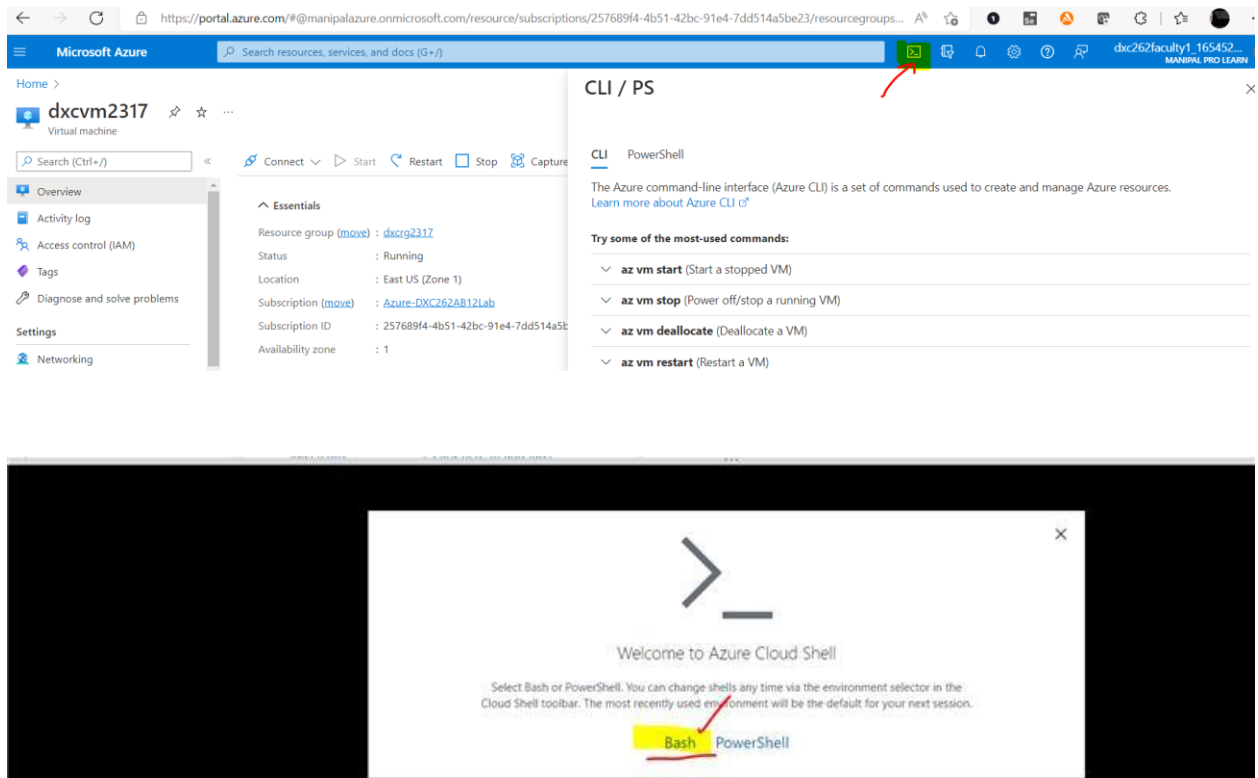
## Using bastion after creating vm Connect->Bastion



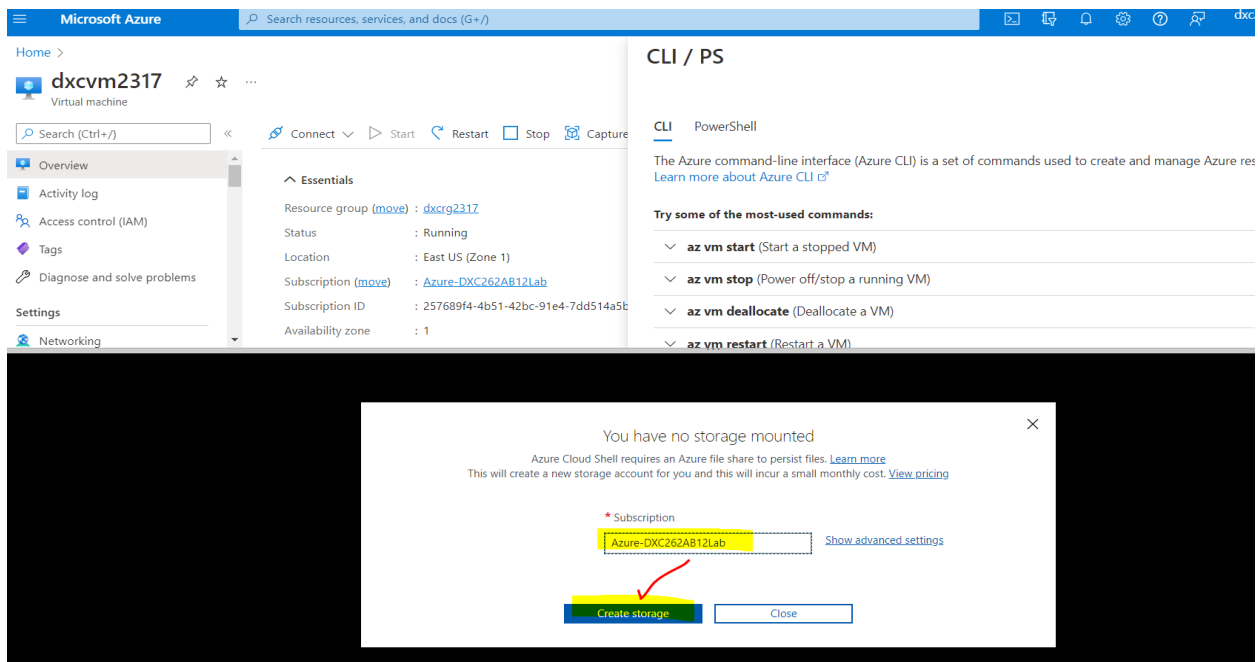
## Give username



Go to CLI/PS and click the below symbol and select bash



Create storage





## Run the commands to start

The screenshot shows the Azure portal interface for a virtual machine named **dxsvm2317**. The left sidebar contains navigation options: Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Settings, and Networking. The main area displays the VM's status as **Running** and provides essential details: Resource group (dxcrq2317), Location (East US (Zone 1)), Subscription (Azure-DXC262AB12Lab), Subscription ID (257689f4-4b51-42bc-91e4-7dd514a5be23), and Availability zone (1). On the right, the **CLI / PS** section offers commands for starting a VM. The command `az vm start --resource-group dxcrq2317 --name dxsvm2317 --subscription 257689f4-4b51-42bc-91e4-7dd514a5be23` is highlighted in yellow. A red arrow points from this command to the terminal window below.

**Bash**

```
Requesting a Cloud Shell.Succeeded.
Connecting terminal...

Welcome to Azure Cloud Shell

Type "az" to use Azure CLI
Type "help" to learn about Cloud Shell

dxc262faculty1@Azure:~$ ls -lrt
total 0
lrwxrwxrwx 1 dxc262faculty1 dxc262faculty1 22 Jun  8 05:24 clouddrive -> [redacted]
dxc262faculty1@Azure:~$ az vm start --resource-group dxcrq2317 --name dxsvm2317 --subscription 257689f4-4b51-42bc-91e4-7dd514a5be23
```

The screenshot shows the Azure portal interface for the same virtual machine **dxsvm2317**. The left sidebar is identical to the previous screenshot. The main area shows the VM's status as **Running** and provides essential details: Resource group (dxcrq2317), Location (East US (Zone 1)), Subscription (Azure-DXC262AB12Lab), Subscription ID (257689f4-4b51-42bc-91e4-7dd514a5be23), and Availability zone (1). On the right, the **CLI / PS** section offers commands for listing VM details. The command `az vm show --resource-group dxcrq2317 --name dxsvm2317 --subscription 257689f4-4b51-42bc-91e4-7dd514a5be23` is highlighted in yellow. A red arrow points from this command to the terminal window below.

