

## Assignment 8 June 2022

NAME: ASHOK KUMAR

BATCH: DXC-262-ANALYTICS-B12-AZURE

EMPLOYEE DOMAIN: AZURE ANALYTICS

TRAINING UNDER: MANIPAL PRO LEARN

TRAINER NAME: MR. AJAY KUMAR

NO. OF QUESTIONS: 10

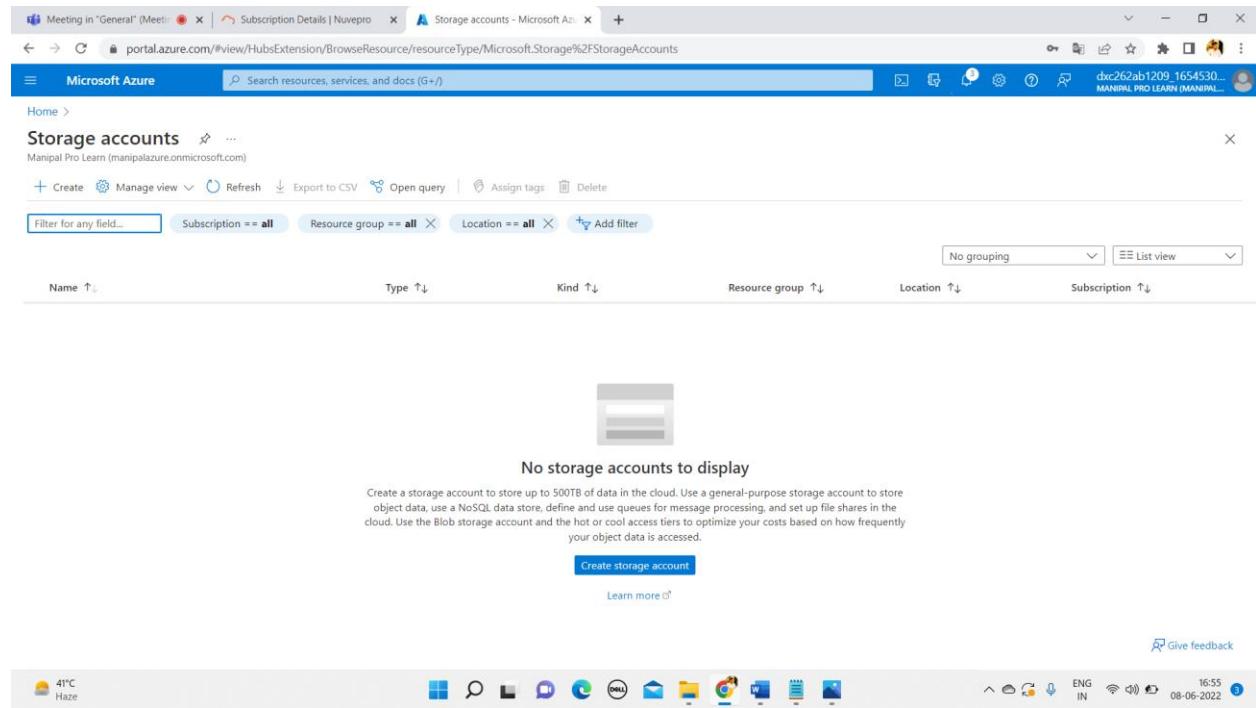
ROLL NUMBER: DXC-262-AB-1233

COMPANY: DXC TECHNOLOGY

DATE OF SUBMISSION: 8 JUNE 2022

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

ANSWER: Go to <https://portal.azure.com/#home> and search **storage accounts**



The screenshot shows the Microsoft Azure portal's Storage accounts page. The URL in the address bar is <https://portal.azure.com/#view/HubsExtension/BrowseResource/resourceType/Microsoft.Storage%2FStorageAccounts>. The page title is "Storage accounts". A message at the top says "No storage accounts to display". Below it, a button labeled "Create storage account" is visible. The page includes various filters and sorting options. At the bottom, there's a toolbar with icons for file operations and a status bar showing system information like battery level, signal strength, and date/time.

## Click on create and fill the details

The screenshot shows the 'Create a storage account' wizard in the Microsoft Azure portal. The 'Basics' tab is selected. In the 'Subscription' section, 'Azure-DXC262AB12Lab' is chosen. In the 'Resource group' section, '(New) ashokrg99' is selected. Below these, there's a 'Create new' link. The 'Instance details' section includes fields for 'Storage account name' (set to 'ashokstorage99'), 'Region' (set to '(US) East US'), 'Performance' (set to 'Standard: Recommended for most scenarios (general-purpose v2 account)'), and 'Redundancy' (set to 'Geo-redundant storage (GRS)'). At the bottom, there are 'Review + create' and 'Next : Advanced >' buttons.

## Click on review+create

The screenshot shows the 'Create a storage account' wizard in the Microsoft Azure portal. The 'Review + create' tab is selected. It displays the configuration details from the previous screen: Subscription (Azure-DXC262AB12Lab), Resource Group (ashokrg99), Location (eastus), Storage account name (ashokstorage99), Deployment model (Resource manager), Performance (Standard), and Replication (Read-access geo-redundant storage (RA-GRS)). Below this, the 'Advanced' section shows settings for Secure transfer (Enabled), Allow storage account key access (Enabled), Allow cross-tenant replication (Enabled), and Default to Azure Active Directory authorization in the Azure portal (Disabled). At the bottom, there are 'Create' and 'Next >' buttons, along with a note to 'Download a template for automation'. The status bar at the bottom indicates it's 17:14 on 08-06-2022.

Click on create.

The screenshot shows the Microsoft Azure portal interface. The main title bar says "ashokstorage99\_1654688675715 | Overview". On the left, there's a navigation menu with "Overview" selected. The main content area displays a message: "Deployment is in progress". Below this, it shows deployment details: Deployment name: ashokstorage99\_1654688675715, Subscription: Azure-DXC262A81Lab, Resource group: ashokrg99. A table titled "Deployment details (Download)" lists one resource: "ashokstorage99" (Type: Microsoft.Storage/storageAccounts, Status: Accepted). To the right, there are promotional cards for Microsoft Defender for Cloud, Free Microsoft tutorials, and Work with an expert. The taskbar at the bottom shows various pinned icons like File Explorer, Task View, and Edge browser.

Wait till deployment is complete.

The screenshot shows the Microsoft Azure portal interface, similar to the previous one but with a different message. The main title bar says "ashokstorage99\_1654688675715 | Overview". The left navigation menu is identical. The main content area now displays a message: "Your deployment is complete". Below this, it shows deployment details: Deployment name: ashokstorage99\_1654688675715, Subscription: Azure-DXC262A81Lab, Resource group: ashokrg99. A table titled "Deployment details (Download)" is present. Below the table, there's a "Next steps" section with a "Go to resource" button. To the right, there are promotional cards for Cost Management, Microsoft Defender for Cloud, Free Microsoft tutorials, and Work with an expert. The taskbar at the bottom is identical to the previous screenshot.

## Click on go to resources

ashokstorage99 - Microsoft Azure

ashokstorage99 - Storage account

Overview

Properties

Blob service

Security

Networking

Containers

File shares

Queues

Tables

Networking

Azure CDN

Access keys

41°C Haze

Click on containers and fill the details for new container and click on create

New container

Name: ashokdemoblob99

Public access level: Blob (anonymous read access for blobs only)

Name	Last modified	Public access
\$logs	6/8/2022, 5:15:17 PM	Private

Create Discard

Containers

\$logs

Storage container is created!

The screenshot shows the Microsoft Azure Storage Containers page. The left sidebar navigation includes sections for Overview, Activity log, Tags, Diagnose and solve problems, Access Control (IAM), Data migration, Events, and Storage browser (preview). Under Data storage, the 'Containers' option is selected. The main content area displays a table of containers:

Name	Last modified	Public access level	Lease state
\$logs	6/8/2022, 5:15:17 PM	Private	Available
ashokdemoblob99	6/8/2022, 5:21:51 PM	Blob	Available

At the bottom right of the interface, there is a status bar showing the date (08-06-2022) and time (17:23).

Click on **ashokdemoblob99** to open it then click on upload to upload file from your local storage

The screenshot shows the Microsoft Azure Storage Container upload dialog for the 'ashokdemoblob99' container. The left sidebar navigation is identical to the previous screenshot. The main content area shows a file selection dialog with the following details:

- File: \*1000\_Companies.csv
- Overwrite if files already exist:
- Advanced options are expanded.

At the bottom right of the dialog, there is a large blue 'Upload' button. The status bar at the bottom right shows the date (08-06-2022) and time (17:27).

Click on upload to upload the file.

The screenshot shows the Microsoft Azure Storage Container Overview page. The container name is 'ashokdemoblob99'. A single blob named '1000\_Companies.csv' is listed. The blob details are as follows:

Name	Modified	Access tier	Archive status	Blob type	Size	Lease state
1000_Companies.csv	6/8/2022, 5:28:11 PM	Hot (Inferred)		Block blob	50 KiB	Available

The screenshot shows the Microsoft Azure Blob Properties blade for the blob '1000\_Companies.csv'. The URL is https://ashokstorage99... . The blob properties are as follows:

Properties	Value
URL	https://ashokstorage99...
LAST MODIFIED	6/8/2022, 5:28:11 PM
CREATION TIME	6/8/2022, 5:28:11 PM
VERSION ID	-
TYPE	Block blob
SIZE	50 KiB
ACCESS TIER	Hot (Inferred)
ACCESS TIER LAST MODIFIED	N/A
ARCHIVE STATUS	-
REHYDRATE PRIORITY	-
SERVER ENCRYPTED	true
ETAG	0x8DA494629076AF8
VERSION-LEVEL IMMUTABILITY POLICY	Disabled
CACHE-CONTROL	[Empty]
CONTENT-TYPE	text/csv
CONTENT-MDS	tDTeRwQTEa8/4mPsig/I7Q==
CONTENT-ENCODING	[Empty]
CONTENT-LANGUAGE	[Empty]

Meeting in "General" (M... | Subscription Details | Nuvepro | 1000\_Companies.csv - Microsoft | +

portal.azure.com/#view/Microsoft\_Azure\_Storage/BlobPropertiesBladeV2/storageAccountId%2fsubscriptions%2F442b51c3-1fed-40a7-9d05-105684c1217c%2fresourcegroups%2F...

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

ashokstorage99\_165468867515 > ashokstorage99 > ashokdemoblob99 >

ashokdemoblob99 Container

Search (Ctrl+/) Upload Change access level ...

Overview Diagnose and solve problems Access Control (IAM) Settings Shared access tokens Access policy Properties Metadata

Authentication method: Access key (Switch to Azure AD User Account) Location: ashokdemoblob99

Search blobs by prefix (case...) Show deleted blobs Add filter

Name

1000\_Companies.csv

1000\_Companies.csv ...

Save Discard Download Refresh Delete

Overview Versions Snapshots Edit Generate SAS

4 153441.51,101145.55,407934.54,Florida,191056,39  
5 144372.41,118671.85,383199.62,New York,182901.99  
6 142107.34,91391.77,366168.42,Florida,166187.94  
7 131876.9,99814.71,362861.36,New York,156991.12  
8 134615.46,147198.87,127716.82,California,156122.51  
9 130298.13,145530.06,323876.68,Florida,155752.6  
10 120542.52,148718.95,311613.29,New York,152211.77  
11 123334.88,108679.17,304981.62,California,149759.96  
12 101913.08,110594.11,229160.95,Florida,146121.95  
13 100671.96,91790.61,249744.55,California,144259.4  
14 93863.75,127320.38,249839.44,Florida,141585.52  
15 91992.39,135495.07,252664.93,California,134307.35  
16 119943.24,156547.42,256512.92,Florida,132602.65  
17 114523.61,122616.84,261776.23,New York,129917.04  
18 78013.11,121597.55,264346.06,California,126992.93  
19 94657.16,145077.58,282574.31,New York,125378.37  
20 91749.16,114175.79,294919.57,Florida,124266.9  
21 86419.7,153514.11,0,New York,122776.86  
22 76253.86,113867.3,298664.47,California,118474.03  
23 78389.47,153773.43,299737.29,New York,111313.02  
24 73904.56,122782.75,303311.26,Florida,110352.75

Csv Preview

Meeting in "General" (M... | Subscription Details | Nuvepro | 1000\_Companies.csv - Microsoft | +

portal.azure.com/#view/Microsoft\_Azure\_Storage/BlobPropertiesBladeV2/storageAccountId%2fsubscriptions%2F442b51c3-1fed-40a7-9d05-105684c1217c%2fresourcegroups%2F...

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

ashokstorage99\_165468867515 > ashokstorage99 > ashokdemoblob99 >

ashokdemoblob99 Container

Search (Ctrl+/) Upload Change access level ...

Overview Diagnose and solve problems Access Control (IAM) Settings Shared access tokens Access policy Properties Metadata

Authentication method: Access key (Switch to Azure AD User Account) Location: ashokdemoblob99

Search blobs by prefix (case...) Show deleted blobs Add filter

Name

1000\_Companies.csv

1000\_Companies.csv ...

Save Discard Download Refresh Delete

Overview Versions Snapshots Edit Generate SAS

R%26D%20Spend	Administration	Marketing%20Spend	State	Profit
165349.2	136897.8	471784.1	New%20York	192261.83
162597.7	151377.59	443898.53	California	191792.06
153441.51	101145.55	407934.54	Florida	191050.39
144372.41	118671.85	383199.62	New%20York	182901.99
142107.34	91391.77	366168.42	Florida	166187.94
131876.9	99814.71	362861.36	New%20York	156991.12
134615.46	147198.87	127716.82	California	156122.51
130298.13	145530.06	323876.68	Florida	155752.6
120542.52	148718.95	311613.29	New%20York	152211.77
123334.88	108679.17	304981.62	California	149759.96
101913.08	110594.11	229160.95	Florida	146121.95
100671.96	91790.61	249744.55	California	144259.4
93863.75	127320.38	249839.44	Florida	141585.52
91992.39	135495.07	252664.93	California	134307.35
119943.24	156547.42	256512.92	Florida	132602.65
114523.61	122616.84	261776.23	New%20York	129917.04

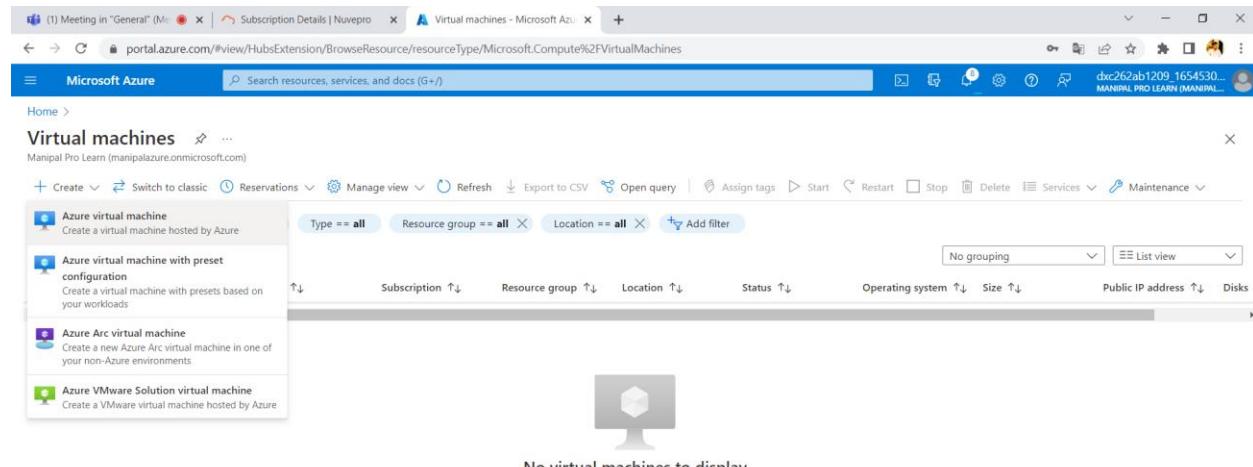
## QUESTION 2. Explain the steps with screenshots how to create Virtual machine & how to connect from

(i) Local Computer - CMD method?