**Bash**

```
Requesting a Cloud Shell.Succeeded.
Connecting terminal...

Welcome to Azure Cloud Shell

Type "az" to use Azure CLI
Type "help" to learn about Cloud Shell

dxc262faculty1@Azure:~$ ls -lrt
total 0
lrwxrwxrwx 1 dxc262faculty1 dxc262faculty1 22 Jun  8 05:24 clouddrive -> [redacted]
dxc262faculty1@Azure:~$ az vm start --resource-group dxcrq2317 --name dxsvm2317 --subscription 257689f4-4b51-42bc-91e4-7dd514a5be23
dxc262faculty1@Azure:~$ az vm show
(--resource-group --name | --ids) are required
dxc262faculty1@Azure:~$ az vm show --resource-group dxcrq2317 --name dxsvm2317 --subscription 257689f4-4b51-42bc-91e4-7dd514a5be23
{
  "additionalCapabilities": null,
  "applicationProfile": null,
  "availabilitySet": null,
  "billingProfile": null,
  "capacityReservation": null,
  "dxc262faculty1@Azure:~$
```

### 3) Explain the steps with screenshots how to create Data factory?

search data factory in azure and give resource group dxcrgr2317 and name dxcdf2804

Microsoft Azure

Home > Data factories >

## Create Data Factory

**Basics** | Git configuration | Networking | Advanced | 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-DXC262AB12Lab

Resource group \* ⓘ dxcrgr2317  
[Create new](#)

**Instance details**

Name \* ⓘ dxcdf2804

Region \* ⓘ East US

Version \* ⓘ V2 (Recommended)

[Review + create](#) [< Previous](#) [Next : Git configuration >](#)

-git configure later check it and create

Microsoft Azure

Home > Data factories >

## Create Data Factory

**Basics** | **Git configuration** | Networking | Advanced | Tags | Review + create

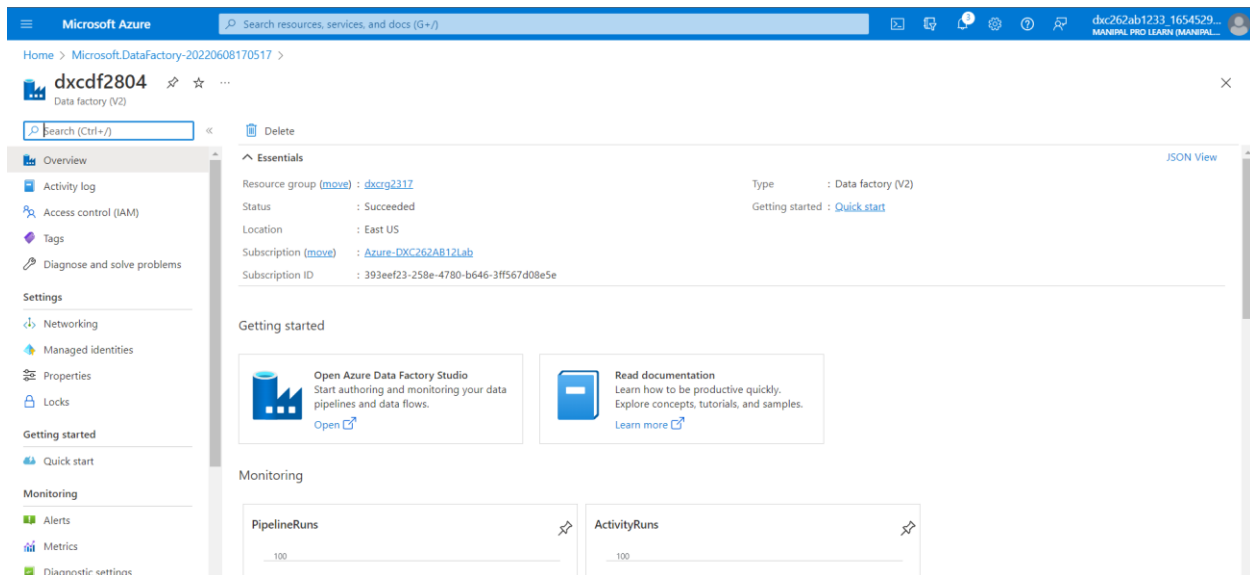
Azure Data Factory allows you to configure a Git repository with either Azure DevOps or GitHub. Git is a version control system that allows for easier change tracking and collaboration.  
[Learn more about Git integration in Azure Data Factory](#)

Configure Git later ⓘ ☒

[Review + create](#) [< Previous](#) [Next : Networking >](#)

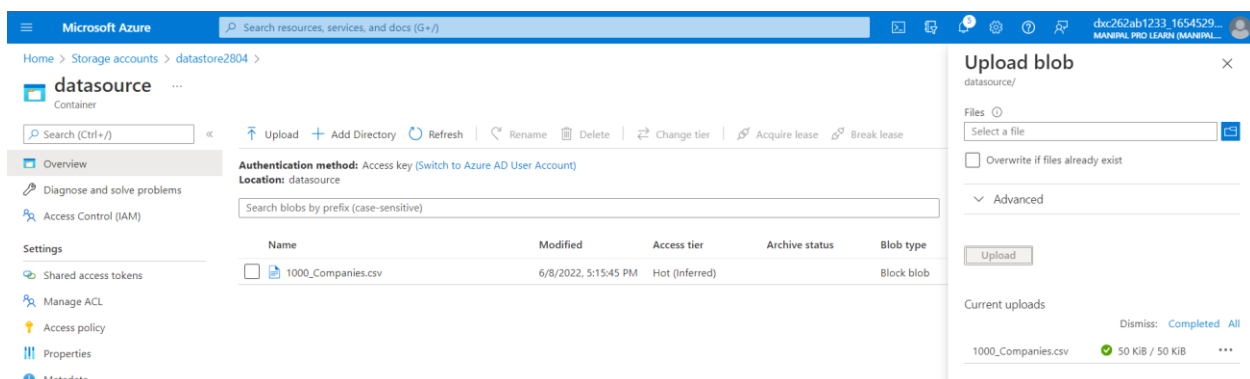
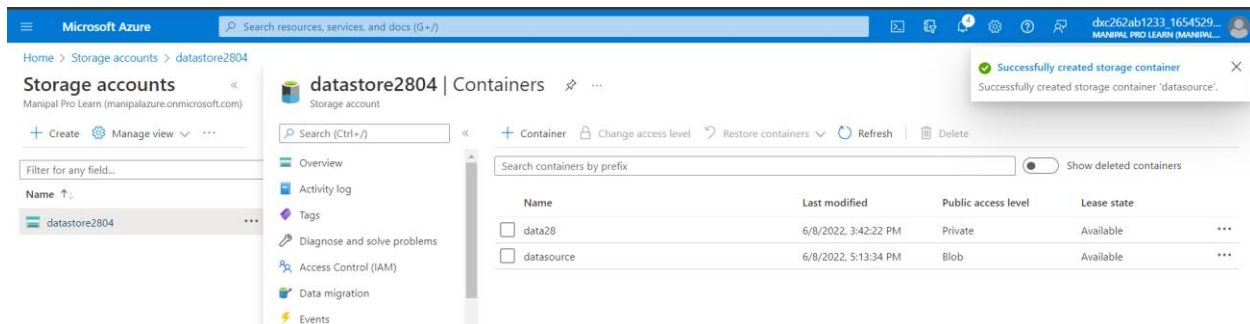
And others are default and review and create and go to resource after creating

-get started go to azure data factory studio

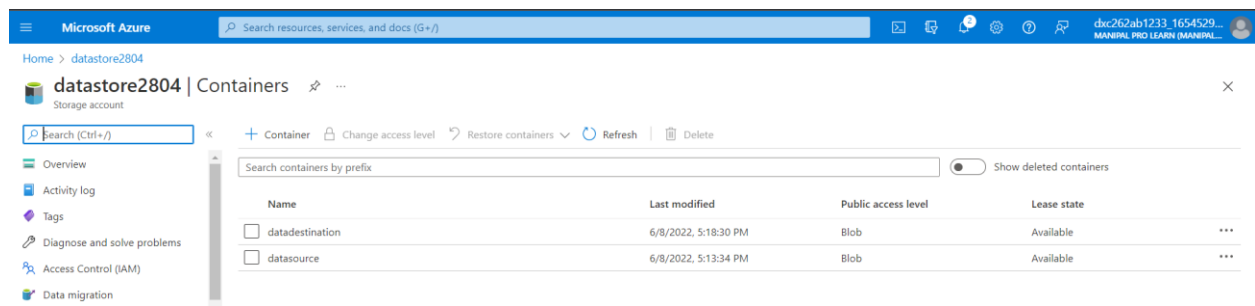


4) Explain the steps with screenshots how to copy data from source blob to destination blob

As we created the data factory keep it a side and create a storage account in that create 2 containers datasource and datadestination

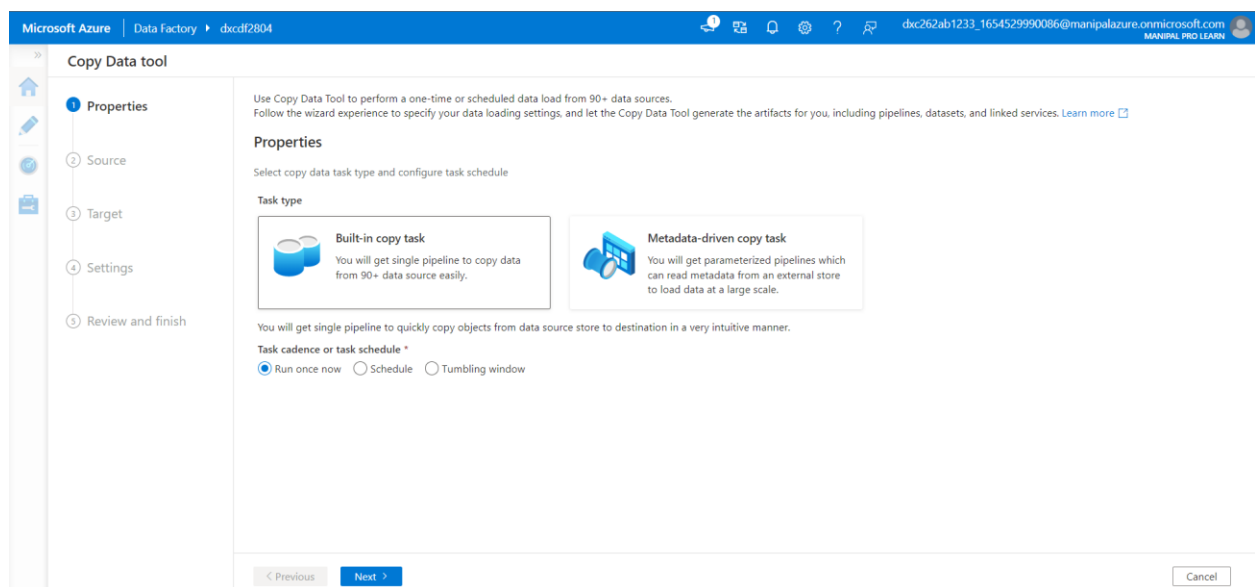


In datasource upload a file of any type but don't upload any file in the datadestination



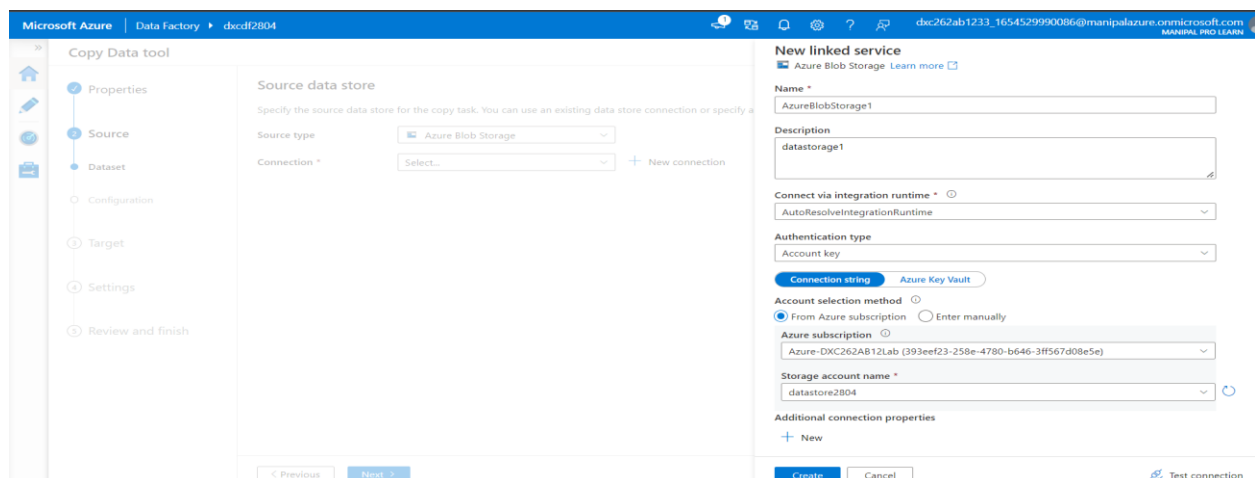
come to data factory and click on ingest option

-click on build in copy task and next



-source type is Azure blob storage

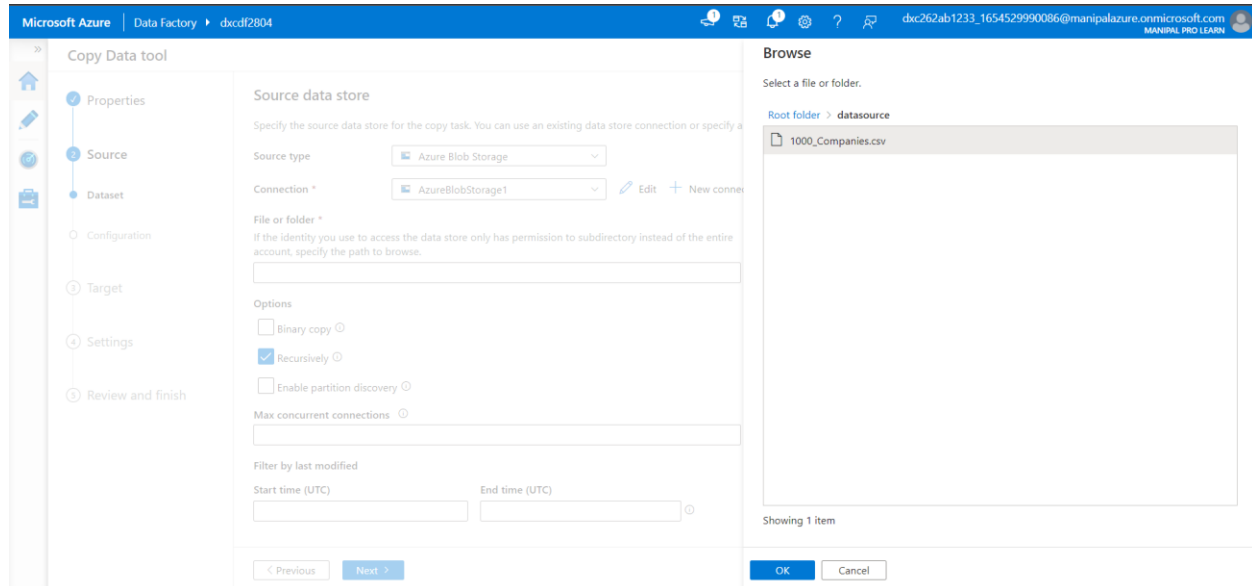
-connection new description: AazureblobStorage1 and create