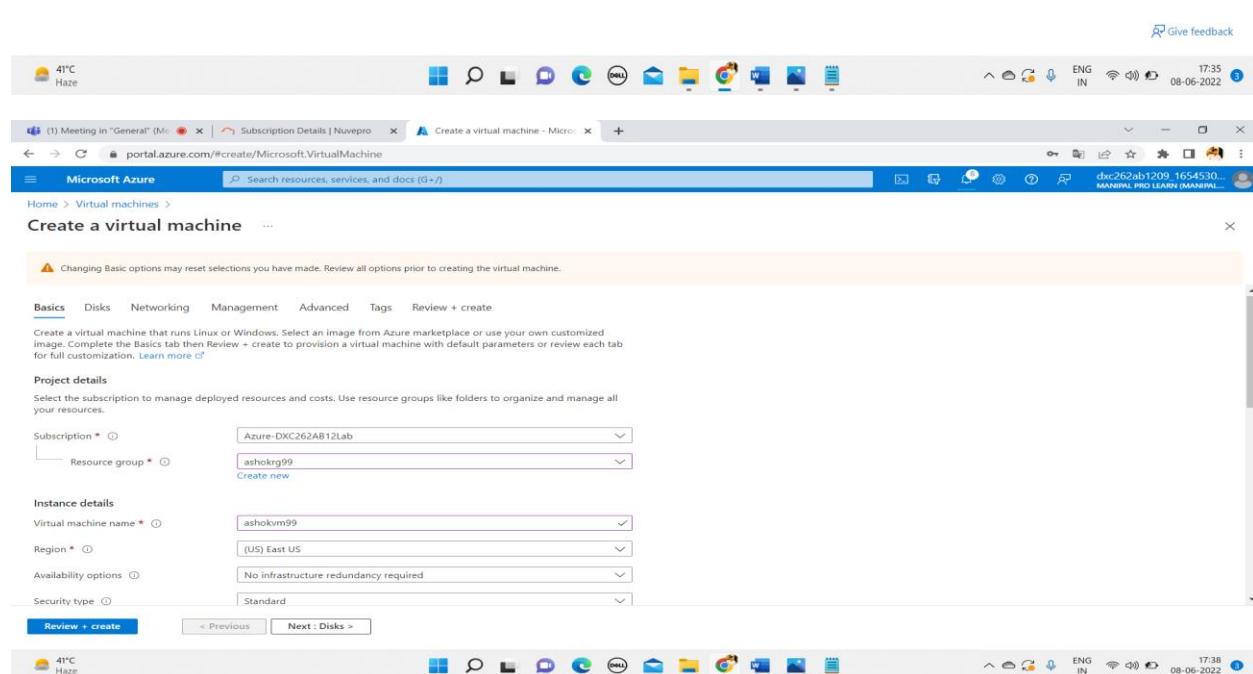
(ii) Using Azure cloud Shell?

(iii) Also using Azure Bastion?

**ANSWER:** To create virtual machine Go to <https://portal.azure.com/#home> and search **virtual machine** and go into it and click on create then azure virtual machine to crate the virtual machine.



The screenshot shows the Microsoft Azure portal's 'Virtual machines' page. At the top, there are navigation links for 'Create', 'Switch to classic', 'Reservations', 'Manage view', 'Refresh', 'Export to CSV', 'Open query', 'Assign tags', 'Start', 'Restart', 'Stop', 'Delete', 'Services', and 'Maintenance'. Below these are filters for 'Type == all', 'Resource group == all', 'Location == all', and 'Add filter'. The main area lists four creation methods: 'Azure virtual machine' (Create a virtual machine hosted by Azure), 'Azure virtual machine with preset configuration' (Create a virtual machine with presets based on your workloads), 'Azure Arc virtual machine' (Create a new Azure Arc virtual machine in one of your non-Azure environments), and 'Azure VMware Solution virtual machine' (Create a VMware virtual machine hosted by Azure). A large central icon represents a computer monitor. Below it, a message says 'No virtual machines to display' and provides instructions: 'Create a virtual machine that runs Linux or Windows. Select an image from the marketplace or use your own customized image.'



The screenshot shows the 'Create a virtual machine' wizard in the Microsoft Azure portal. The 'Basics' tab is active. It includes fields for 'Subscription' (set to 'Azure-DXC262AB12Lab'), 'Resource group' (set to 'ashokrg99' with a 'Create new' option), 'Virtual machine name' (set to 'ashokv99'), 'Region' (set to '(US) East US'), 'Availability options' (set to 'No infrastructure redundancy required'), and 'Security type' (set to 'Standard'). At the bottom, there are 'Review + create' and 'Next : Disks >' buttons. The status bar at the bottom right shows the date and time as 08-06-2022 17:38.

The screenshot shows the Microsoft Azure 'Create a virtual machine' wizard at the 'Review + create' step. At the top, there's a green banner indicating 'Validation passed'. Below it, the 'Review + create' tab is selected among 'Basics', 'Disks', 'Networking', 'Management', 'Advanced', and 'Tags'. A note says 'Cost given below is an estimate and not the final price. Please use [Pricing calculator](#) for all your pricing needs.'  
  
Under 'PRODUCT DETAILS', it shows '1 X Standard D2s v3' by Microsoft. A note states 'Pricing not available for this offering'. Links for 'Terms of use' and 'Privacy policy' are provided.  
  
The 'TERMS' section contains legal text about agreeing to terms and privacy statements, mentioning support for billing and other transactional activities. It also notes that Microsoft does not provide rights for third-party offerings. A link to 'Azure Marketplace Terms' is included.  
  
A warning message in a yellow box at the bottom left says: '⚠ You have set SSH port(s) open to the internet. This is only recommended for testing. If you want to change this setting, go back to Basics tab.'  
  
At the bottom, there are buttons for 'Create', '< Previous' and 'Next >', and 'Download a template for automation'. The status bar at the bottom right shows the date and time: '08-06-2022 17:39'.  
  
A modal dialog box titled 'Generate new key pair' is overlaid on the page. It contains a note: 'An SSH key pair contains both a public key and a private key. Azure doesn't store the private key. After the SSH key resource is created, you won't be able to download the private key again. [Learn more](#)'  
Below this, there are two buttons: 'Download private key and create resource' and 'Return to create a virtual machine'.  
  
The desktop taskbar at the bottom includes icons for File Explorer, Task View, Start, Search, Edge, and others.

## Download private key

The screenshot shows the Microsoft Azure portal interface. At the top, there are several tabs and a search bar. The main content area displays a deployment overview for a VM named 'CreateVm-canonical.0001-com-ubuntu-server-focal-2-20220608173605'. The status bar at the bottom right shows 'Deployment in progress...'.

**Deployment Details:**

- Deployment name: CreateVm-canonical.0001-com-ubuntu-server-focal-2-20220608173605
- Subscription: Azure-DXC262AB12Lab
- Resource group: ashokrg99
- Start time: 6/8/2022, 5:39:51 PM
- Correlation ID: ea1f18e5-9144-41ea-9930-dd47e6ee1e16

**Deployment Status:**

Deployment is in progress

**Deployment Details (Download):**

Resource	Type	Status	Operation details
No results.			

**Next Steps:**

- Setup auto-shutdown Recommended
- Monitor VM health, performance and network dependencies Recommended
- Run a script inside the virtual machine Recommended

**Actions:**

- Go to resource
- Create another VM

**Side Panel:**

- 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:** Start learning today >
- Work with an expert:** Azure experts are service provider partners

- (i) Connect from Local Computer - CMD method?  
 Go to connect → click on SSH → copy  
**ssh -i <private key path> azureuser@20.39.50.239**  
 open cmd and go at location of key that you downloaded in you system.  
**cd C:\Users\Del\Downloads\**  
 then run this command  
**ssh -i C:\Users\Del\Downloads\ashokvm99\_key.pem azureuser@20.39.50.239**

The screenshot shows the Microsoft Azure portal interface. The main window displays a virtual machine named "ashokvm99". The machine is running, located in East US, and is associated with a Standard D2s v3 (2 vcpus, 8 GB memory) configuration. It has a public IP address of 20.39.50.239 and is connected to a virtual network/subnet named "ashokvm99-vnet/default". The DNS name is listed as "Not configured".

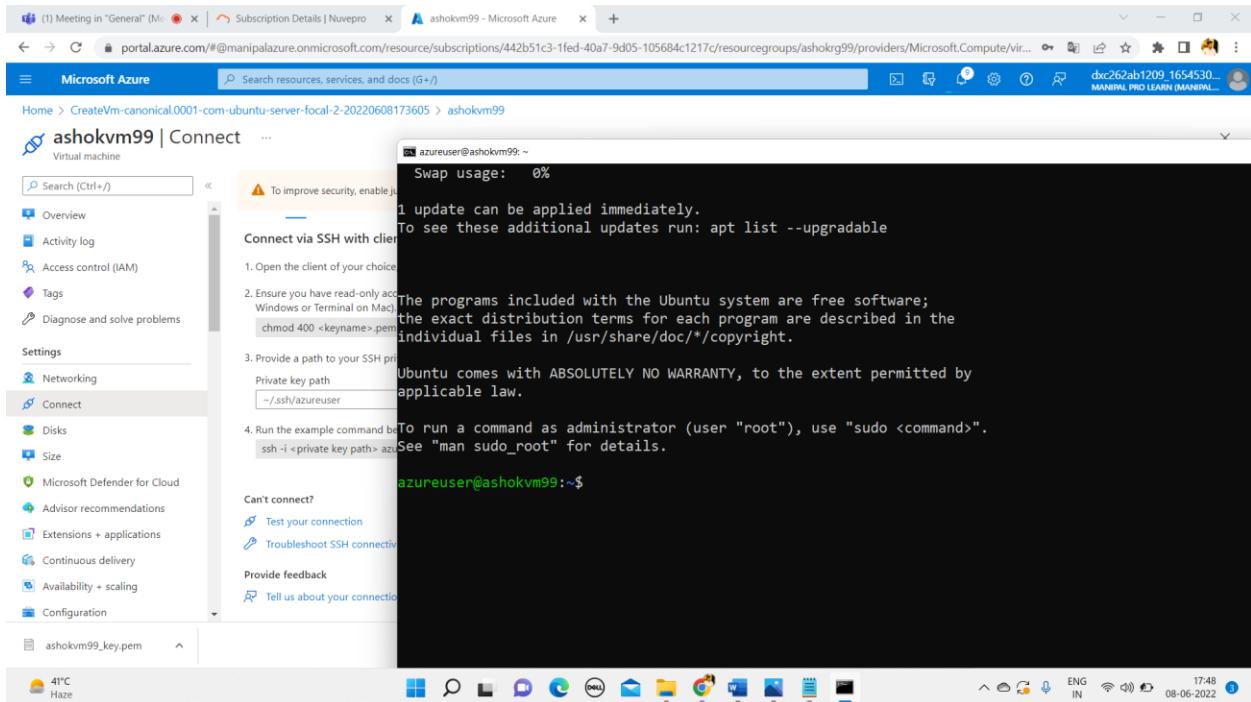
The left sidebar shows the navigation menu with options like Home, CreateVm-canonical.0001-com-ubuntu-server-focal-2-20220608173605, ashokvm99, and ashokvm99\_key.pem.

A secondary window titled "ashokvm99 | Connect" is open, showing the "SSH" connection details. It includes a command prompt window with the following text:

```
Microsoft Windows [Version 10.0.22000.675]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Ashok>cd C:\Users\Ashok\Downloads

C:\Users\Ashok\Downloads>ssh -i C:\Users\Ashok\Downloads\ashokvm99_key.pem azureuser@20.39.50.239
The authenticity of host '20.39.50.239 (20.39.50.239)' can't be established.
ECDSA key fingerprint is SHA256:txMnP1B5MOQ1Zaf9tM12G6U8pnBzAQxpefFgvdqo.
Are you sure you want to continue connecting (yes/no/[fingerprint])? 
```



## (ii) Using Azure cloud Shell?

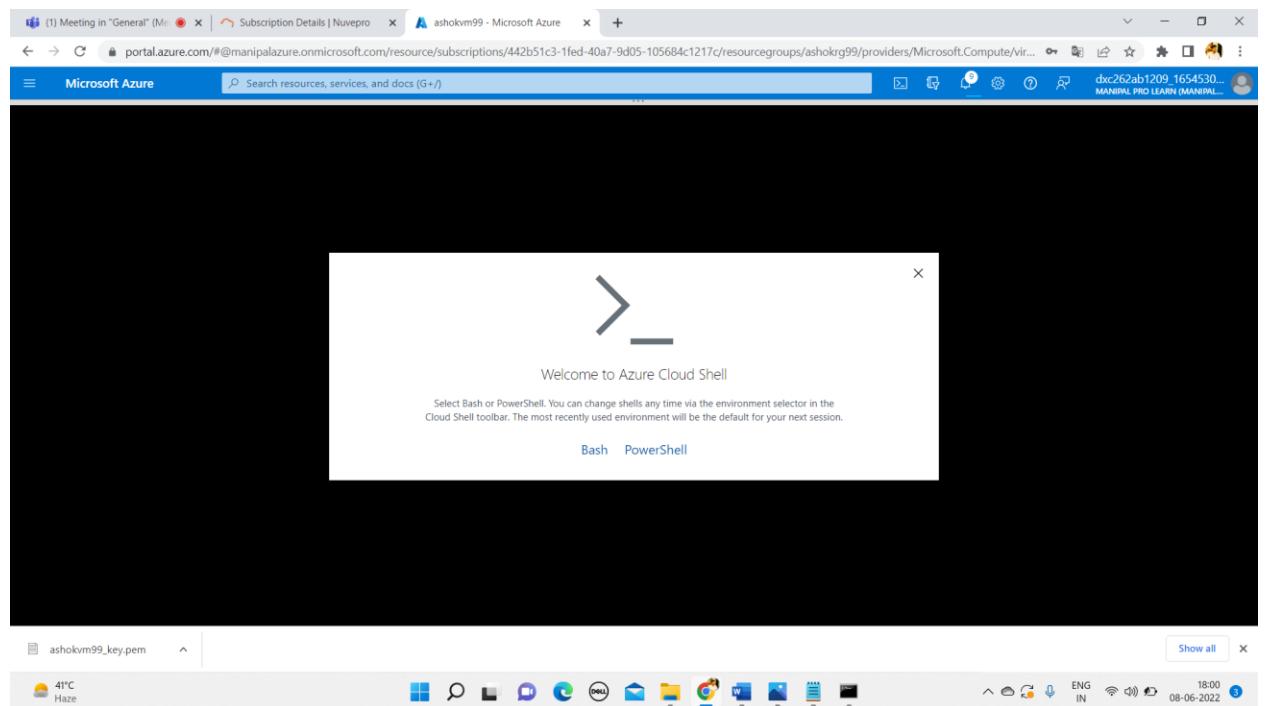
Click on cloud shell icon on header.

The screenshot shows the Microsoft Azure portal with the "ashokvm99" virtual machine selected. The "CLI / PS" tab is highlighted in the header. The main content area displays the virtual machine's properties and networking details.

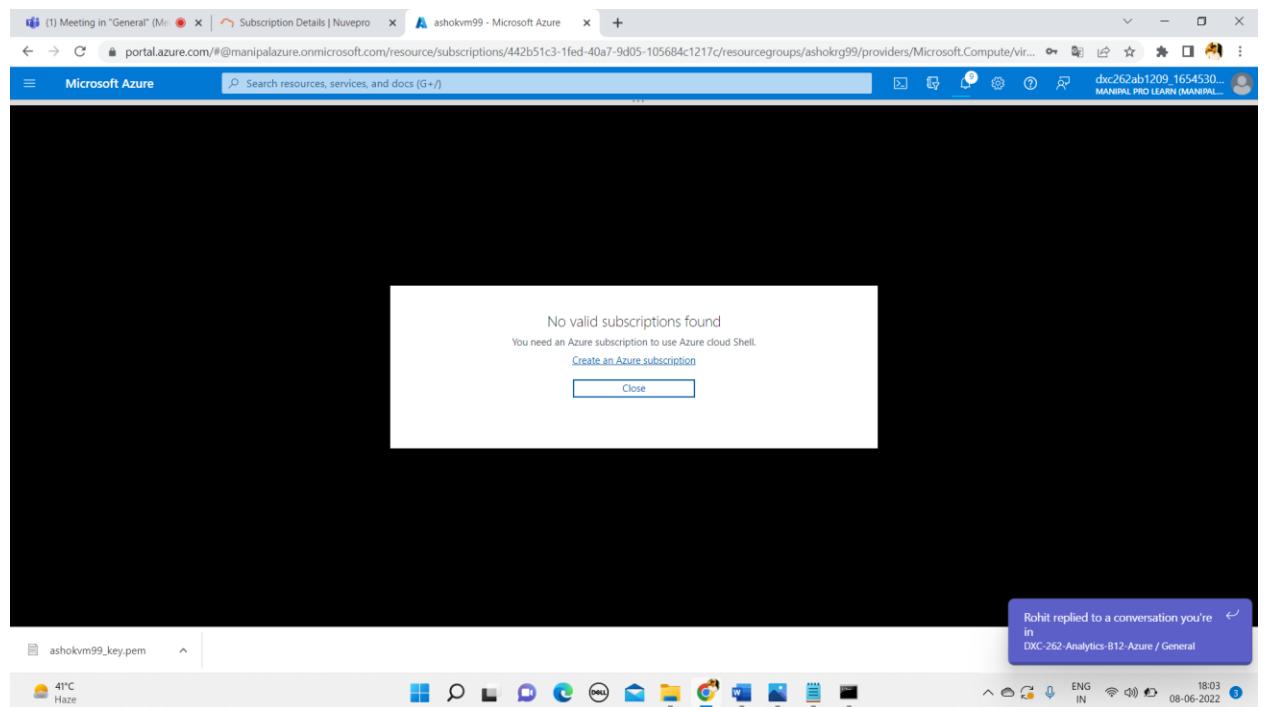
Essentials	
Resource group (move)	: ashokrg99
Status	: Running
Location	: East US
Subscription (move)	: Azure-DXC262AB1Lab
Subscription ID	: 442b51c3-1fed-40a7-9d05-105684c1217c
Tags (edit)	: Click here to add tags

Properties	
<b>Virtual machine</b>	
Computer name	ashokvm99
Health state	-
Operating system	Linux (ubuntu 20.04)
Publisher	canonical
Offer	0001-com-ubuntu-server-focal

Networking	
Public IP address	20.39.50.239
Public IP address (IPv6)	-
Private IP address	10.0.0.4
Private IP address (IPv6)	-
Virtual network/subnet	ashokrg99-vnet/default



Click on bash.