-we will come to Source data store

in file or folder browse and select datasource/1000\_companies data and ok

-next



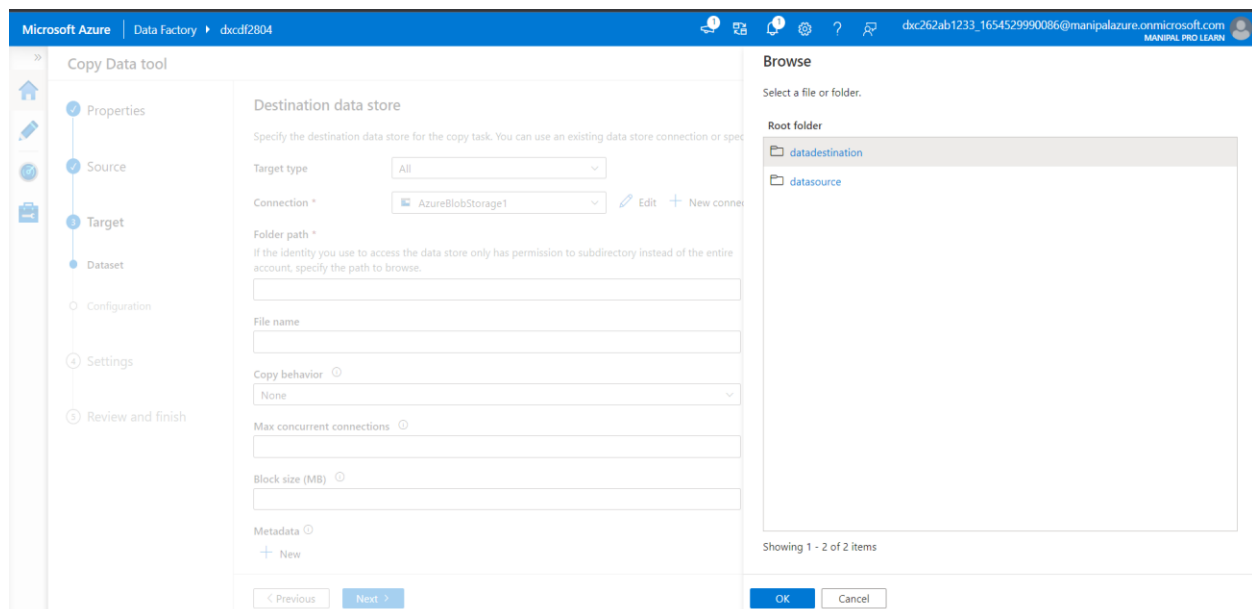
Same for destination as well

destination data store

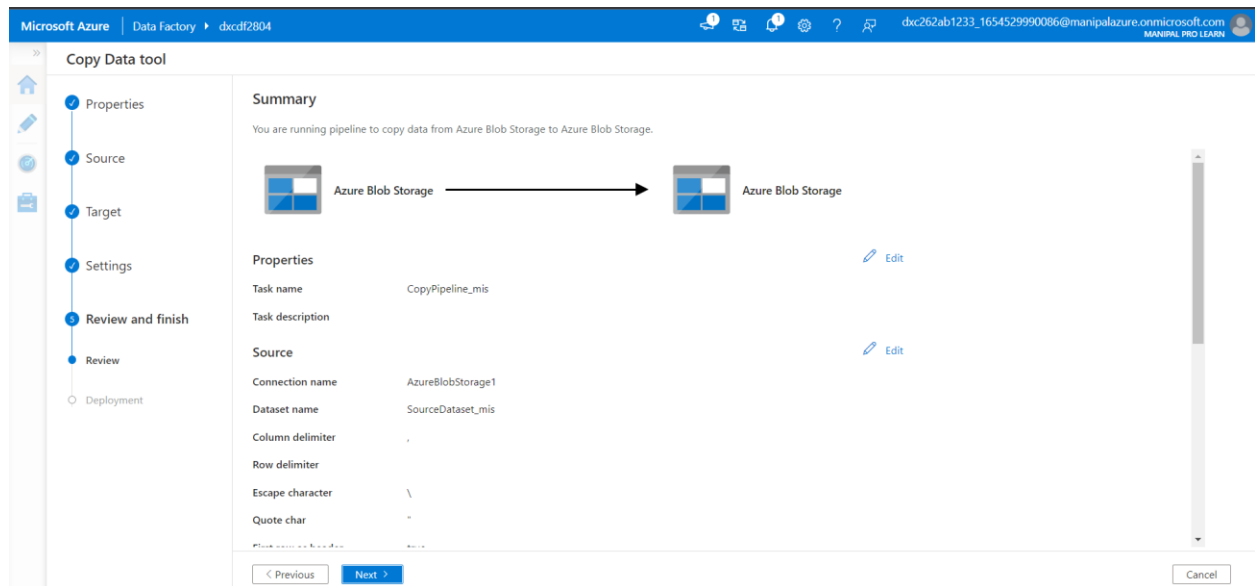
select the destinationblob1

in file or folder browse and select datadestination and ok

-next we will go to File format setting every thing is default and next



-next settings next, summary next so it will copy my files to datasource to datadestination

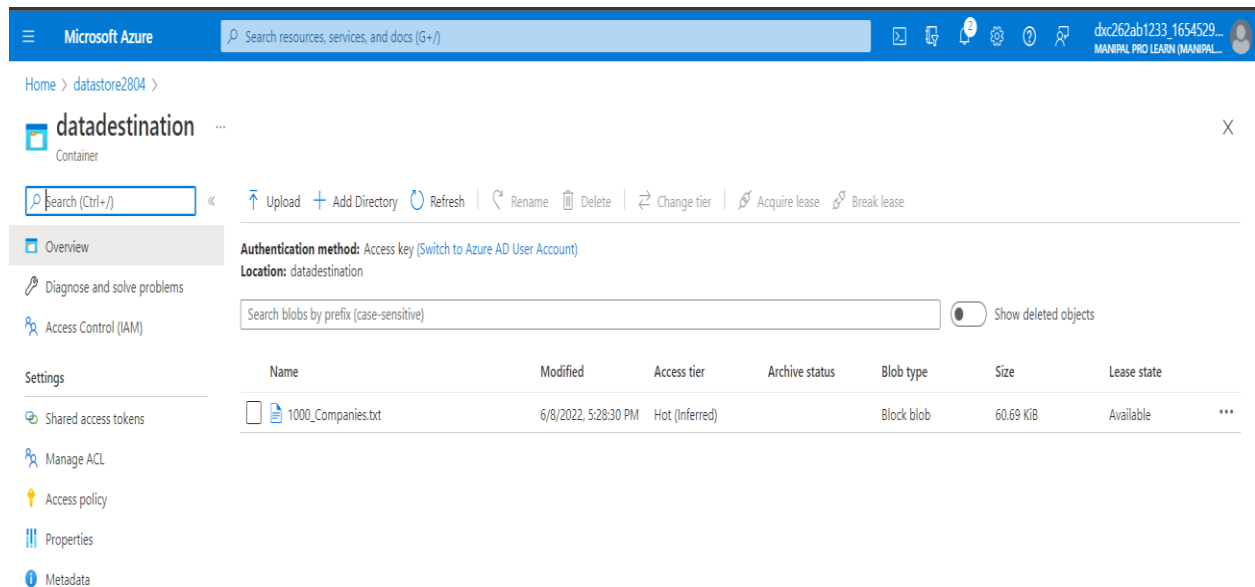


-validation and finish

we have to go to dxstorage2804 in that

-we need to open the datadestination the file is copied in it

-this is happened because of the data factory



5) Explain the steps with screenshots how to create Virtual Network in Azure

go to azure search vnet select virtual network

-create

-resource group -dxcrq2317 and name as dxcvnet2804 and ip address default and all next

Microsoft Azure

Search resources, services, and docs (G+)

Home > Virtual networks >

### Create virtual network

Basics IP Addresses Security Tags Review + create

Azure Virtual Network (VNet) is the fundamental building block for your private network in Azure. VNet enables many types of Azure resources, such as Azure Virtual Machines (VM), to securely communicate with each other, the internet, and on-premises networks. VNet is similar to a traditional network that you'd operate in your own data center, but brings with it additional benefits of Azure's infrastructure such as scale, availability, and isolation. [Learn more about virtual network](#)

**Project details**

Subscription \* ⓘ Azure-DXC262AB12Lab

Resource group \* ⓘ dxcrq2317  
[Create new](#)

**Instance details**

Name \* dxcvnet2804

Region \* East US

[Review + create](#) < Previous Next : IP Addresses > [Download a template for automation](#)

-create

-we get your deployment is complete

Microsoft Azure

Search resources, services, and docs (G+)

Home >

## Microsoft.VirtualNetwork-20220608173128 | Overview

Deployment

Search (Ctrl+J) Delete Cancel Redeploy Refresh

**Overview**

We'd love your feedback! →

**✓ Your deployment is complete**

Deployment name: Microsoft.VirtualNetwork-20220608173128 Start time: 6/8/2022, 5:32:55 PM  
Subscription: Azure-DXC262AB12Lab Correlation ID: 6ba52624-db5a-448e-9bb7-6677d0d53b2c  
Resource group: dxcrq2317

Deployment details (Download)

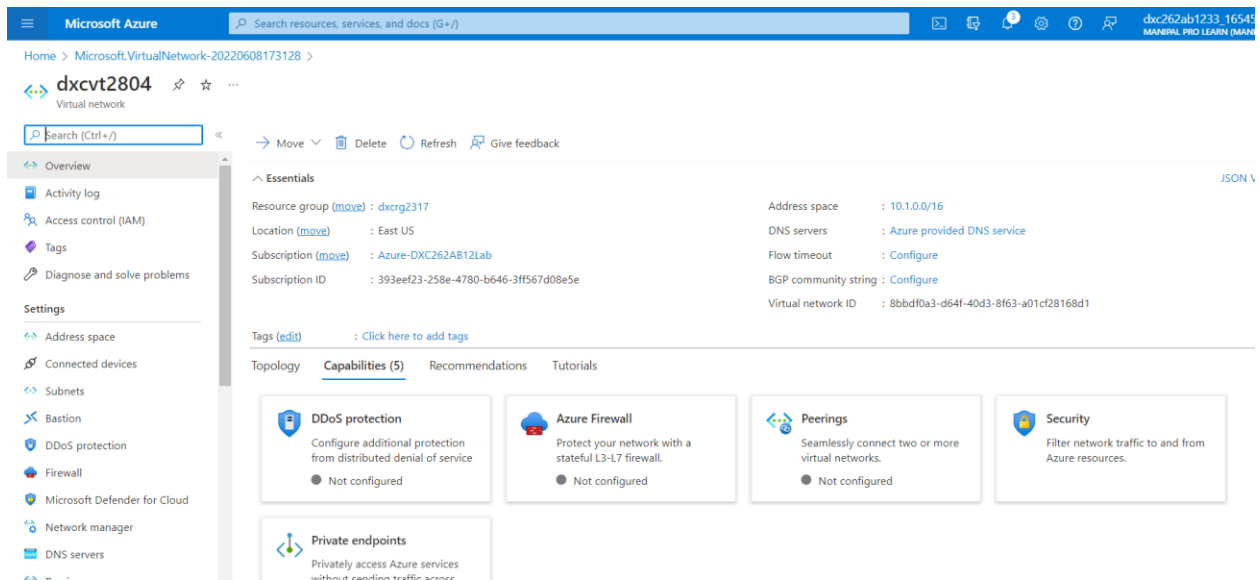
Next steps

[Go to resource](#)

**Cost Management**  
Get notified to stay within your budget and prevent unexpected charges on your bill.  
[Set up cost alerts >](#)

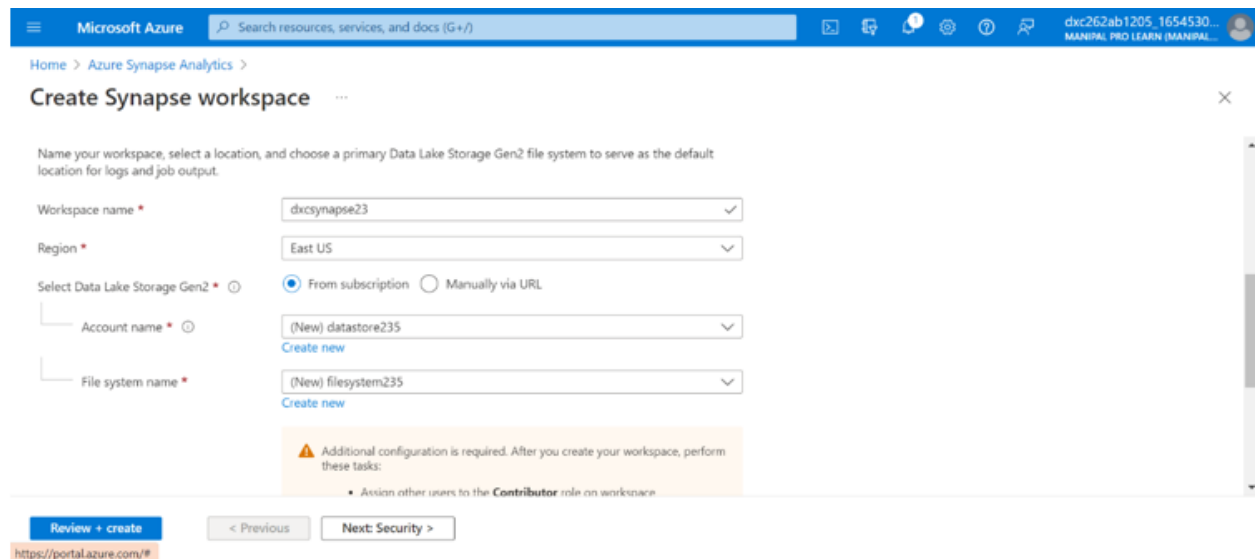
**Microsoft Defender for Cloud**  
Secure your apps and infrastructure

-go to resources



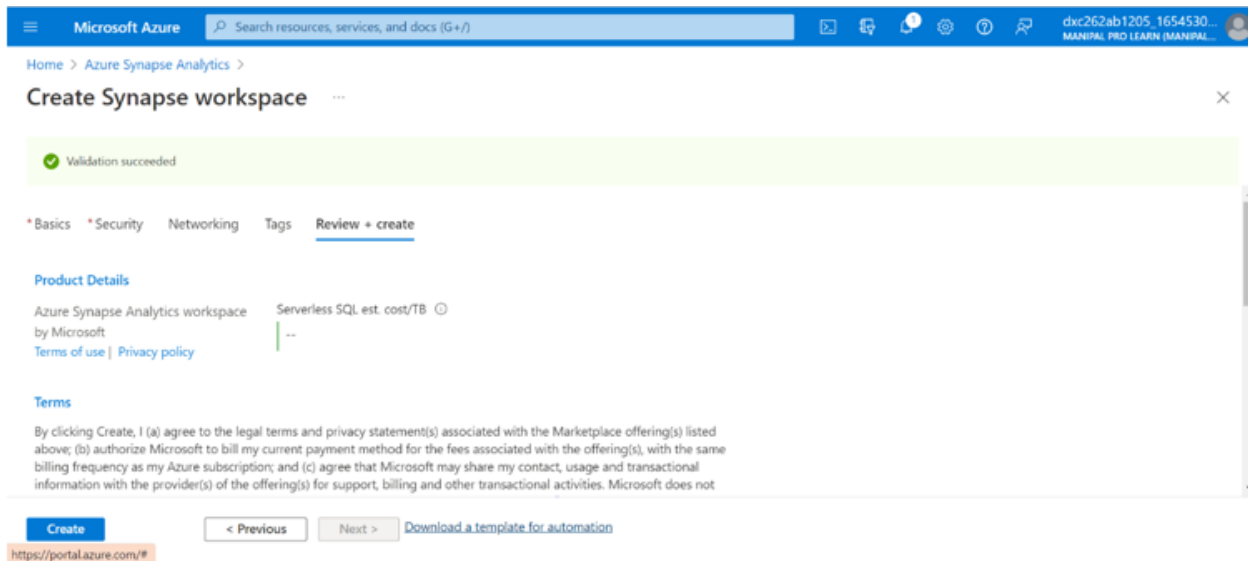
## 6) Explain the steps with screenshots how to create azure synapse analytics?

First we need to go to Azure and search for synapse analytics select it and + create

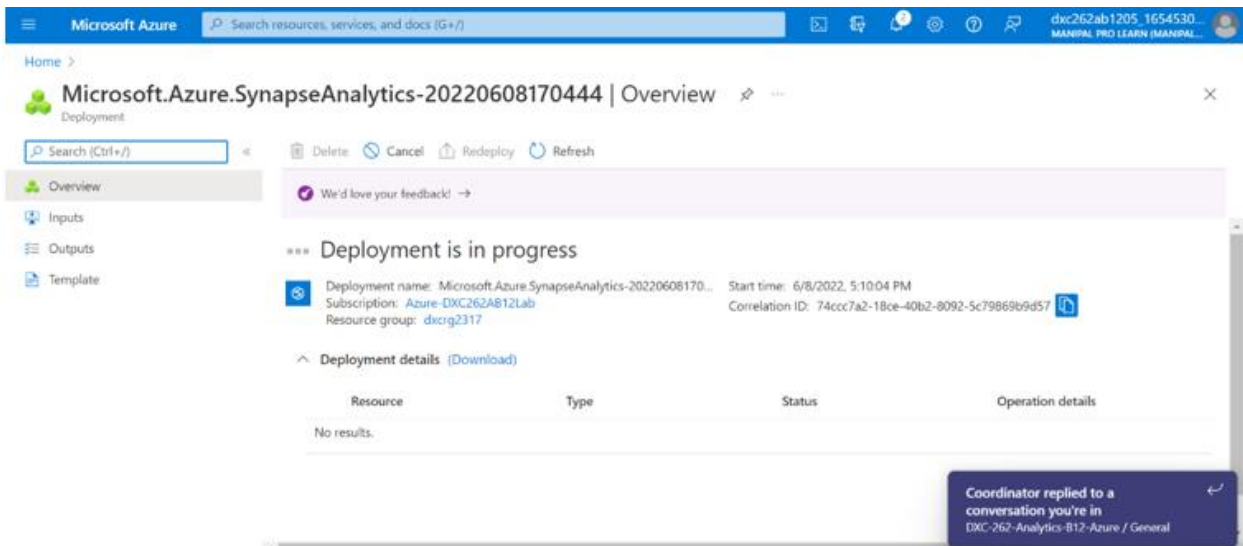


Give the workspace name dxcsynapse23, storage account name-datastore235 and filesystem name as filesystem235

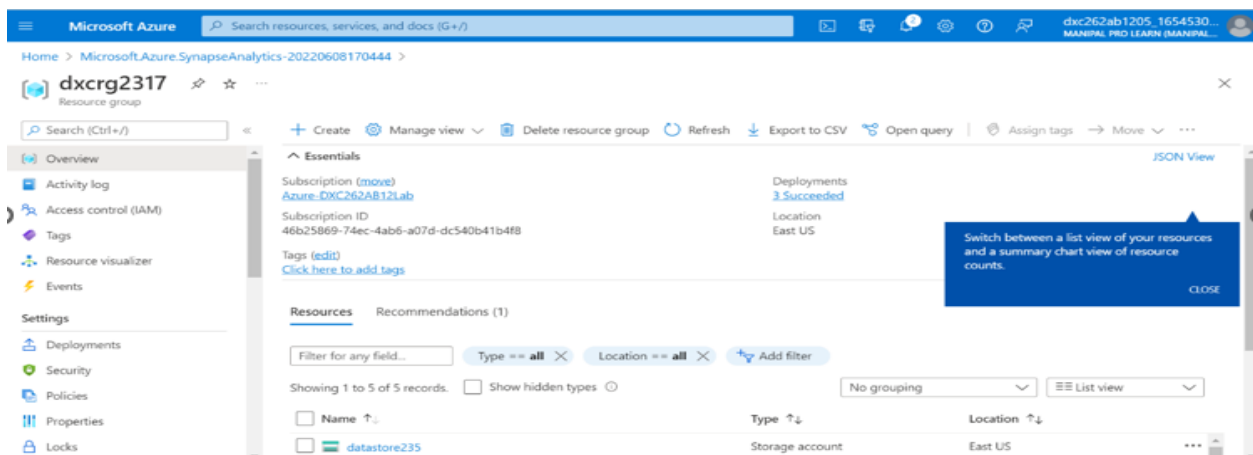




All are default and create after validation



After that we get Deployment is complete and go to resource creating a synapse analytics is done



## 7) Explain the steps with screenshots how to create Azure storage account?

First we need to go to Azure and search for storage accounts and click on create

Give the resource group name dxcrgr2317 and storage account name as dxstorage2804

The screenshot shows the 'Create a storage account' wizard in the Microsoft Azure portal. The 'Basics' tab is selected. The form contains the following fields:

- Subscription \***: Azure-DXC262AB12Lab
- Resource group \***: dxcrgr2317 (with a 'Create new' link below it)
- Storage account name \***: dxstorage2804
- Region \***: (US) East US
- Performance \***: Standard: Recommended for most scenarios (general-purpose)

At the bottom, there is a 'Review + create' button and navigation links for '< Previous' and 'Next : Advanced >'.