### (iii) Also using Azure Bastion?

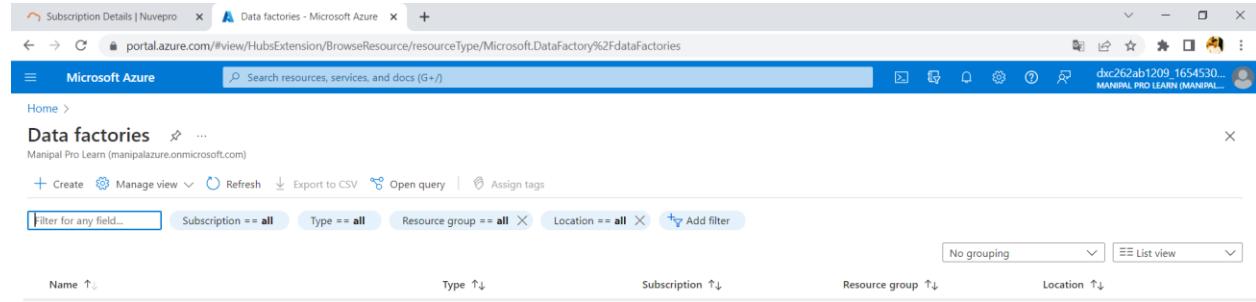
The screenshot shows the Microsoft Azure portal interface for a virtual machine named "ashokvm99". The "Bastion" tab is selected under the "SSH" section, showing the status as "running". The "Networking" section provides the following details:

Property	Value
Public IP address	20.39.50.239
Private IP address	10.0.0.4
Virtual network/subnet	ashokvm99-vnet/default

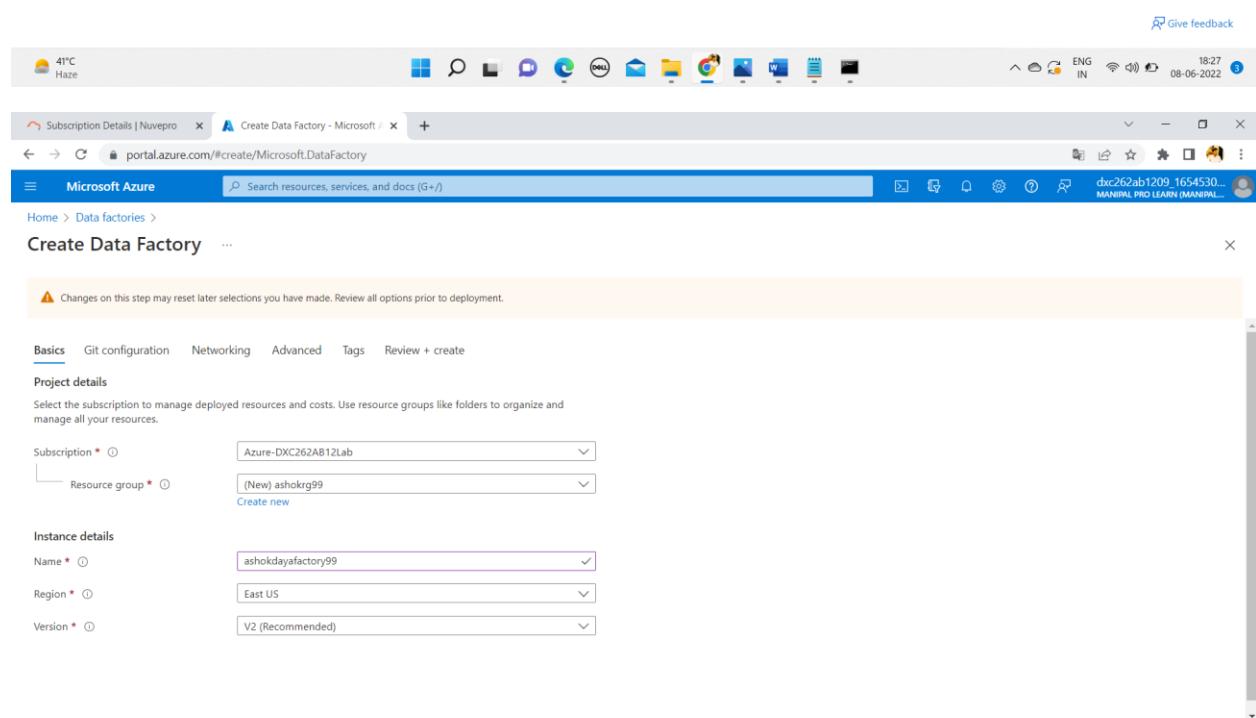
Other tabs available include Properties, Monitoring, Capabilities (7), Recommendations, and Tutorials.

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

### ANSWER:



The screenshot shows the Microsoft Azure portal interface. The title bar reads "Subscription Details | Nuvapro" and "Data factories - Microsoft Azure". The main content area is titled "Data factories" and displays a message: "No data factories to display. Try changing or clearing your filters." Below this is a "Create data factory" button and a "Learn more" link. The top navigation bar includes "Home", "Data factories", and "MANIPAL PRO LEARN (MANIPAL...)". The bottom status bar shows weather (41°C Haze), battery level, and system time (18:27 08-06-2022).



The screenshot shows the "Create Data Factory" wizard in the Microsoft Azure portal. The current step is "Basics". The "Project details" section asks for a subscription and resource group. The "Subscription" dropdown is set to "Azure-DXC262AB12Lab" and the "Resource group" dropdown is set to "(New) ashokrg99" with a "Create new" link. The "Instance details" section sets the "Name" to "ashokdayafactory99", "Region" to "East US", and "Version" to "V2 (Recommended)". At the bottom, there are "Review + create" and "Next : Git configuration >" buttons. The top navigation bar and bottom status bar are visible.

The screenshot shows the Microsoft Azure portal with the URL [portal.azure.com/#create/Microsoft.DataFactory](https://portal.azure.com/#create/Microsoft.DataFactory). The page title is "Create Data Factory". The top navigation bar includes "Home > Data factories > Create Data Factory". Below the title, there are tabs: Basics, **Git configuration**, Networking, Advanced, Tags, Review + create. The main content area discusses Azure Data Factory's Git integration and provides a link to "Learn more about Git integration in Azure Data Factory". A checkbox labeled "Configure Git later" is checked.

The screenshot shows the Microsoft Azure portal with the URL [portal.azure.com/#create/Microsoft.DataFactory](https://portal.azure.com/#create/Microsoft.DataFactory). The page title is "Create Data Factory". The top navigation bar includes "Home > Data factories > Create Data Factory". Below the title, there are tabs: **Review + create**, < Previous, Next : Networking >. The main content area displays a green banner with a checkmark icon and the text "Validation Passed". The "Review + create" section contains tabs: Basics, Git configuration, Networking, Advanced, Tags, **Review + create**. The "TERMS" section states: "By clicking "Create", I (a) agree to the legal terms and privacy statement(s) associated with the Marketplace offering(s) listed above; and (b) agree that Microsoft may share my contact, usage and transactional information with the provider(s) of the offering(s) for support, billing and other transactional activities. Microsoft does not provide rights for third-party offerings. See the [Azure Marketplace Terms](#) for additional details." The "Basics" section shows the following details:

Subscription	Azure-DXC262A812Lab
Resource group	ashokkr99
Name	ashokdayafactory99
Region	East US
Version	V2 (Recommended)

The "Networking" section shows "Connect via Public endpoint". At the bottom, there are buttons: **Create**, < Previous, Next, and "Download a template for automation". The status bar at the bottom right shows the date and time: 08-06-2022 18:29.

The screenshot shows the Microsoft Azure Data Factory Overview page for a deployment named "Microsoft.DataFactory-20220608182750". The deployment status is "Deployment is in progress". Deployment details include:

- Deployment name: Microsoft.DataFactory-20220608182750
- Subscription: Azure-DXC262AB12Lab
- Resource group: ashokrg99

The deployment details table shows "No results." under the "Operation details" column.

The screenshot shows the Microsoft Azure Data Factory Overview page for the same deployment. The deployment status is now "Your deployment is complete". Deployment details are identical to the previous screenshot.

A sidebar on the right provides links to:

- 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**: Start learning today. [Start learning today >](#)
- Work with an expert**: Azure experts are service provider partners who can help manage your assets on Azure and be your first line of support. [Find an Azure expert >](#)

Subscription Details | Nuvepro x ashokdayfactory99 - Microsoft x +

portal.azure.com/#@manipalazure.onmicrosoft.com/resource/subscriptions/442b51c3-1fed-40a7-9d05-105684c1217c/resourceGroups/ashokrg99/providers/Microsoft.DataFactory/facto... ...

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

Home > Microsoft.DataFactory-20220608182750 >

**ashokdayfactory99** x ...

Data factory (V2)

Search (Ctrl+)

Delete

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Essentials

Resource group ([move](#)) : **ashokrg99** Type : Data factory (V2)  
Status : Succeeded Getting started : [Quick start](#)  
Location : East US  
Subscription ([move](#)) : [Azure-DXC262AB12Lab](#)  
Subscription ID : 442b51c3-1fed-40a7-9d05-105684c1217c

JSON View

Getting started

Open Azure Data Factory Studio Start authoring and monitoring your data pipelines and data flows. [Open](#)

Read documentation Learn how to be productive quickly. Explore concepts, tutorials, and samples. [Learn more](#)

Monitoring

PipelineRuns ActivityRuns

100 100  
80 80  
60 60

41°C Haze

18:31 ENG IN 08-06-2022

**QUESTION 4. Explain the steps with screenshots how to copy data from source blob to destination blob?**

**ANSWER: Open azure data factory studio**

The screenshot shows the Microsoft Azure portal interface for the 'ashokdayafactory99' Data Factory (V2). The left sidebar contains navigation links for Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Settings, Networking, Managed identities, Properties, Locks, Getting started (Quick start), Monitoring (Alerts, Metrics, Diagnostic settings, Logs), and Haze. The main content area displays the 'Essentials' section with details: Resource group (move) : ashokrg99, Status : Succeeded, Location : East US, Subscription (move) : Azure-DXC262AB12Lab, and Subscription ID : 442b51c3-1fed-40a7-9d05-105684c1217c. Below this is the 'Getting started' section with two cards: 'Open Azure Data Factory Studio' (Start authoring and monitoring your data pipelines and data flows) and 'Read documentation' (Learn how to be productive quickly. Explore concepts, tutorials, and samples). The 'Monitoring' section shows PipelineRuns and ActivityRuns charts. The bottom right corner shows system status: ENG IN, 18:38, 08-06-2022.

The screenshot shows the Azure Data Factory studio homepage for the 'ashokdayafactory99' Data Factory. The top navigation bar includes Microsoft Azure, the Data Factory name, and a search bar. The main content area features a large 3D icon representing data flow between various components. Below the icon are four key features: 'Ingest' (Copy data at scale once or on a schedule.), 'Orchestrate' (Code-free data pipelines.), 'Transform data' (Transform your data using data flows.), and 'Configure SSIS' (Manage & run your SSIS packages in the cloud.). The 'Discover more' section includes links for Browse partners (preview), Pipeline templates, and SAP pipeline templates. The bottom right corner shows system status: ENG IN, 18:33, 08-06-2022.

**Click on Ingest**

Subscription Details | Nuvepro | ashokdayafactory99 - Microsoft | ashokdayafactory99 - Azure Data | +

ash.azure.com/en/home/copywizard?factory=%2Fsubscriptions%2F442b51c3-1fed-40a7-9d05-105684c1217%2FresourceGroups%2Fashokrg99%2Fproviders%2FMicrosoft.DataFactory%...

Microsoft Azure | ashokdayafactory99

### Copy Data tool

Properties

Source

Target

Settings

Review and finish

Use Copy Data Tool to perform a one-time or scheduled data load from 90+ data sources. Follow the wizard experience to specify your data loading settings, and let the Copy Data Tool generate the artifacts for you, including pipelines, datasets, and linked services. [Learn more](#)

**Properties**

Select copy data task type and configure task schedule

**Task type**

**Built-in copy task**  
You will get single pipeline to copy data from 90+ data source easily.

**Metadata-driven copy task**  
You will get parameterized pipelines which can read metadata from an external store to load data at a large scale.

You will get single pipeline to quickly copy objects from data source store to destination in a very intuitive manner.

**Task cadence or task schedule \***

Run once now  Schedule  Tumbling window

< Previous Next > Cancel

41°C Haze

18:38 08-06-2022

Subscription Details | Nuvepro | ashokstorage999 - Microsoft | ashokdayafactory99 - Azure Data | +

portal.azure.com/#@manipalazure.onmicrosoft.com/resource/subscriptions/442b51c3-1fed-40a7-9d05-105684c1217c/resourcegroups/ashokrg99/providers/Microsoft.Storage/storageA...

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

Home > ashokstorage999\_1654693935076 > ashokstorage999

### ashokstorage999 | Containers

Storage account

Search (Ctrl+/)

+ Container Change access level Restore containers Refresh Delete

Show deleted containers

Name	Last modified	Public access level	Lease state
\$logs	6/8/2022, 6:43:01 PM	Private	Available
destinationblob1	6/9/2022, 6:44:39 PM	Blob	Available
sourceblob1	6/8/2022, 6:44:12 PM	Blob	Available

Overview

Activity log

Tags

Diagnose and solve problems

Access Control (IAM)

Data migration

Events

Storage browser (preview)

Data storage

Containers

File shares

Queues

Tables

Security + networking

Networking

Azure CDN

Access keys

41°C Haze

18:45 08-06-2022

The screenshot shows the Microsoft Azure Storage Explorer interface. On the left, there's a sidebar with 'Overview', 'Diagnose and solve problems', 'Access Control (IAM)', 'Settings' (with 'Shared access tokens', 'Access policy', 'Properties', and 'Metadata' options), and a 'Search (Ctrl+/' input field). The main area displays a table of blobs:

Name	Modified	Access tier	Archive status	Blob type
1000_Companies.csv	6/8/2022, 6:52:28 PM	Hot (Inferred)		Block blob

On the right, a context menu is open over the '1000\_Companies.csv' file, showing options like 'Upload Completed for 1000\_Companies.csv' and 'Select a file'. Below the table, there's a section for 'Current uploads' with a progress bar for '1000\_Companies.csv'.

Go to source and give source type and connection to storage account

My storage account is **ashokstorage999**

And I uploaded one csv file in sourceblob

The screenshot shows the 'Copy Data tool' wizard in the Azure Data Factory portal. The current step is 'Source'. The 'Source data store' configuration is shown, with 'Source type' set to 'Azure Blob Storage' and 'Connection' set to 'AutoResolveIntegrationRuntime'. The 'Authentication type' is 'Account key', and the 'Connection string' is 'Azure Key Vault'. Under 'Account selection method', 'From Azure subscription' is selected, and the 'Azure subscription' dropdown shows 'Azure-DXC262AB12Lab (442b51c3-1fed-40a7-9d05-105684c1217c)'. The 'Storage account name' is 'ashokstorage999'. There are sections for 'Additional connection properties', 'Test connection' (set to 'To linked service'), 'Annotations', 'Parameters', and 'Advanced'.

Click on browse to browse source blob

Subscription Details | Nuvepro x ashokstorage999 - Microsoft Azure x ashokdayafactory99 - Azure Data x +

ash.azure.com/en/home?factory=%2Fsubscriptions%2F442b51c3-1fed-40a7-9d05-105684c1217c%2FresourceGroups%2Fashokrg999%2Fproviders%2FMicrosoft.DataFactory%2Factories... dxc262ab1209\_165453008226@manipalazure.onmicrosoft.com MANIPAL PRO LEARN

Microsoft Azure | ashokdayafactory99

Copy Data tool

Properties

Source

Dataset

Configuration

Target

Settings

Review and finish

Source data store

Specify the source data store for the copy task. You can use an existing data store connection or specify a new one.

Source type: Azure Blob Storage

Connection: AzureBlobStorage1

File or folder

If the identity you use to access the data store only has permission to subdirectory instead of the entire account, specify the path to browse.

Root folder: destinationblob

sourceblob1

Showing 1 - 2 of 2 items

OK Cancel

41°C Haze

18:49 08-06-2022

Subscription Details | Nuvepro x Upload blob - Microsoft Azure x ashokdayafactory99 - Azure Data x +

ash.azure.com/en/home?factory=%2Fsubscriptions%2F442b51c3-1fed-40a7-9d05-105684c1217c%2FresourceGroups%2Fashokrg999%2Fproviders%2FMicrosoft.DataFactory%2Factories... dxc262ab1209\_165453008226@manipalazure.onmicrosoft.com MANIPAL PRO LEARN

Microsoft Azure | ashokdayafactory99

Copy Data tool

Properties

Source

Dataset

Configuration

Target

Settings

Review and finish

Source data store

Specify the source data store for the copy task. You can use an existing data store connection or specify a new one.