Keep all default advanced, Networking and keep on clicking next and click Review + create, We get validation to create

The screenshot shows the 'Create a storage account' wizard in the Microsoft Azure portal, now at the 'Review + create' tab. A green banner at the top indicates 'Validation passed'. The 'Basics' section displays the following details:

Field	Value
Subscription	Azure-DXC262AB12Lab
Resource Group	dxcrgr2317
Location	eastus
Storage account name	dxstorage2804
Deployment model	Resource manager
Performance	Standard
Replication	Read-access geo-redundant storage (RA-GRS)

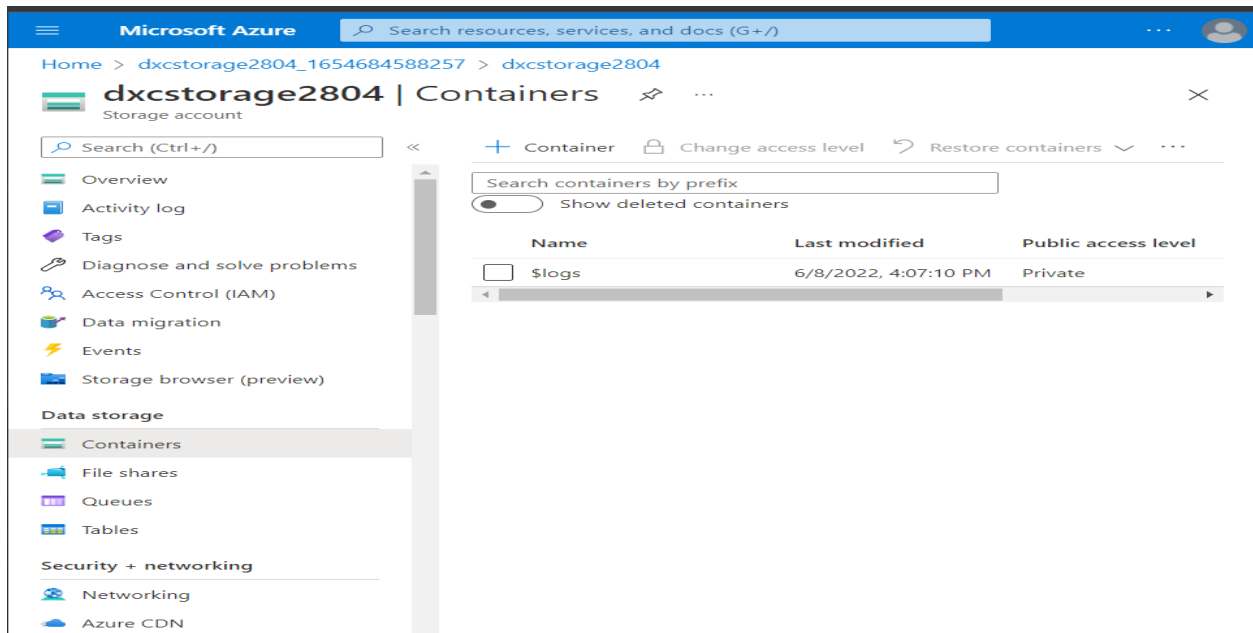
The 'Advanced' section shows the following settings:

Field	Value
Secure transfer	Enabled
Allow storage account key access	Enabled
Allow cross-tenant replication	Enabled

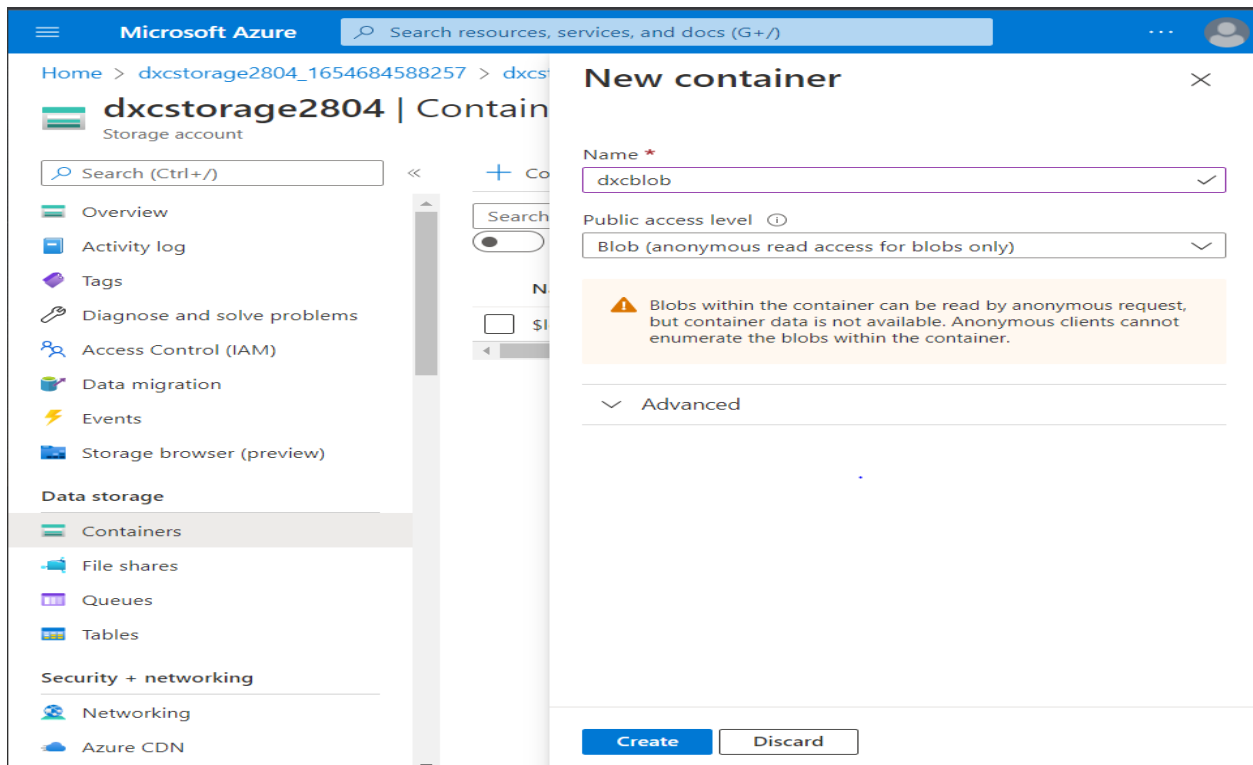
At the bottom, there is a 'Create' button, navigation links for '< Previous' and 'Next >', and a link to 'Download a template for automation'.

## 8) Explain the steps with screenshots how to create upload data into Azure Blobs?

After that we will get Your Deployment is complete and go to Resource in that Click on Containers-> + Container

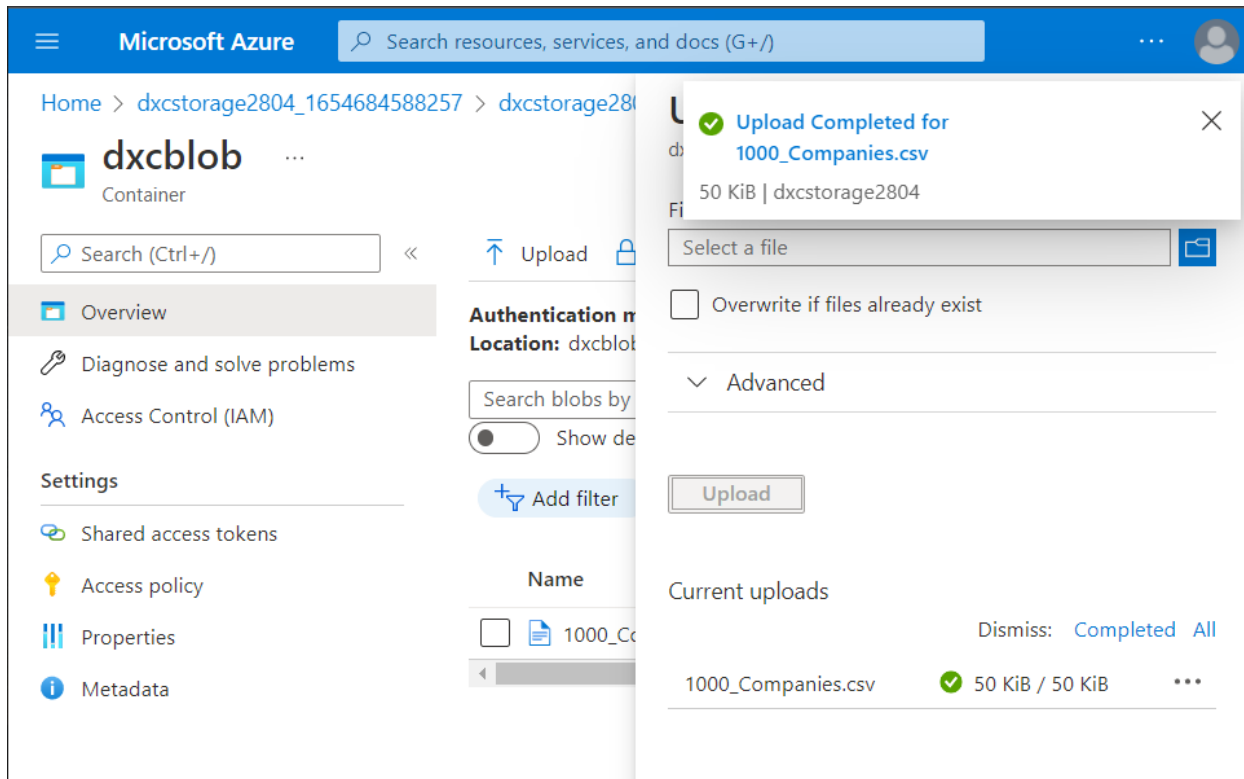


After that give the name of the container dxcblob and Public access level as Blob and Create

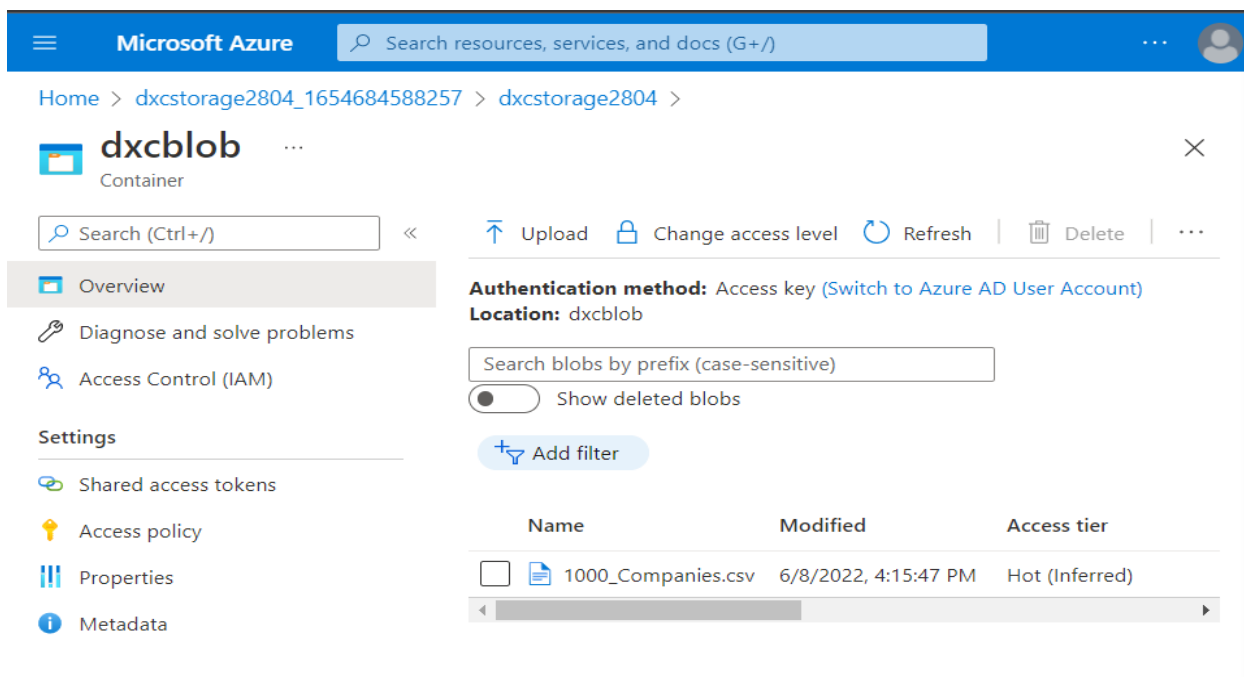


We get the dxcblob container storage click on it

We will get options to upload whatever file we need click on upload and select any file from the pc and upload

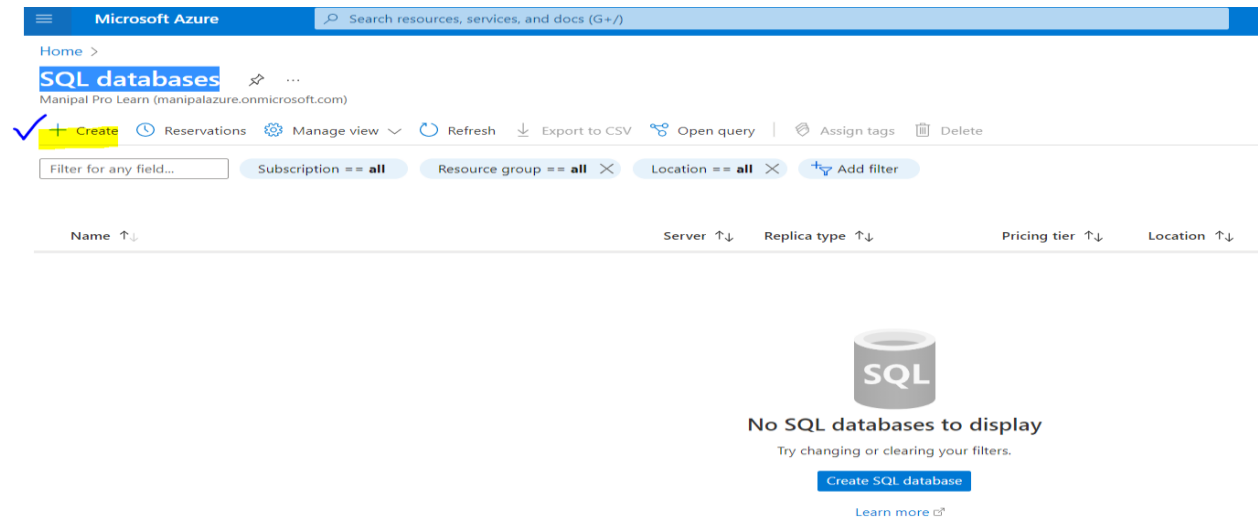


When we click on the dxcblob we get to find the file

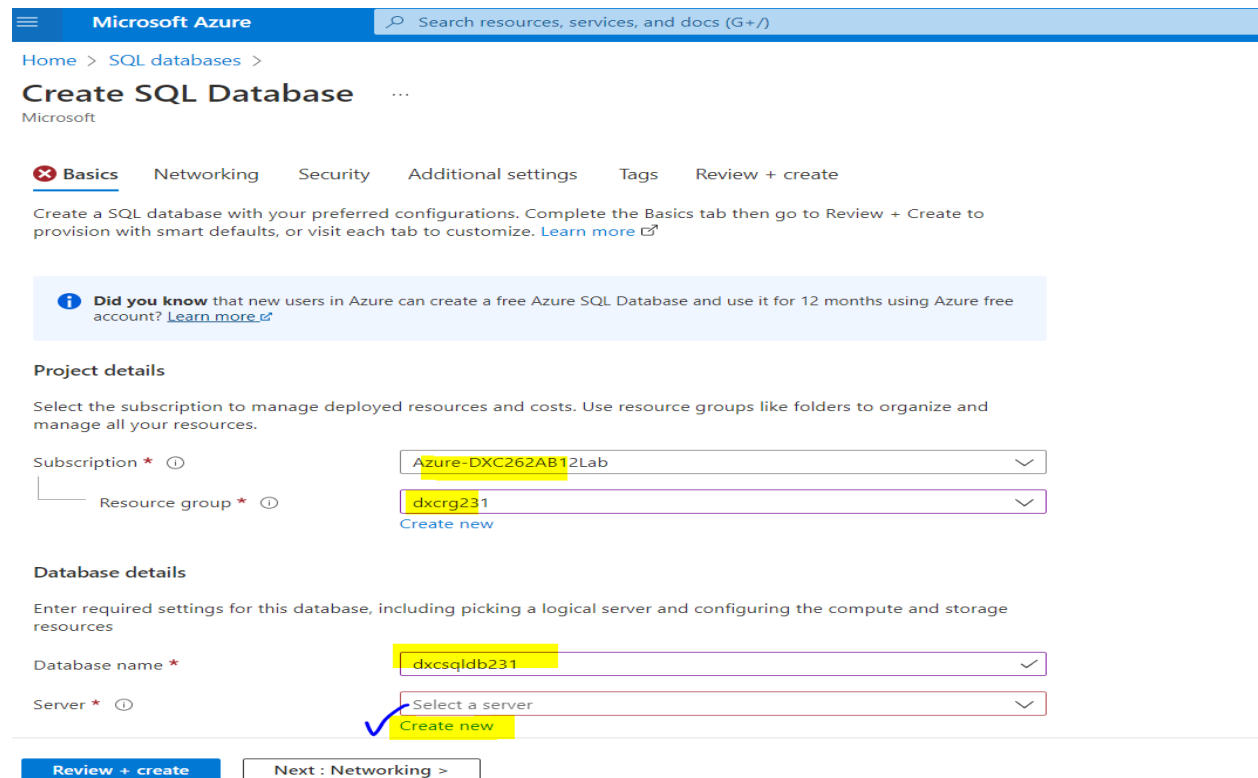


## 9) Explain the steps with screenshots how to create connect SQL Database in Azure?

-First search the sql database and then we will get the home page like the below one



-Click on Create option we will go to the basics where we will give the details



Microsoft Azure

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

[Home](#) > [SQL databases](#) > [Create SQL Database](#) >

## Create SQL Database Server

Microsoft

### Server details

Enter required settings for this server, including providing a name and location. This server will be created in the same subscription and resource group as your database.