Source type: Azure Blob Storage

Connection: AzureBlobStorage1

File or folder

If the identity you use to access the data store only has permission to subdirectory instead of the entire account, specify the path to browse.

sourceblob1/1000\_Companies.csv

Options

Binary copy

Recursively (checked)

Enable partition discovery

Max concurrent connections

Filter by last modified

Start time (UTC) End time (UTC)

Root folder: sourceblob1

1000\_Companies.csv

Showing 1 item

OK Cancel

41°C Haze

18:54 08-06-2022

Subscription Details | Nuvepro | Upload blob - Microsoft Azure | ashokdayafactory99 - Azure Data | +

ash.azure.com/en/home?factory=%2Fsubscriptions%2F442b51c3-1fed-40a7-9d05-105684c1217c%2FresourceGroups%2Fashokrg999%2Fproviders%2FMicrosoft.DataFactory%2Factories... dxc262ab1209\_165453008226@manipalazure.onmicrosoft.com MANIPAL PRO LEARN

Microsoft Azure | ashokdayafactory99

Copy Data tool

Properties

Source

Dataset

Configuration

Target

Settings

Review and finish

File format settings

File format: DelimitedText

Column delimiter: Comma (,)

Row delimiter: Line feed (\n)

First row as header:

Advanced

Compression type: None

Additional columns: + New

< Previous Next > Cancel

41°C Haze

Subscription Details | Nuvepro | Upload blob - Microsoft Azure | ashokdayafactory99 - Azure Data | +

ash.azure.com/en/home?factory=%2Fsubscriptions%2F442b51c3-1fed-40a7-9d05-105684c1217c%2FresourceGroups%2Fashokrg999%2Fproviders%2FMicrosoft.DataFactory%2Factories... dxc262ab1209\_165453008226@manipalazure.onmicrosoft.com MANIPAL PRO LEARN

Microsoft Azure | ashokdayafactory99

Copy Data tool

Properties

Source

Target

Dataset

Configuration

Settings

Review and finish

Destination data store

Specify the destination data store for the copy task. You can use an existing data store connection or specify a new one.

Target type: Azure Blob Storage

Connection: Select... + New connection

New linked service

Azure Blob Storage Learn more

Name: AzureBlobStorage2

Description: AzureBlobStorage2

Connect via integration runtime: AutoResolveIntegrationRuntime

Authentication type: Account key

Connection string: Azure Key Vault

Account selection method: From Azure subscription

Azure subscription: Azure-DXC262AB12Lab (442b51c3-1fed-40a7-9d05-105684c1217c)

Storage account name: ashokstorage999

Additional connection properties: + New

Create Cancel Test connection

41°C Haze

[Subscription Details | Nuvepro](#) [Upload blob - Microsoft Azure](#) [ashokdayafactory99 - Azure Data](#) +

ashokdayafactory99 - Microsoft Azure | ashokdayafactory99

Copy Data tool

Properties

Source

**Target**

Dataset

Configuration

Settings

Review and finish

Destination data store

Specify the destination data store for the copy task. You can use an existing data store connection or specify a new data store.

Target type: Azure Blob Storage

Connection: AzureBlobStorage2

Folder path: destinationblob1

File name:

Copy behavior: None

Max concurrent connections:

Block size (MB):

Metadata: New

Browse

Select a file or folder.

Root folder > destinationblob1

Showing 0 items

OK Cancel

< Previous Next >

41°C Haze

Subscription Details | Nuvepro [Upload blob - Microsoft Azure](#) [ashokdayafactory99 - Azure Data](#) +

ashokdayafactory99 - Microsoft Azure | ashokdayafactory99

Copy Data tool

Properties

Source

**Target**

Dataset

Configuration

Settings

Review and finish

Destination data store

Specify the destination data store for the copy task. You can use an existing data store connection or specify a new data store.

Target type: Azure Blob Storage

Connection: AzureBlobStorage2

Folder path: destinationblob1

File name:

Copy behavior: None

Max concurrent connections:

Block size (MB):

Metadata: New

< Previous Next >

Cancel

41°C Haze

Subscription Details | Nuvepro | Upload blob - Microsoft Azure | ashokdayafactory99 - Azure Data | +

ashokdayafactory99 - Microsoft Azure | ashokdayafactory99

Copy Data tool

Properties

Source

Target

Dataset

Configuration

Settings

Review and finish

File format settings

File format: DelimitedText

Column delimiter: Comma (,)

Row delimiter: Default (\r\n, or \n)

Add header to file:

Advanced

Compression type: None

Max rows per file:

File name prefix:

< Previous Next > Cancel

41°C Haze

18:57 08-06-2022

Subscription Details | Nuvepro | Upload blob - Microsoft Azure | ashokdayafactory99 - Azure Data | +

ashokdayafactory99 - Microsoft Azure | ashokdayafactory99

Copy Data tool

Properties

Source

Target

Settings

Review and finish

Review

Deployment

Summary

You are running pipeline to copy data from Azure Blob Storage to Azure Blob Storage.

Azure Blob Storage → Azure Blob Storage

Properties

Task name: CopyPipeline\_ud0

Task description:

Source

Connection name: AzureBlobStorage1

Dataset name: SourceDataset\_ud0

Column delimiter: ,

Row delimiter: \n

Escape character: \

Quote char: "

First row as header: true

< Previous Next > Cancel

41°C Haze

18:57 08-06-2022

Subscription Details | Nuvepro | Upload blob - Microsoft Azure | ashokdayafactory99 - Azure Data | +

Microsoft Azure | ashokdayafactory99

Copy Data tool

Properties  
Source  
Target  
Settings  
Review and finish  
Review  
Deployment

Azure Blob Storage → Azure Blob Storage

Deployment complete

Deployment step Status

- Validating copy runtime environment Succeeded
- > Creating datasets Succeeded
- > Creating pipelines Succeeded
- > Running pipelines Succeeded

Datasets and pipelines have been created. You can now monitor and edit the copy pipelines or click finish to close Copy Data Tool.

Finish | Edit pipeline | Monitor

41°C Haze 18:58 08-06-2022

This screenshot shows the Microsoft Azure Copy Data tool interface. It displays a flow from 'Azure Blob Storage' to 'Azure Blob Storage'. A summary table shows deployment steps: 'Validating copy runtime environment' (Succeeded), 'Creating datasets' (Succeeded), 'Creating pipelines' (Succeeded), and 'Running pipelines' (Succeeded). Below the table, a message indicates datasets and pipelines have been created, and users can monitor or edit pipelines or close the tool. The bottom navigation bar includes 'Finish', 'Edit pipeline', and 'Monitor' buttons. The system tray at the bottom shows the date and time as 08-06-2022, 18:58, and weather information as 41°C Haze.

Subscription Details | Nuvepro | Upload blob - Microsoft Azure | ashokdayafactory99 - Azure Data | +

Microsoft Azure | ashokdayafactory99

Home | Author | Monitor | Manage

Pipeline runs

Runs

Triggered Debug Rerun Cancel Refresh Edit columns List Gantt

Filter by run ID or name: Chennai, Kolkata, Mu... : Last 24 hours Pipeline name: All Status: All

Runs: Latest runs Triggered by: All Add filter

Copy filters Export to CSV

Showing 0 - 0 items

Refreshing...

Pipeline name	Run start	Run end	Duration	Triggered by	Status	Error
Loading pipeline runs						

41°C Haze 18:59 08-06-2022

This screenshot shows the Microsoft Azure Pipeline runs page. The left sidebar has 'Author' selected. The main area shows a table with columns: Pipeline name, Run start, Run end, Duration, Triggered by, Status, and Error. A message at the top says 'Showing 0 - 0 items'. A progress indicator 'Refreshing...' is shown above the table. The bottom navigation bar shows the date and time as 08-06-2022, 18:59, and weather information as 41°C Haze.

Subscription Details | Nuvepro | Upload blob - Microsoft Azure | ashokdayfactory99 - Azure Data... | +

Subscription Details | Nuvepro | Upload blob - Microsoft Azure | ashokdayfactory99 - Azure Data... | +

ash.azure.com/en/monitoring/pipelineruns?factory=%2fsubscriptions%2f442b51c3-1fed-40a7-9d05-105684c1217c%2fresourceGroups%2fashokrg99%2fproviders%2fMicrosoft.DataF...

Microsoft Azure | ashokdayfactory99

Pipeline runs

Triggered Debug Rerun Cancel Refresh Edit columns List Gantt

Filter by run ID or name: Chennai, Kolkata, Mu... Last 24 hours Pipeline name: All Status: All

Runs: Latest runs Triggered by: All Add filter

Last refreshed 1 minute ago

Showing 1 - 1 items

Run start	Run end	Duration	Triggered by	Status	Error
12, 6:58:29 pm	00:00:12		Manual trigger	Succeeded	

Rerun?

Are you sure you want to rerun pipeline CopyPipeline\_ud0?

OK Cancel

41°C Haze

18:59 ENG IN 08-06-2022

Subscription Details | Nuvepro | destinationblob1 - Microsoft Azure | ashokdayfactory99 - Azure Data... | +

Subscription Details | Nuvepro | destinationblob1 - Microsoft Azure | ashokdayfactory99 - Azure Data... | +

portal.azure.com/#view/Microsoft\_Azure\_Storage/ContainerMenuBlade/~/overview/storageAccountId/%2fsubscriptions%2f442b51c3-1fed-40a7-9d05-105684c1217c%2fresourcegroup...

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

Home > ashokstorage999\_1654693935076 > ashokstorage999

destinationblob1 Container

Search (Ctrl+/) Upload Change access level Refresh Delete Change tier Acquire lease Break lease View snapshots Create snapshot

Authentication method: Access key (Switch to Azure AD User Account)  
Location: destinationblob1

Search blobs by prefix (case-sensitive): Show deleted blobs

Add filter

Name	Modified	Access tier	Archive status	Blob type	Size	Lease state
1000_Companies.txt	6/8/2022, 7:00:16 PM	Hot (Inferred)		Block blob	60.69 KB	Available

Shared access tokens Access policy Properties Metadata

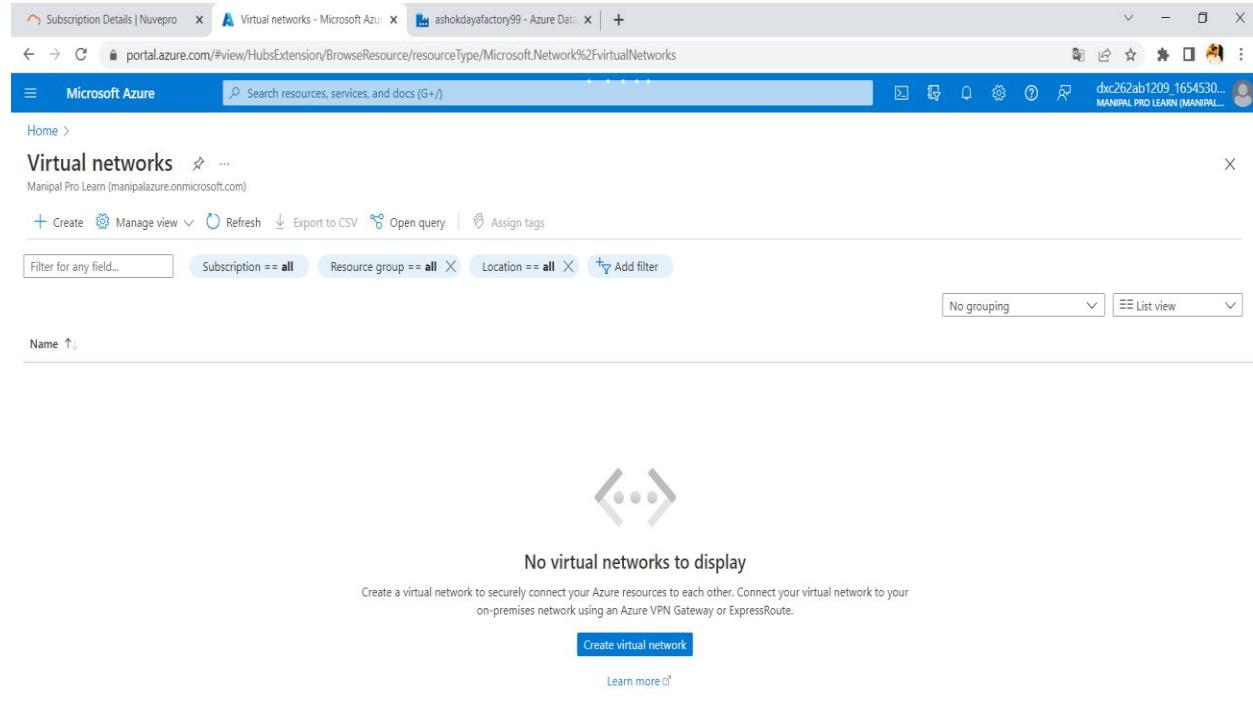
https://portal.azure.com/#

41°C Haze

19:00 ENG IN 08-06-2022

## QUESTION 5. Explain the steps with screenshots how to create Virtual Network in Azure?

### ANSWER:



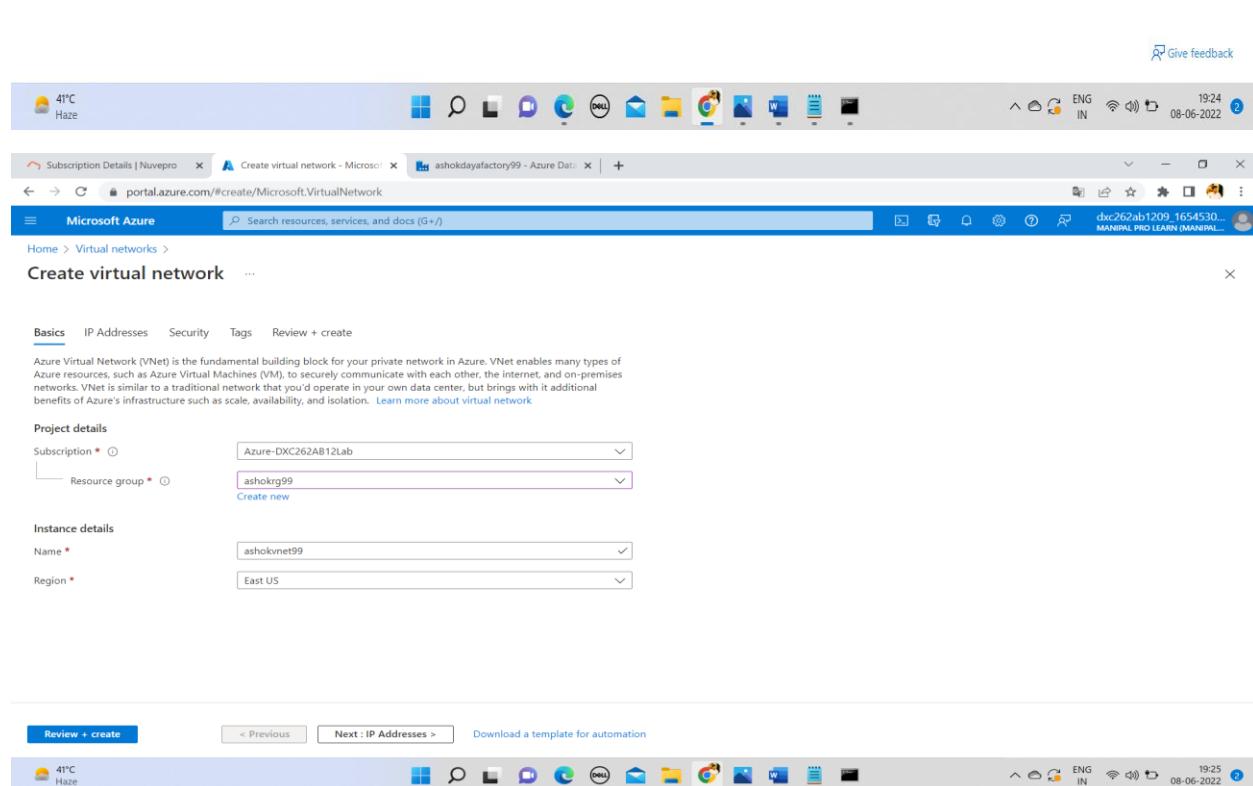
The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes tabs for 'Subscription Details | Nuvapro', 'Virtual networks - Microsoft Azure', and 'ashokdayafactory99 - Azure Data'. The main search bar says 'Search resources, services, and docs (G+)'. The user's name 'MANIPAL PRO LEARN (MANIPAL...' is visible in the top right. Below the header, the 'Virtual networks' section is displayed with a 'Create' button and filter options for Subscription, Resource group, and Location.