Server name \*

sqlserver231

✓

.database.windows.net

Location \*

(US) East US

✓

### Authentication

Select your preferred authentication methods for accessing this server. Create a server admin login and password to access your server with SQL authentication, select only Azure AD authentication [Learn more](#) using an existing Azure AD user, group, or application as Azure AD admin [Learn more](#), or select both SQL and Azure AD authentication.

Authentication method

☒ Use SQL authentication

☐ Use only Azure Active Directory (Azure AD) authentication

☐ Use both SQL and Azure AD authentication

Server admin login \*

ajay

✓

Password \*

\*\*\*\*\*

✓

Confirm password \*

\*\*\*\*\*

✓

OK

-give server name and location

-click Configure database give Max vCore 1 GB and Apply

Microsoft Azure

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

[Home](#) > [SQL databases](#) > [Create SQL Database](#) >

## Configure

Feedback

provides set price/performance packages to choose from for easy configuration. [Learn more](#)

Service tier

General Purpose (Scalable compute and storage options)

[Compare service tiers](#)

Compute tier

☐ Provisioned - Compute resources are pre-allocated. Billed per hour based on vCores configured.

☒ Serverless - Compute resources are auto-scaled. Billed per second based on vCores used.

Compute Hardware

Select the hardware configuration based on your workload requirements. Availability of compute optimized, memory optimized, and confidential computing hardware depends on the region, service tier, and compute tier.

Hardware Configuration

Gen5

up to 40 vCores, up to 120 GB memory

[Change configuration](#)

Max vCores

0.5 vCores

Min vCores

0.5 vCores

2.02 GB MIN MEMORY

3 GB MAX MEMORY

Apply

SQL

Cost summary

Gen5 - General Purpose (GP\_S\_Gen5\_1)

Cost per GB (in --)

Max storage selected (in GB)

x 41.6

ESTIMATED STORAGE COST / MONTH

COMPUTE COST / VCORE / SECOND <sup>1</sup>

NOTES

<sup>1</sup> Serverless databases are billed in vCores based on a combination of CPU and memory utilization. [Learn more about serverless billing](#)

PLEASE CONTACT YOUR RESELLER

## Keep backup storage redundancy as Geo-redundant backup storage

### Create SQL Database

Microsoft

Database name \*

Server \* ⓘ   
[Create new](#)

Want to use SQL elastic pool? ⓘ ☐ Yes ☒ No

Compute + storage \* ⓘ **General Purpose - Serverless**  
**Gen5, 1 vCore, 1 GB storage, zone redundant disabled**  
[Configure database](#)

#### Backup storage redundancy

Choose how your PITR and LTR backups are replicated. Geo restore or ability to recover from regional outage is only available when geo-redundant storage is selected.

- Backup storage redundancy ⓘ
- ☐ Locally-redundant backup storage
- ☐ Zone-redundant backup storage
- ☒ Geo-redundant backup storage

⚠ Selected value for backup storage redundancy is Geo-redundant backup storage. Database backups will be geo-replicated which might impact your data residency requirements. [Learn more](#)

[Review + create](#)

[Next : Networking >](#)

## After that review + create and Our Deployment is complete

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

Home > Microsoft.SQLDatabase.newDatabaseNewServer\_216813d0cd0d41e193a2a | Overview

Deployment

Search (Ctrl+/) < Delete Cancel Redeploy Refresh

We'd love your feedback! →

✓ Your deployment is complete

Deployment name: Microsoft.SQLDatabase.newDatabaseNewServer\_216813d0cd0d41e193a2a Start time: 6/7/2022, 3:11:42 PM  
Subscription: Azure-DXC262AB12Lab Correlation ID: 70cd4a4c-9ad7-4df0-a762-4af1be0bd10d  
Resource group: dxcrgr231

Deployment details (Download)

Next steps

[Go to resource](#)

Deployment succeeded

Deployment 'Microsoft.SQLDatabase.newDatabaseNewServer\_216813d0cd0d41e193a2a' to resource group 'dxcrgr231' was successful.

[Go to resource](#) [Pin to dashboard](#)

Cost Management

Get notified to stay within your budget and prevent unexpected charges on your bill. [Set up cost alerts >](#)

Microsoft Defender for Cloud

Secure your apps and infrastructure. [Go to Microsoft Defender for Cloud >](#)

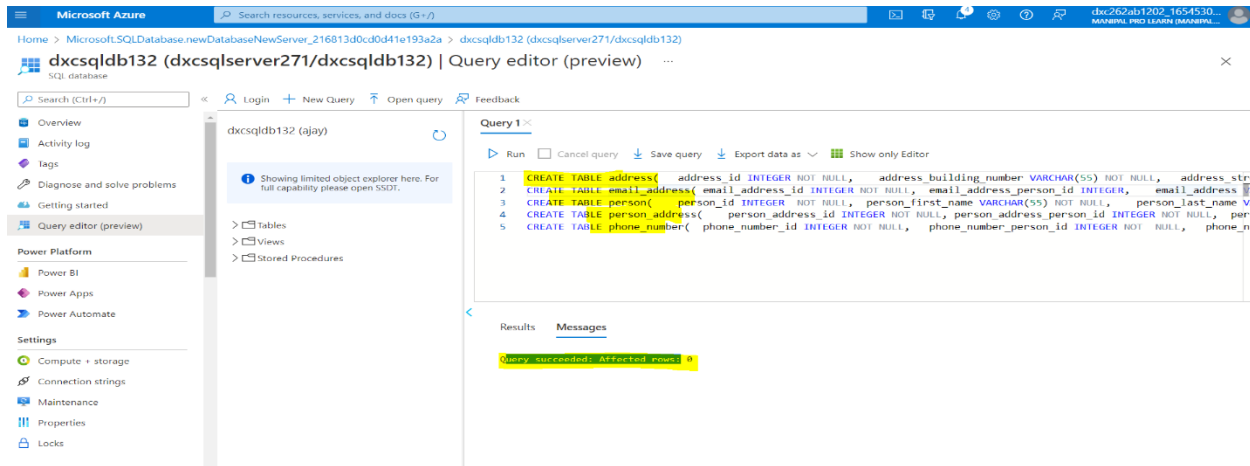
Free Microsoft tutorials

## 10) Explain the steps with screenshots how to insert data into azure SQL database?

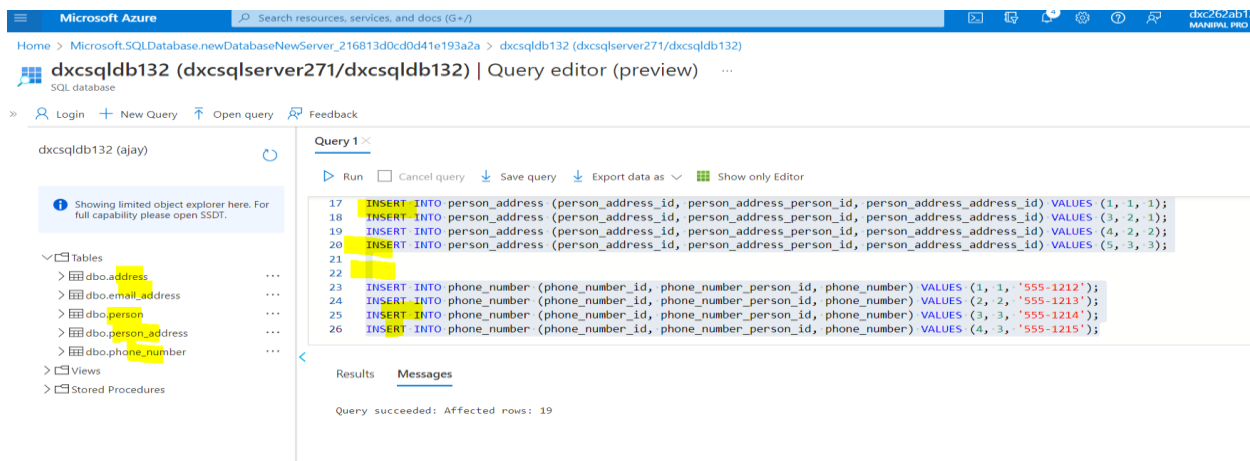
To insert data in Azure Sql after deployment go to

-Query editor (preview)

Give your login id and password and click ok



Create the tables whatever we want and run the query tables will be created ,After that insert the values we need in the table we get tables with inserted values



To see the inserted values in the table go to tables and write the query which is select \* from table\_name