**No virtual networks to display**

Create a virtual network to securely connect your Azure resources to each other. Connect your virtual network to your on-premises network using an Azure VPN Gateway or ExpressRoute.

**Create virtual network**

Learn more ↗

The screenshot shows the 'Create virtual network' wizard. The 'Project details' step is active, requiring a subscription and resource group selection. The 'Subscription' dropdown is set to 'Azure-DXC262AB12Lab' and the 'Resource group' dropdown is set to 'ashokrg99'. The 'Instance details' step is partially visible below, showing fields for 'Name' (ashokvnet99) and 'Region' (East US).

**Review + create**

< Previous      Next : IP Addresses >      Download a template for automation

The screenshot shows the Microsoft Azure portal interface for creating a virtual network. The top navigation bar includes tabs for 'Subscription Details | Nuvepro', 'Create virtual network - Microsoft...', and 'ashokdayafactory99 - Azure Data...'. The main title is 'Create virtual network' under 'Virtual networks'. Below the title, there are tabs for 'Basics', 'IP Addresses' (which is selected), 'Security', 'Tags', and 'Review + create'. A sub-header states: 'The virtual network's address space, specified as one or more address prefixes in CIDR notation (e.g. 192.168.1.0/24)'. Under 'IPv4 address space', the value '10.0.0.0/16 10.0.0.0 - 10.0.255.255 (65536 addresses)' is shown. There is also a checkbox for 'Add IPv6 address space'. A note below says: 'The subnet's address range in CIDR notation (e.g. 192.168.1.0/24). It must be contained by the address space of the virtual network.' A table lists a single subnet: 'Subnet name: default, Subnet address range: 10.0.0.0/24, NAT gateway: -'. A note at the bottom left says: 'Use of a NAT gateway is recommended for outbound internet access from a subnet. You can deploy a NAT gateway and assign it to a subnet after you create the virtual network. [Learn more](#)'.

The screenshot shows the 'Review + create' tab of the Azure portal for creating a virtual network. At the top, there are buttons for 'Review + create' (highlighted in blue), '< Previous' and 'Next > Security', and 'Download a template for automation'. The main area displays validation status: 'Validation passed'. Below this, the 'Review + create' section contains tabs for 'Basics', 'IP Addresses', 'Security', 'Tags', and 'Review + create' (selected). The 'Basics' section shows: Subscription (Azure-DXC262AB12Lab), Resource group (ashokrg99), Name (ashokvnet99), and Region (East US). The 'IP addresses' section shows: Address space (10.0.0.0/16) and Subnet (default (10.0.0.0/24)). The 'Tags' section shows: None. The 'Security' section shows: BastionHost (Disabled). At the bottom, there are buttons for 'Create' (highlighted in blue), '< Previous' and 'Next >', and 'Download a template for automation'. The system tray at the bottom right shows the date and time as 08-06-2022 19:26.

The screenshot shows the Microsoft Azure Virtual Network Overview page for a resource named "ashokdayafactory99". The main message is "Your deployment is complete". Deployment details include:

- Deployment name: Microsoft.VirtualNetwork-20220608192444
- Subscription: Azure-DXC262AB12Lab
- Resource group: ashokrg99

Other sections visible include "Deployment details" (Download), "Next steps", and a "Go to resource" button. A sidebar on the right provides links to Cost Management, Microsoft Defender for Cloud, Free Microsoft tutorials, and Work with an expert.

The screenshot shows the Microsoft Azure Virtual Network settings page for a resource named "ashokvnet99". The left sidebar lists various settings like Address space, Connected devices, Subnets, Bastion, DDoS protection, Firewall, Microsoft Defender for Cloud, Network manager, DNS servers, Peering, Service endpoints, and Private endpoints. The main area displays the following configuration details:

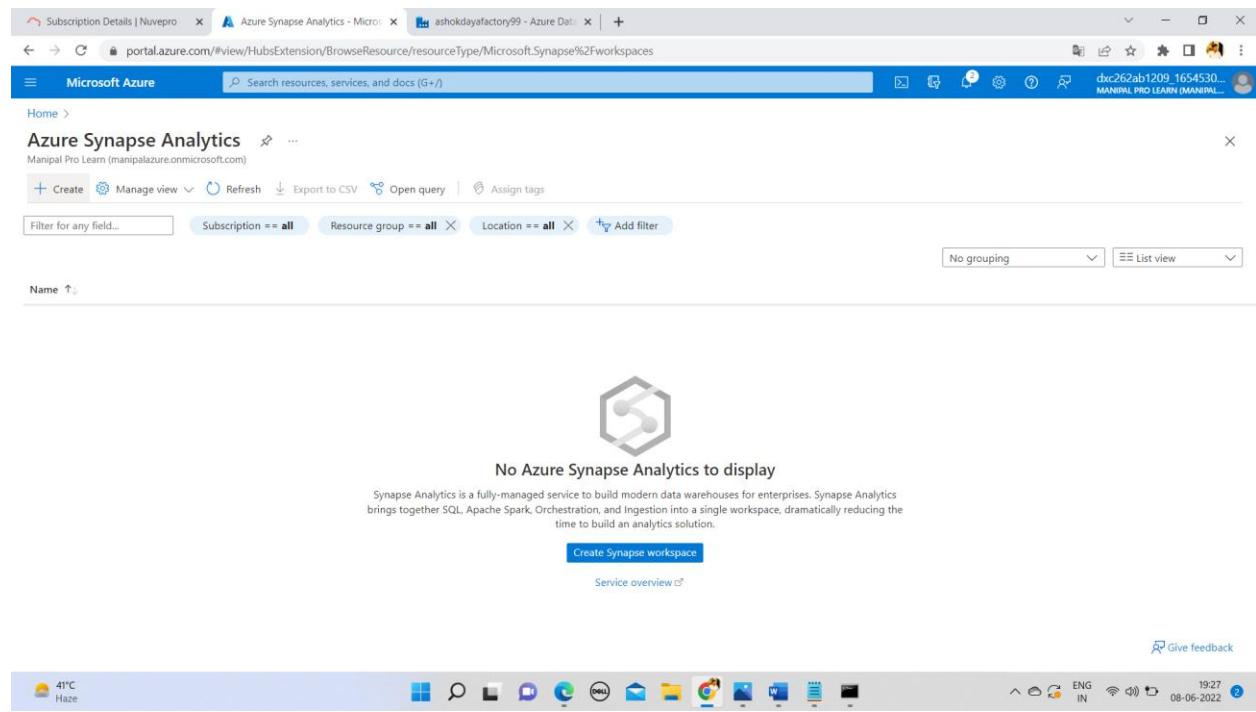
Setting	Value
Resource group (move)	ashokrg99
Location (move)	East US
Subscription (move)	Azure-DXC262AB12Lab
Subscription ID	442b51c3-1fed-40a7-9d05-105684c1217c
Address space	10.0.0.0/16
DNS servers	Azure provided DNS service
Flow timeout	Configure
BGP community string	Configure
Virtual network ID	e64c46e2-c41c-485d-b8ee-1285a9ab6682

The "Capabilities" tab is selected, showing the following status for various features:

- DDoS protection: Not configured
- Azure Firewall: Not configured
- Peering: Not configured
- Private endpoints: Not configured

## **QUESTION 6. Explain the steps with screenshots how to create azure synapse analytics?**

### **ANSWER:**



The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes tabs for "Subscription Details | Nuvapro", "Azure Synapse Analytics - Micro", and "ashokdayafactory99 - Azure Data". The main title is "Microsoft Azure" with a search bar. Below the header, there are buttons for "+ Create", "Manage view", "Refresh", "Export to CSV", "Open query", and "Assign tags". A filter bar at the top allows filtering by "Subscription", "Resource group", and "Location", with an "Add filter" button. The main content area displays a message: "No Azure Synapse Analytics to display". It explains that Synapse Analytics is a fully-managed service for building modern data warehouses. A prominent blue button labeled "Create Synapse workspace" is visible. At the bottom, there's a "Service overview" link and a "Give feedback" button. The taskbar at the very bottom shows various pinned icons and system status indicators.

Subscription Details | Nuvepro | Create Synapse workspace - Microsoft Azure | ashokdayafactory99 - Azure Data | + | portal.azure.com/#create/Microsoft.Synapse

Microsoft Azure | Search resources, services, and docs (G+) | ENG IN 08-06-2022 19:29

Home > Azure Synapse Analytics > Create Synapse workspace ...

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

Subscription \*  Azure-DXC262A812Lab

Resource group \*  ashokrg99

Create new

Managed resource group  Enter managed resource group name

**Workspace details**

Name your workspace, select a location, and choose a primary Data Lake Storage Gen2 file system to serve as the default location for logs and job output.

Workspace name \*  ashoksynapse99

Region \*  East US

Select Data Lake Storage Gen2 \*  From subscription  Manually via URL

Account name \*  (New) datastore31

Create new

File system name \*  (New) filesystem31

Create new

Additional configuration is required. After you create your workspace, perform the following steps:

**Review + create** < Previous Next: Security >

https://portal.azure.com/#

41°C Haze

Subscription Details | Nuvepro | Create Synapse workspace - Microsoft Azure | ashokdayafactory99 - Azure Data | + | portal.azure.com/#create/Microsoft.Synapse

Microsoft Azure | Search resources, services, and docs (G+) | ENG IN 08-06-2022 19:30

Home > Azure Synapse Analytics > Create Synapse workspace ...

**\* Basics** **\* Security** Networking Tags Review + create

Configure security options for your workspace.

**Authentication**

Choose the authentication method for access to workspace resources such as SQL pools. The authentication method can be changed later on. [Learn more](#)

Authentication method  Use both local and Azure Active Directory (Azure AD) authentication  Use only Azure Active Directory (Azure AD) authentication

SQL Server admin login \*  sqldadminuser

SQL Password

Confirm password

**System assigned managed identity permission**

Select to grant the workspace network access to the Data Lake Storage Gen2 account using the workspace system identity. [Learn more](#)

Allow network access to Data Lake Storage Gen2 account.  The selected Data Lake Storage Gen2 account does not restrict network access using any network access rules, or you selected a storage account manually via URL under Basics tab. [Learn more](#)

**Review + create** < Previous Next: Networking >

https://portal.azure.com/#

41°C Haze

Subscription Details | Nuvepro | Create Synapse workspace - Microsoft Azure | portal.azure.com/#create/Microsoft.Synapse | ashokdayafactory99 - Azure Data | +

Microsoft Azure | Search resources, services, and docs (G+) | ENG IN 08-06-2022 19:30 dx26ab1209\_1654530... MANIPAL PRO LEARN (MANIPAL)

Home > Azure Synapse Analytics > Create Synapse workspace ...

Validation succeeded

\* Basics \* Security Networking Tags Review + create

**Product Details**

Azure Synapse Analytics workspace by Microsoft Serverless SQL est. cost/TB ⓘ  
Terms of use | Privacy policy

**Terms**

By clicking Create, I (a) agree to the legal terms and privacy statement(s) associated with the Marketplace offering(s) listed above; (b) authorize Microsoft to bill my current payment method for the fees associated with the offering(s), with the same billing frequency as my Azure subscription; and (c) agree that Microsoft may share my contact, usage and transactional information with the provider(s) of the offering(s) for support, billing and other transactional activities. Microsoft does not provide rights for third-party offerings. For additional details see Azure Marketplace Terms. ⓘ

**Basics**

Subscription Azure-DXC262AB12Lab  
Resource group ashokrg99  
Region East US  
Workspace name (new) ashoksynapse99

Create < Previous Next > Download a template for automation

Subscription Details | Nuvepro | Microsoft.Azure.SynapseAnalytics - ashokdayafactory99 - Azure Data | portal.azure.com/#view/HubsExtension/DeploymentDetailsBlade/~/overview/id%2Fsubscriptions%2F442b51c3-1fed-40a7-9d05-105684c1217c%2FresourceGroups%2Fashokrg99... | +

Microsoft Azure | Search resources, services, and docs (G+) | ENG IN 08-06-2022 19:31 dx26ab1209\_1654530... MANIPAL PRO LEARN (MANIPAL)

Home > Microsoft.Azure.SynapseAnalytics-20220608192743 | Overview

Deployment

Search (Ctrl+J) Delete Cancel Redeploy Refresh

We'd love your feedback! →

**Deployment is in progress**

Deployment name: Microsoft.Azure.SynapseAnalytics-20220608192... Start time: 6/8/2022, 7:30:42 PM  
Subscription: Azure-DXC262AB12Lab Correlation ID: 6e638950-e66b-4262-9dc9-74350288d878

Inputs Outputs Template

Deployment details (Download)

Resource	Type	Status	Operation details
datastore31	Microsoft.Storage/storageAccounts	Accepted	Operation details

The image displays two side-by-side screenshots of the Microsoft Azure portal, showing the Synapse Analytics workspace configuration and overview.

**Top Screenshot (Overview Page):**

- Page Title:** Microsoft.Azure.SynapseAnalytics-20220608192743 | Overview
- Deployment Status:** Your deployment is complete.
- Deployment Details:** Deployment name: Microsoft.Azure.SynapseAnalytics-20220608192..., Start time: 6/8/2022, 7:30:42 PM, Subscription: Azure-DXC26AB12Lab, Resource group: ashokrg99.
- Next Steps:** Go to resource group.
- Right Panel (Promotional Links):**
  - 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:** Start learning today >
  - Work with an expert:** Azure experts are service provider partners who can help manage your assets on Azure and be your first line of support. Find an Azure expert >

**Bottom Screenshot (Configuration Page):**

- Page Title:** Microsoft Azure SynapseAnalytics-20220608192743 > ashokrg99
- Section:** Synapse workspace
- Overview:** Shows basic workspace details like Resource group (ashokrg99), Status (Succeeded), Location (East US), and more.
- Essentials:** Lists primary configurations such as Primary ADLS Gen2 account, SQL admin username, and Development endpoint.
- Getting started:** Provides links to Open Synapse Studio and Read documentation.
- Analytics pools:** A table showing existing pools (e.g., SQL pools, Apache Spark pools, Data Explorer pools).
- Security:** Options for Encryption, Networking, and Identity.

Subscription Details | Nuvepro x | ashoksynapse99 - Microsoft Azure x | ashoksynapse99 - Azure Synapse x | ashokdayafactory99 - Azure Data x | +

Microsoft Azure | ashoksynapse99

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Synapse Analytics workspace  
ashoksynapse99

New [Ingest](#) [Explore and analyze](#) [Visualize](#)

Ingest: Perform a one-time or scheduled data load.

Explore and analyze: Learn how to get insights from your data.

Visualize: Build interactive reports with Power BI capabilities.

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Recent resources

41°C Haze

19:37 ENG IN 08-06-2022

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

ANSWER: Go to <https://portal.azure.com/#home> and search **storage accounts**

The screenshot shows the Microsoft Azure Storage accounts page. At the top, there are three tabs: 'Meeting in "General" (Meet)', 'Subscription Details | Nuvepro', and 'Storage accounts - Microsoft Azure'. The 'Storage accounts' tab is active. The main content area is titled 'Storage accounts' and shows a large placeholder image of a storage unit. Below it, the text 'No storage accounts to display' is centered. A descriptive paragraph explains that storage accounts can store up to 500TB of data and lists various features like general-purpose storage, object storage, NoSQL data stores, message queues, and file shares. A prominent blue button labeled 'Create storage account' is at the bottom, along with a 'Learn more' link. The page includes standard Azure navigation and search bars at the top.

Click on create and fill the details

The screenshot shows the 'Create a storage account' wizard in the 'Basics' step. The title bar says '(1) Meeting in "General" (Meet) | Subscription Details | Create a storage account - Microsoft Azure'. The main content area is titled 'Create a storage account' and shows the 'Basics' tab selected. It asks for a 'Subscription' (set to 'Azure-DXC262AB12Lab') and a 'Resource group' (set to '(New) ashokrg99'). Below this, the 'Instance details' section includes fields for 'Storage account name' (set to 'ashokstorage99'), 'Region' (set to '(US) East US'), 'Performance' (set to 'Standard'), and 'Redundancy' (set to 'Geo-redundant storage (GRS)'). At the bottom, there are buttons for 'Review + create' and 'Next : Advanced >'. The page includes standard Azure navigation and search bars at the top.

Click on review+create

Subscription: Azure-DXC262AB12Lab  
Resource Group: ashokrg99  
Location: eastus  
Storage account name: ashokstorage99  
Deployment model: Resource manager  
Performance: Standard  
Replication: Read-access geo-redundant storage (RA-GRS)

Secure transfer: Enabled  
Allow storage account key access: Enabled  
Allow cross-tenant replication: Enabled  
Default to Azure Active Directory authorization in the Azure portal: Disabled

Click on create.

Deployment name: ashokstorage99\_1654688675715  
Subscription: Azure-DXC262AB12Lab  
Resource group: ashokrg99

Start time: 6/8/2022, 5:14:46 PM  
Correlation ID: 23e165ad-8495-48a3-86bf-b2417f25705b

Microsoft Defender for Cloud  
Secure your apps and infrastructure >  
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Wait till deployment is complete.

(1) Meeting in "General" (Me) | Subscription Details | Nuvepro | ashokstorage99\_1654688675715 | +

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

Home > ashokstorage99\_1654688675715 | Overview

Deployment

Search (Ctrl+ /)

Delete Cancel Redeploy Refresh

We'd love your feedback!

Your deployment is complete

Deployment name: ashokstorage99\_1654688675715  
Subscription: Azure-DXC262AB1Lab  
Resource group: ashokrg99

Start time: 6/8/2022, 5:14:46 PM  
Correlation ID: 23e165ad-8495-48a3-86bf-b2417f25705b

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 Microsoft Defender for Cloud >

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41°C Haze

ENG IN WiFi 17:15 08-06-2022

(1) Meeting in "General" (Me) | Subscription Details | Nuvepro | ashokstorage99 - Microsoft Azure | +

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

Home > ashokstorage99\_1654688675715 >

ashokstorage99 | Storage account

Upload Open in Explorer Delete Move Refresh Mobile Feedback

JSON View

Overview

Activity log Tags Diagnose and solve problems Access Control (IAM) Data migration Events Storage browser (preview)

Data storage

Containers File shares Queues Tables

Security + networking

Networking Azure CDN Access keys

Essentials

Resource group (move) : ashokrg99  
Location : East US  
Primary/Secondary Location : Primary: East US, Secondary: West US  
Subscription (move) : Azure-DXC262AB1Lab  
Subscription ID : 442b51c3-1fed-40a7-9d05-105684c1217c  
Disk state : Primary: Available, Secondary: Available

Tags (edit) : Click here to add tags

Properties Monitoring Capabilities (7) Recommendations Tutorials Developer Tools

Blob service

Hierarchical namespace	Disabled
Default access tier	Hot
Blob public access	Enabled
Blob soft delete	Enabled (7 days)
Container soft delete	Enabled (7 days)
Versioning	Disabled
Change feed	Disabled
NFS v3	Disabled

Security

Require secure transfer for REST API operations	Enabled
Storage account key access	Enabled
Minimum TLS version	Version 1.2
Infrastructure encryption	Disabled

Networking

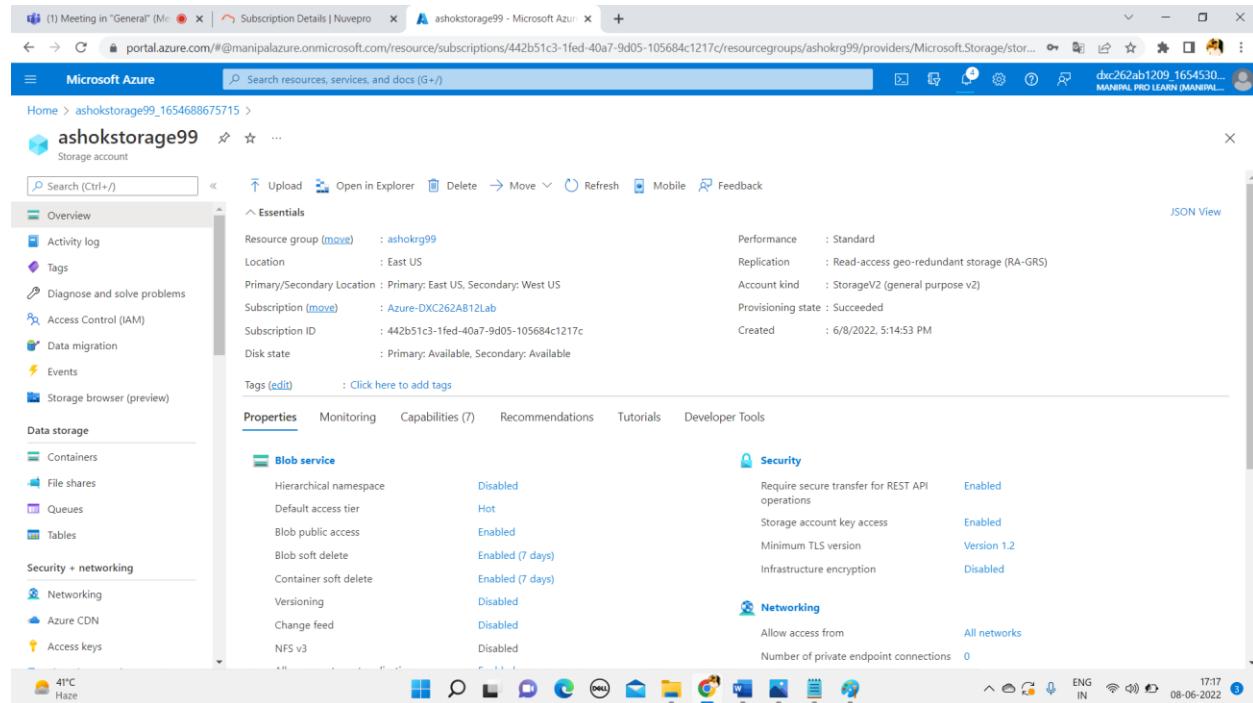
Allow access from	All networks
Number of private endpoint connections	0

41°C Haze

ENG IN WiFi 17:17 08-06-2022

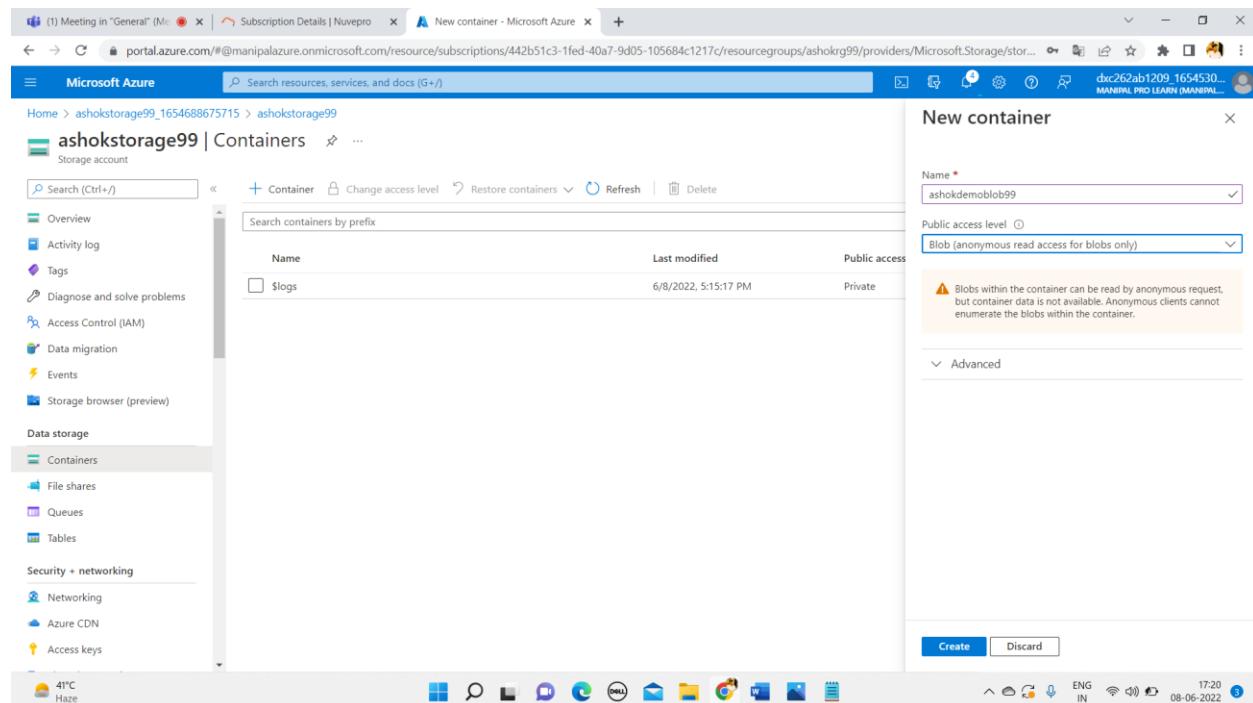
## QUESTION 8. Explain the steps with screenshots how to create upload data into Azure Blobs?

### ANSWER:



The screenshot shows the Microsoft Azure Storage account overview page for 'ashokstorage99'. The page displays basic account details such as Resource group (ashokrg99), Location (East US), Primary/Secondary Location (Primary: East US, Secondary: West US), and Subscription (Azure-DXC262AB12Lab). It also shows Blob service settings like Hierarchical namespace (Disabled), Default access tier (Hot), and Blob public access (Enabled). The Networking section indicates allow access from 'All networks'.

Click on containers and fill the details for new container and click on create



The screenshot shows the Microsoft Azure Storage account containers page for 'ashokstorage99'. A new container named 'ashokdemoblob99' is being created. The container has a public access level set to 'Blob (anonymous read access for blobs only)'. The 'Create' button is visible at the bottom right.

Storage container is created!

The screenshot shows the Microsoft Azure Storage Containers page. The left sidebar navigation includes sections for Overview, Activity log, Tags, Diagnose and solve problems, Access Control (IAM), Data migration, Events, and Storage browser (preview). Under Data storage, the 'Containers' option is selected. The main content area displays a table of containers:

Name	Last modified	Public access level	Lease state
\$logs	6/8/2022, 5:15:17 PM	Private	Available
ashokdemoblob99	6/8/2022, 5:21:51 PM	Blob	Available

At the bottom right of the interface, there is a status bar showing the date (08-06-2022) and time (17:23).

Click on **ashokdemoblob99** to open it then click on upload to upload file from your local storage

The screenshot shows the Microsoft Azure Storage Container page for 'ashokdemoblob99'. The left sidebar navigation includes Overview, Diagnose and solve problems, Access Control (IAM), Settings, Shared access tokens, Access policy, Properties, and Metadata. The main content area shows a table with no results. On the right side, a modal dialog titled 'Upload blob' is open, showing the file path '1000\_Companies.csv' in the 'Files' input field. A checkbox for 'Overwrite if files already exist' is present. At the bottom right of the dialog is a blue 'Upload' button.

Click on upload to upload the file.

The screenshot shows the Microsoft Azure Storage Container Overview page. The container name is 'ashokdemoblob99'. A single blob named '1000\_Companies.csv' is listed. The blob details are as follows:

Name	Modified	Access tier	Archive status	Blob type	Size	Lease state
1000_Companies.csv	6/8/2022, 5:28:11 PM	Hot (Inferred)		Block blob	50 KiB	Available

The screenshot shows the Microsoft Azure Blob Properties blade for the blob '1000\_Companies.csv'. The URL is https://ashokstorage99... . The blob properties are as follows:

Properties	Value
URL	https://ashokstorage99...
LAST MODIFIED	6/8/2022, 5:28:11 PM
CREATION TIME	6/8/2022, 5:28:11 PM
VERSION ID	-
TYPE	Block blob
SIZE	50 KiB
ACCESS TIER	Hot (Inferred)
ACCESS TIER LAST MODIFIED	N/A
ARCHIVE STATUS	-
REHYDRATE PRIORITY	-
SERVER ENCRYPTED	true
ETAG	0x8DA494629076AF8
VERSION-LEVEL IMMUTABILITY POLICY	Disabled
CACHE-CONTROL	[Empty]
CONTENT-TYPE	text/csv
CONTENT-MDS	tDTeRwQTEa8/4mPsig/I7Q==
CONTENT-ENCODING	[Empty]
CONTENT-LANGUAGE	[Empty]

Meeting in "General" (M... | Subscription Details | Nuvepro | 1000\_Companies.csv - Microsoft | +

portal.azure.com/#view/Microsoft\_Azure\_Storage/BlobPropertiesBladeV2/storageAccountId%2fsubscriptions%2F442b51c3-1fed-40a7-9d05-105684c1217c%2fresourcegroups%2F...

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

ashokstorage99\_165468867515 > ashokstorage99 > ashokdemoblob99 >

ashokdemoblob99 Container

Search (Ctrl+/) Upload Change access level ...

Overview Diagnose and solve problems Access Control (IAM) Settings Shared access tokens Access policy Properties Metadata

Authentication method: Access key (Switch to Azure AD User Account) Location: ashokdemoblob99

Search blobs by prefix (case...) Show deleted blobs Add filter

Name

1000\_Companies.csv

1000\_Companies.csv ...

Save Discard Download Refresh Delete

Overview Versions Snapshots Edit Generate SAS

4 153441.51,101145.55,407934.54,Florida,191056,39  
5 144372.41,118671.85,383199.62,New York,182901.99  
6 142107.34,91391.77,366168.42,Florida,166187.94  
7 131876.9,99814.71,362861.36,New York,156991.12  
8 134615.46,147198.87,127716.82,California,156122.51  
9 130298.13,145530.06,323876.68,Florida,155752.6  
10 120542.52,148718.95,311613.29,New York,152211.77  
11 123334.88,108679.17,304981.62,California,149759.96  
12 101913.08,110594.11,229160.95,Florida,146121.95  
13 100671.96,91790.61,249744.55,California,144259.4  
14 93863.75,127320.38,249839.44,Florida,141585.52  
15 91992.39,135495.07,252664.93,California,134307.35  
16 119943.24,156547.42,256512.92,Florida,132602.65  
17 114523.61,122616.84,261776.23,New York,129917.04  
18 78013.11,121597.55,264346.06,California,126992.93  
19 94657.16,145077.58,282574.31,New York,125378.37  
20 91749.16,114175.79,294919.57,Florida,124266.9  
21 86419.7,153514.11,0,New York,122776.86  
22 76253.86,113867.3,298664.47,California,118474.03  
23 78389.47,153773.43,299737.29,New York,111313.02  
24 73904.56,122782.75,303311.26,Florida,110352.75

Csv Preview

Meeting in "General" (M... | Subscription Details | Nuvepro | 1000\_Companies.csv - Microsoft | +

portal.azure.com/#view/Microsoft\_Azure\_Storage/BlobPropertiesBladeV2/storageAccountId%2fsubscriptions%2F442b51c3-1fed-40a7-9d05-105684c1217c%2fresourcegroups%2F...

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

ashokstorage99\_165468867515 > ashokstorage99 > ashokdemoblob99 >

ashokdemoblob99 Container

Search (Ctrl+/) Upload Change access level ...

Overview Diagnose and solve problems Access Control (IAM) Settings Shared access tokens Access policy Properties Metadata

Authentication method: Access key (Switch to Azure AD User Account) Location: ashokdemoblob99

Search blobs by prefix (case...) Show deleted blobs Add filter

Name

1000\_Companies.csv

1000\_Companies.csv ...

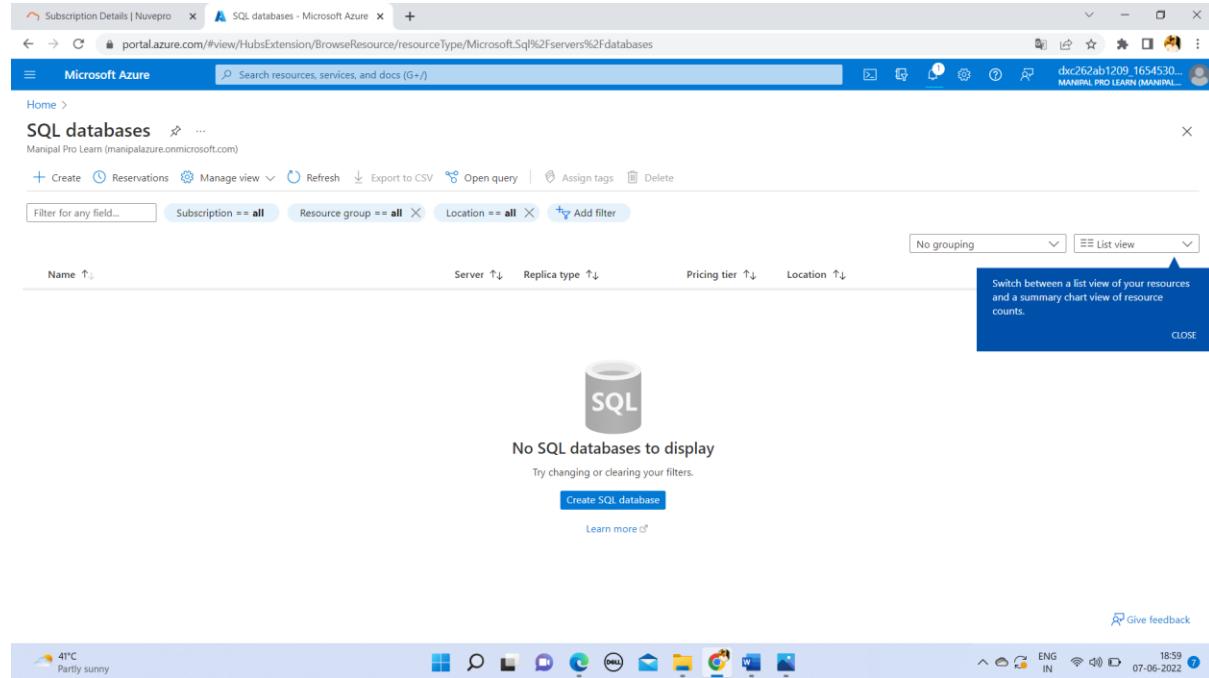
Save Discard Download Refresh Delete

Overview Versions Snapshots Edit Generate SAS

R%26D%20Spend	Administration	Marketing%20Spend	State	Profit
165349.2	136897.8	471784.1	New%20York	192261.83
162597.7	151377.59	443898.53	California	191792.06
153441.51	101145.55	407934.54	Florida	191050.39
144372.41	118671.85	383199.62	New%20York	182901.99
142107.34	91391.77	366168.42	Florida	166187.94
131876.9	99814.71	362861.36	New%20York	156991.12
134615.46	147198.87	127716.82	California	156122.51
130298.13	145530.06	323876.68	Florida	155752.6
120542.52	148718.95	311613.29	New%20York	152211.77
123334.88	108679.17	304981.62	California	149759.96
101913.08	110594.11	229160.95	Florida	146121.95
100671.96	91790.61	249744.55	California	144259.4
93863.75	127320.38	249839.44	Florida	141585.52
91992.39	135495.07	252664.93	California	134307.35
119943.24	156547.42	256512.92	Florida	132602.65
114523.61	122616.84	261776.23	New%20York	129917.04

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

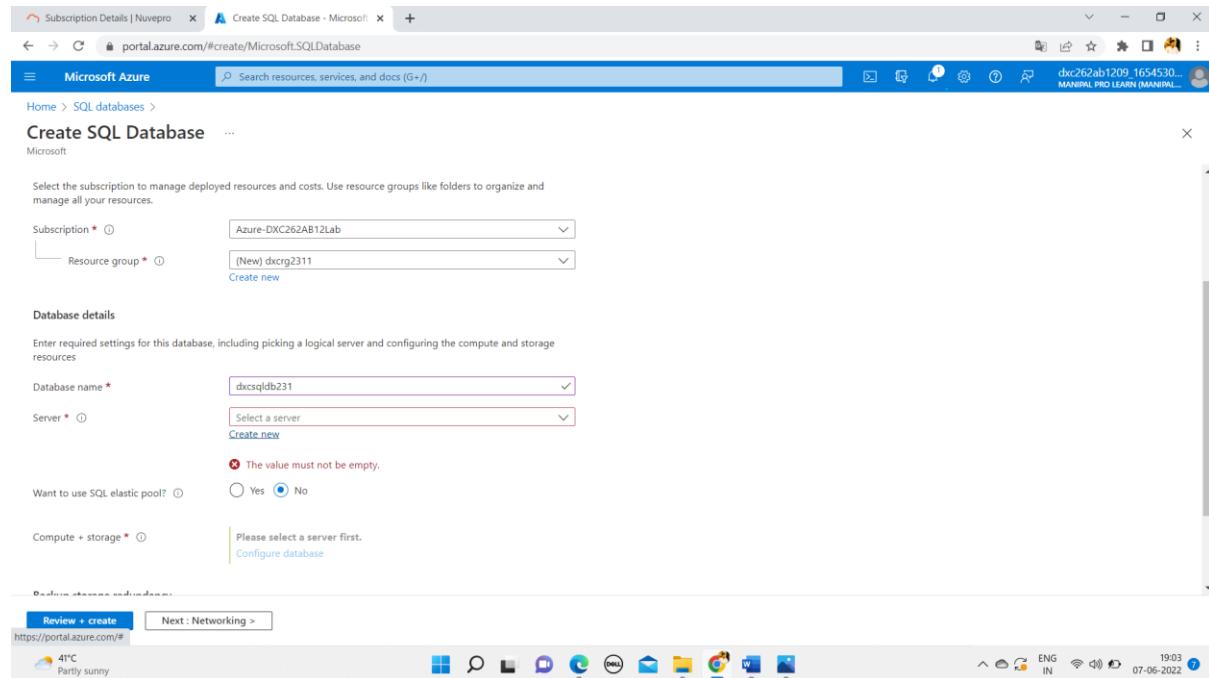
ANSWER: Go to <https://portal.azure.com/#home> and search sql databases



No SQL databases to display  
Try changing or clearing your filters.

Create SQL database

Click on create and give fill details like resource group and database name.



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](#)

Database details

Enter required settings for this database, including picking a logical server and configuring the compute and storage resources

Database name \*

Server \*  [Create new](#)

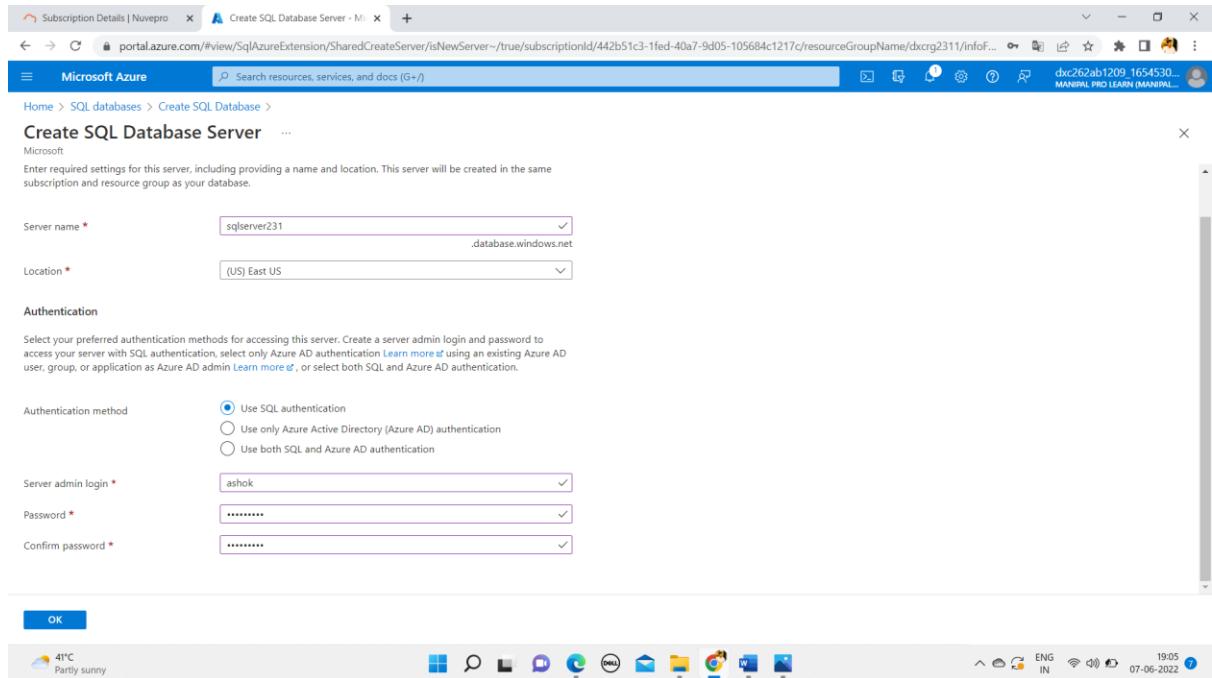
The value must not be empty.

Want to use SQL elastic pool?  Yes  No

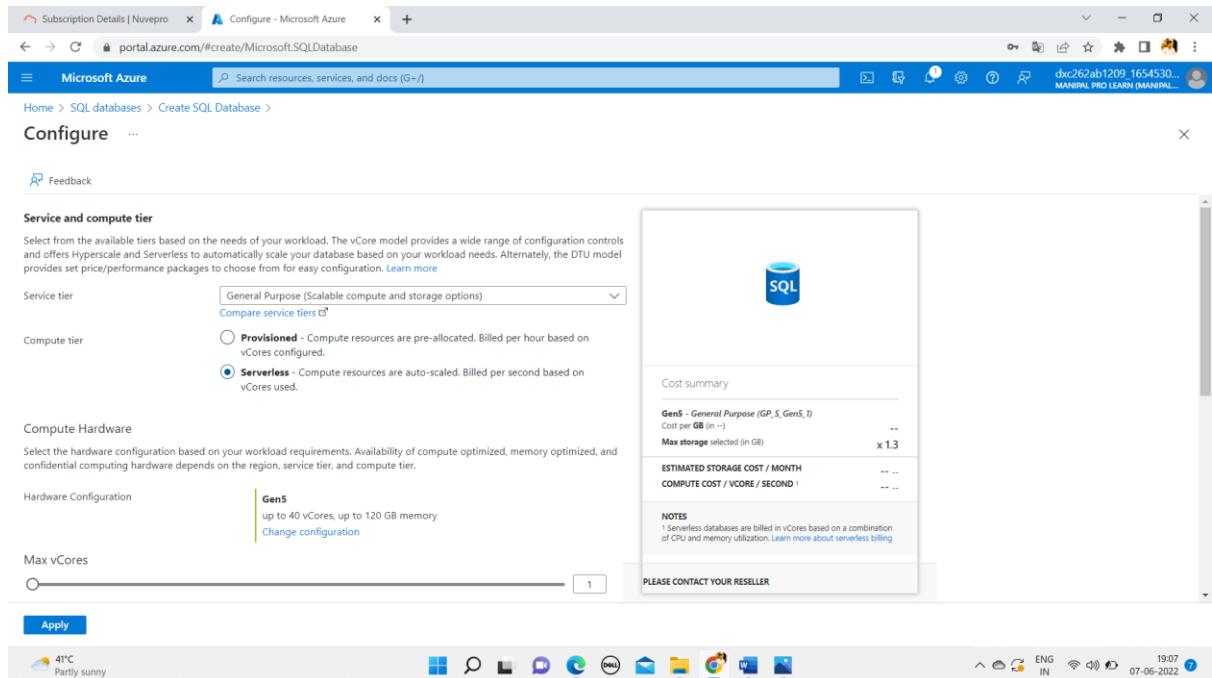
Compute + storage \*  [Configure database](#)

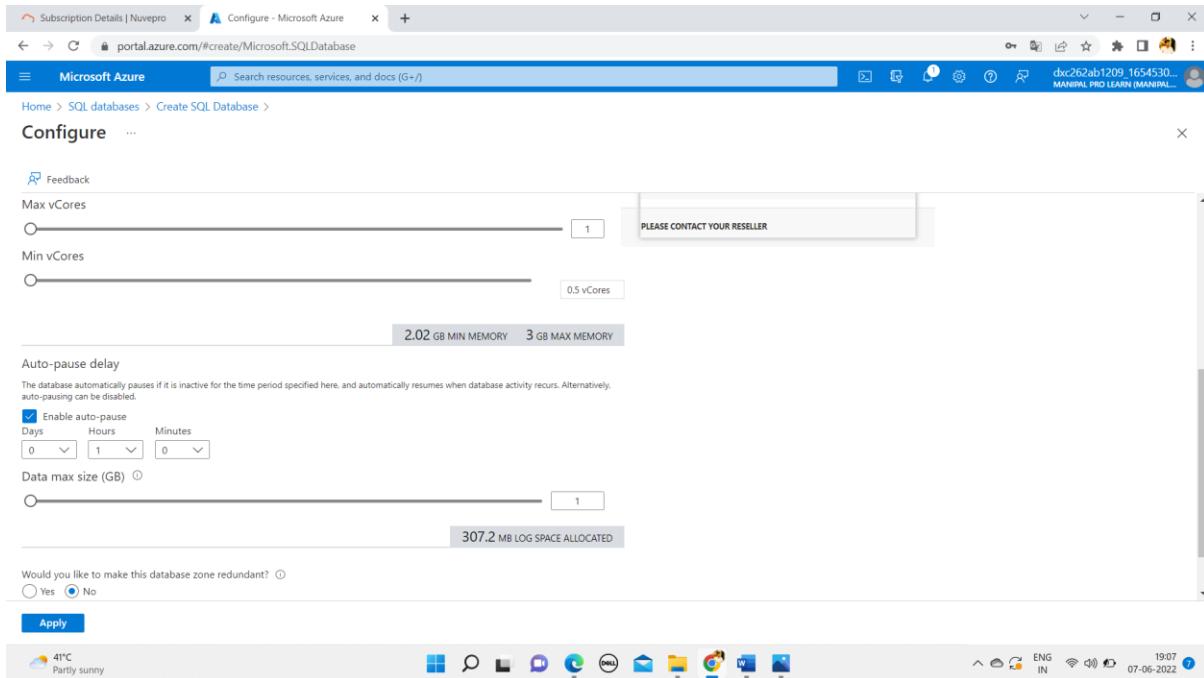
[Review + create](#) [Next: Networking >](#)

click on create new to create new server and fill details for server like server name and server admin details.

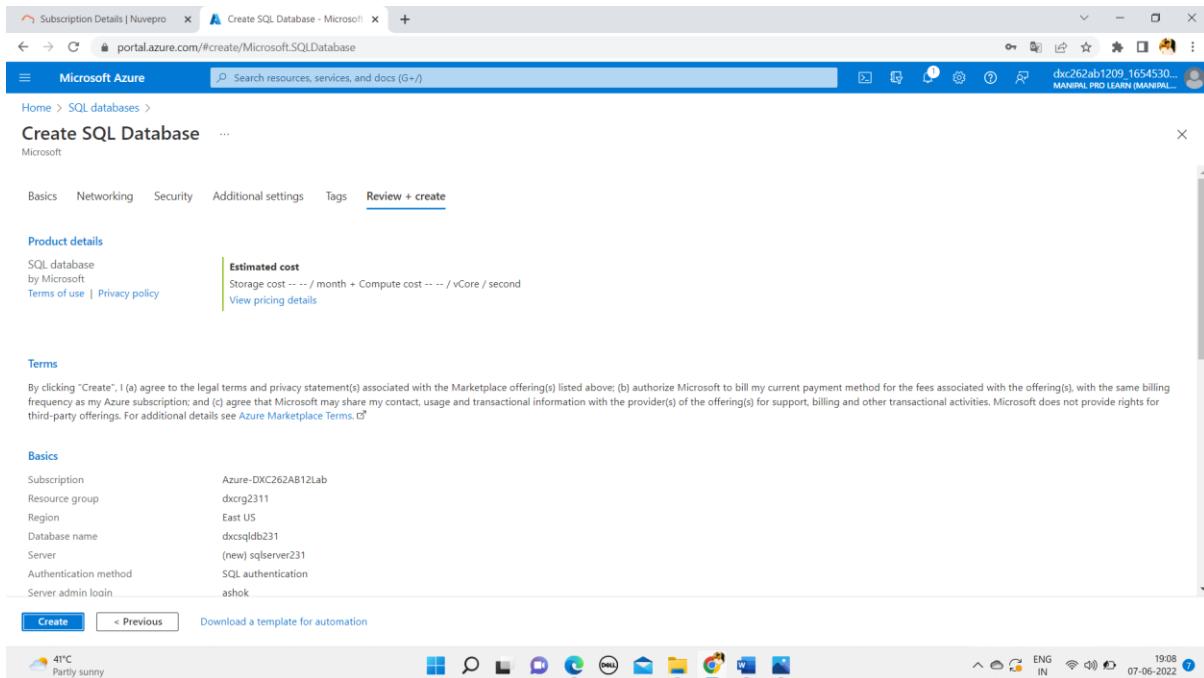


Now click on configure database and do the needful and click apply.





Now click on review+create.

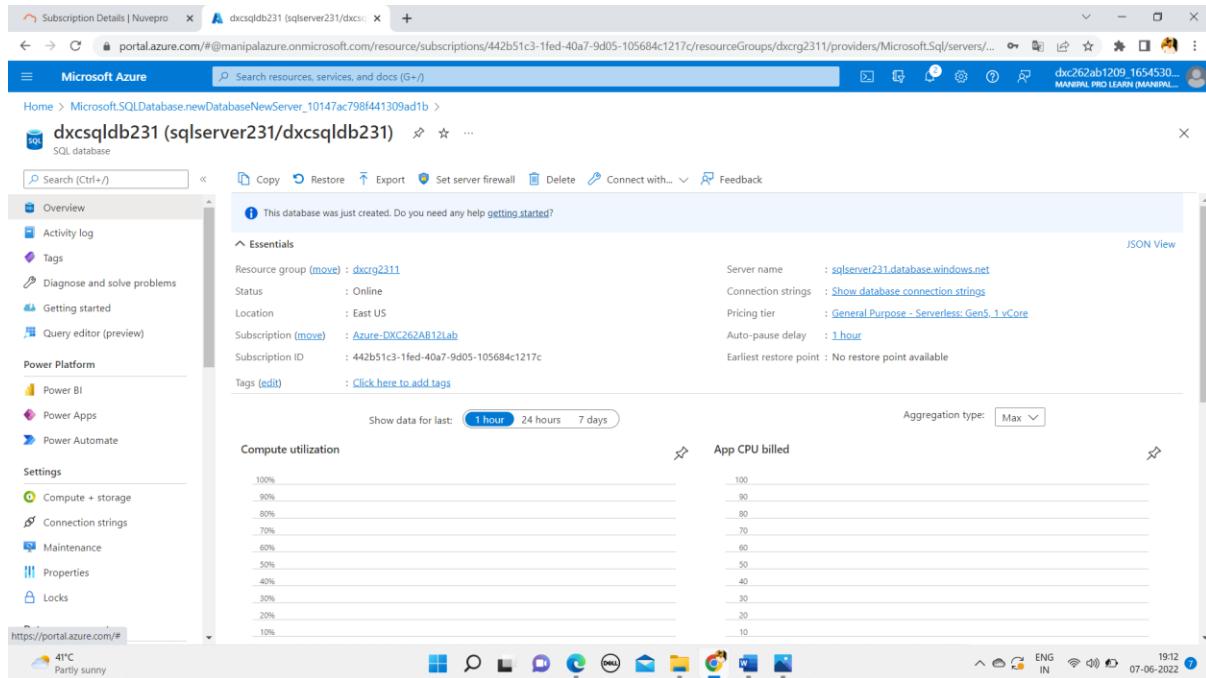


Click on create.

The screenshot shows the Microsoft Azure portal interface. The main title bar reads "Subscription Details | Nuvepro" and "Microsoft.SQLDatabase.newData...". A search bar at the top says "Search resources, services, and docs (G+/-)". On the left, a sidebar menu includes "Home", "Microsoft.SQLDatabase.newDatabaseNewServer\_10147ac798f441309ad1b | Overview", "Deployment", "Overview", "Inputs", "Outputs", and "Template". The main content area displays a message: "... Deployment is in progress... Deployment to resource group 'dxcrg2311' is in progress." Below this, deployment details are listed: Deployment name: Microsoft.SQLDatabase.newDatabaseNewServer\_10147ac798f441309ad1b; Subscription: Azure-DXC262AB12Lab; Resource group: dxcrg2311. Deployment start time: 6/7/2022, 7:09:26 PM. Correlation ID: a97edc4d-a03c-45fb-9403-fe54a3590fa9. A "Deployment details" section with a download link is shown, followed by a table with columns "Resource", "Type", "Status", and "Operation details". The table shows "No results."

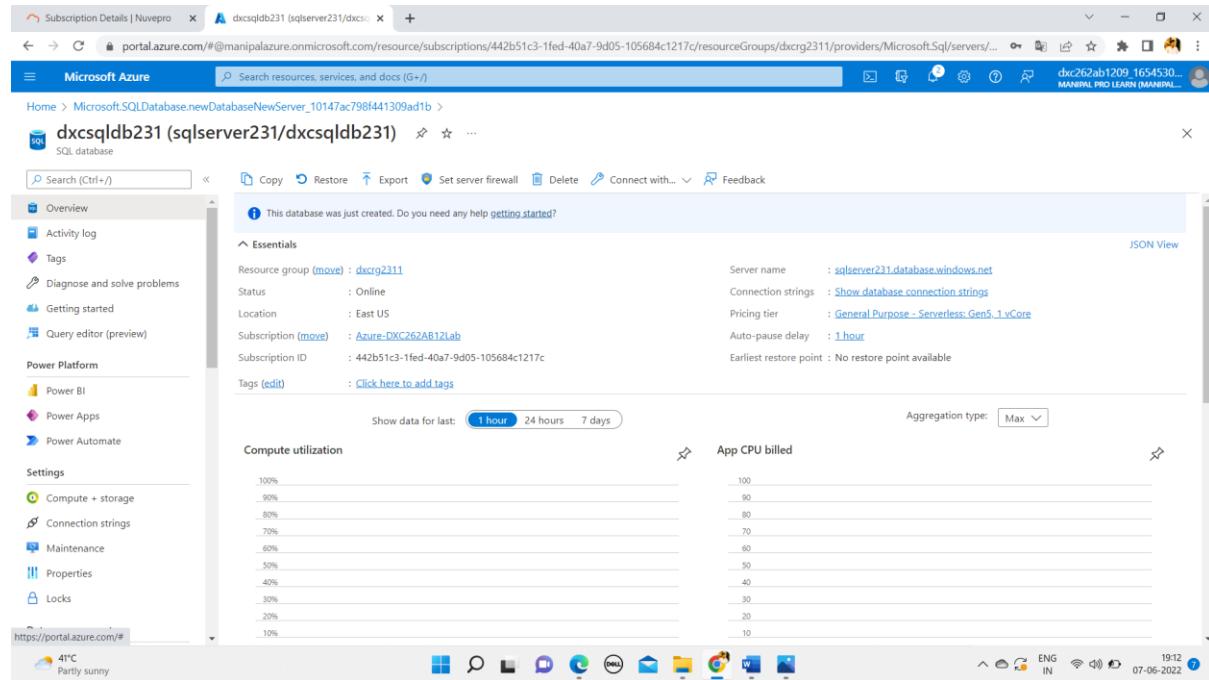
This screenshot is identical to the one above, except the deployment status has changed from "in progress" to "succeeded". The message now reads: "... Deployment succeeded... 'Microsoft.SQLDatabase.newDatabaseNewServer\_10147ac798f441309ad1b' to resource group 'dxcrg2311' was successful." The rest of the interface, including the sidebar, deployment details, and table, remains the same.

Click on go to resources



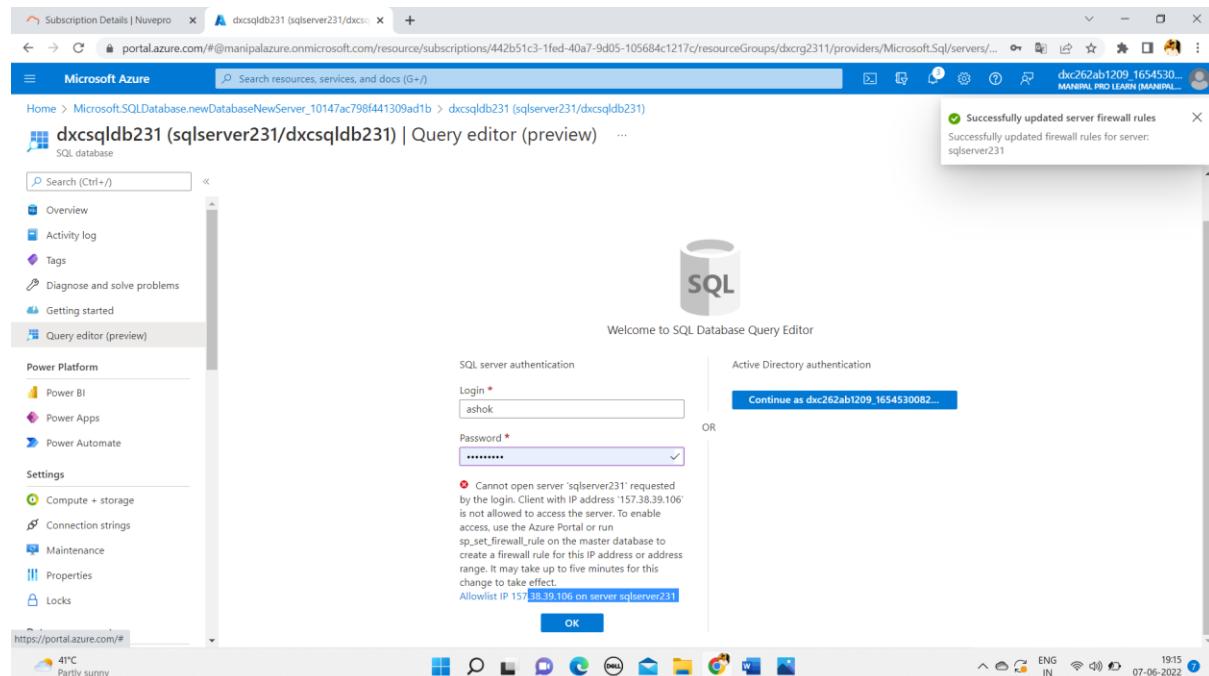
## QUESTION 10. Explain the steps with screenshots how to insert data into azure SQL database?

### ANSWER:



The screenshot shows the Microsoft Azure portal with the URL <https://portal.azure.com/#@manipalazure.onmicrosoft.com/resource/subscriptions/442b51c3-1fed-40a7-9d05-105684c1217c/resourceGroups/dxcrg2311/providers/Microsoft.Sql/servers/dxcsqldb231>. The page displays the Overview for the dxcsqldb231 SQL database, which was just created and is currently online. It shows compute utilization and app CPU billed graphs.

Click on query editor (preview) and fill login details of server admin and allow address to access the server.



The screenshot shows the Microsoft Azure portal with the URL <https://portal.azure.com/#@manipalazure.onmicrosoft.com/resource/subscriptions/442b51c3-1fed-40a7-9d05-105684c1217c/resourceGroups/dxcrg2311/providers/Microsoft.Sql/servers/dxcsqldb231>. The page displays the Query editor (preview) for the dxcsqldb231 SQL database. A message box indicates "Successfully updated server firewall rules" and "Successfully updated firewall rules for server: sqlserver231".

Write and run these queries for create tables.

```

CREATE TABLE address( address_id INTEGER NOT NULL, address_building_number VARCHAR(55) NOT NULL, address_street VARCHAR(55) NOT NULL, address_locality VARCHAR(55), address_city VARCHAR(55) NOT NULL, address_zip_postal VARCHAR(55) NOT NULL, address_state_province_county VARCHAR(55) NOT NULL, address_country VARCHAR(55) NOT NULL , CONSTRAINT PK_Address PRIMARY KEY (address_id) );
CREATE TABLE email_address( email_address_id INTEGER NOT NULL, email_address_person_id INTEGER, email_address VARCHAR(55) NOT NULL, CONSTRAINT PK_email_address PRIMARY KEY (email_address_id ) );
CREATE TABLE person( person_id INTEGER NOT NULL, person_first_name VARCHAR(55) NOT NULL, person_last_name VARCHAR(55) NULL, person_contacted_number INTEGER NOT NULL, person_date_last_contacted DATETIME NOT NULL, person_date_added DATETIME NOT NULL, CONSTRAINT PK_person PRIMARY KEY (person_id));
CREATE TABLE person_address( person_address_id INTEGER NOT NULL, person_address_person_id INTEGER NOT NULL, person_address_address_id INTEGER NOT NULL, CONSTRAINT PK_person_address PRIMARY KEY (person_address_id));
CREATE TABLE phone_number( phone_number_id INTEGER NOT NULL, phone_number_person_id INTEGER NOT NULL, phone_number VARCHAR(55) NOT NULL, CONSTRAINT PK_phone_number PRIMARY KEY (phone_number_id));

```

The screenshot shows the Microsoft Azure portal interface with the Query editor (preview) open. The left sidebar shows the database structure with tables, views, and stored procedures. The main area displays the SQL code for creating four tables: address, email\_address, person, and person\_address. Each table includes columns like address\_id, address\_building\_number, address\_street, etc., with specific data types and constraints like PRIMARY KEY and FOREIGN KEY.

```

1  id INTEGER, email_address VARCHAR(55) NOT NULL, CONSTRAINT PK_email_address PRIMARY KEY (email_address_id );
2  NULL, person.last_name VARCHAR(55) NULL, person_contacted_number INTEGER NOT NULL, person.date.last_contacted DATETIME
3  son_id INTEGER NOT NULL, person.address_address_id INTEGER NOT NULL, CONSTRAINT PK_person_address PRIMARY KEY (perso
4  INTEGER NOT NULL, phone_number VARCHAR(55) NOT NULL, CONSTRAINT PK_phone_number PRIMARY KEY (phone_number_id));

```

### Queries for inserting data into tables

```

INSERT INTO address (address_id, address_building_number, address_street, address_locality, address_city, address_zip_postal, address_state_province_county, address_country) VALUES (4, '555', 'azure203Demo', NULL, 'San Francisco', '91001', 'California', 'US');

```

```

INSERT INTO address (address_id, address_building_number, address_street, address_locality, address_city, address_zip_postal, address_state_province_county, address_country) VALUES (1, '555', 'azure203Demo', NULL, 'Los Angeles', '91001', 'California', 'US');
INSERT INTO address (address_id, address_building_number, address_street, address_locality, address_city, address_zip_postal, address_state_province_county, address_country) VALUES (2, '555', 'azure203Demo', NULL, 'Toronto', '7777', 'Ontario', 'Canada');
INSERT INTO address (address_id, address_building_number, address_street, address_locality, address_city, address_zip_postal, address_state_province_county, address_country) VALUES (3, '555', 'azure203Demo', 'Boonies', 'Somewhere', '11111', 'Maine', 'US');

INSERT INTO email_address (email_address_id, email_address_person_id, email_address) VALUES (1, 1, 'jon.flanders@mail.com');
INSERT INTO email_address (email_address_id, email_address_person_id, email_address) VALUES (2, 1, 'jonf@anothermail.com');

INSERT INTO email_address (email_address_id, email_address_person_id, email_address) VALUES (4, 3, 'fritz@mail.com');
INSERT INTO email_address (email_address_id, email_address_person_id, email_address) VALUES (5, NULL, 'aaron@mail.com');

INSERT INTO person (person_id, person_first_name, person_last_name, person_contacted_number, person_date_last_contacted, person_date_added) VALUES (1, 'Jon', 'Flanders', 5, '2013-09-14 11:43:31', '2013-01-14 11:43:31');
INSERT INTO person (person_id, person_first_name, person_last_name, person_contacted_number, person_date_last_contacted, person_date_added) VALUES (2, 'Shannon', 'A hern', 0, '2013-08-14 11:43:31', '2013-02-14 11:43:31');
INSERT INTO person (person_id, person_first_name, person_last_name, person_contacted_number, person_date_last_contacted, person_date_added) VALUES (3, 'Fritz', 'Onion', 1, '2013-07-14 11:43:31', '2013-03-14 11:43:31');

INSERT INTO person_address (person_address_id, person_address_person_id, person_address_address_id) VALUES (1, 1, 1);
INSERT INTO person_address (person_address_id, person_address_person_id, person_address_address_id) VALUES (3, 2, 1);
INSERT INTO person_address (person_address_id, person_address_person_id, person_address_address_id) VALUES (4, 2, 2);
INSERT INTO person_address (person_address_id, person_address_person_id, person_address_address_id) VALUES (5, 3, 3);

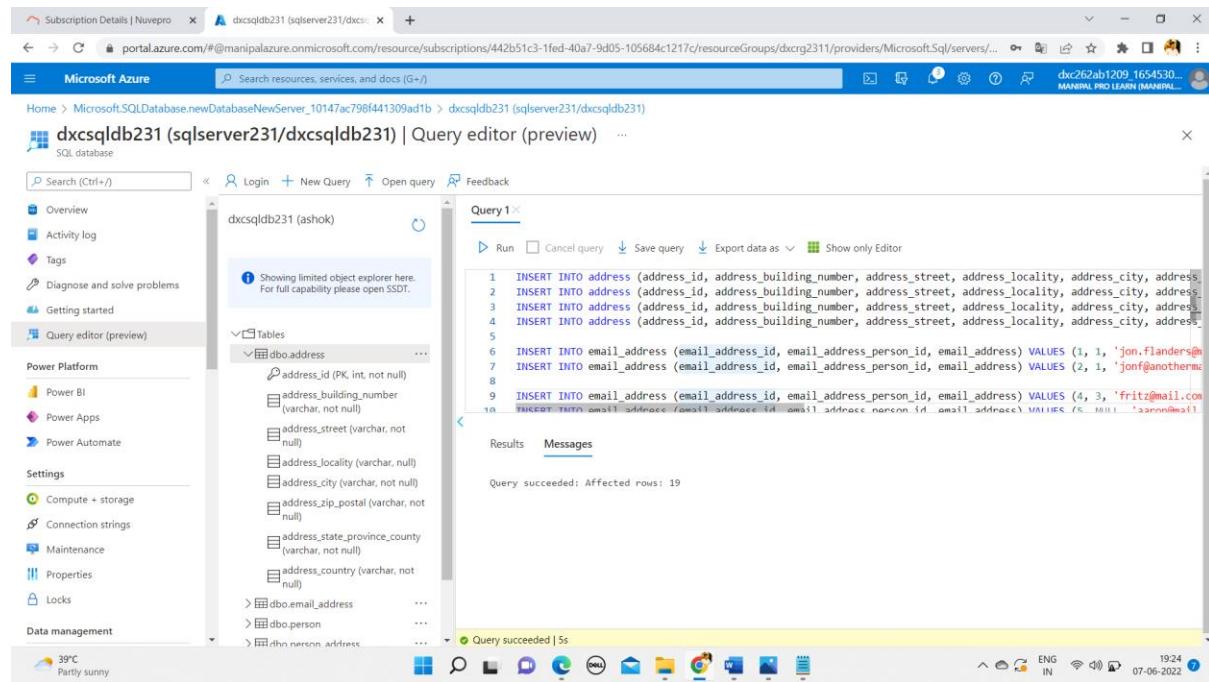
INSERT INTO phone_number (phone_number_id, phone_number_person_id, phone_number) VALUES (1, 1, '555-1212');

```

```

INSERT INTO phone_number (phone_number_id, phone_number_person_id, phone_number)
VALUES (2, 2, '555-1213');
INSERT INTO phone_number (phone_number_id, phone_number_person_id, phone_number)
VALUES (3, 3, '555-1214');
INSERT INTO phone_number (phone_number_id, phone_number_person_id, phone_number)
VALUES (4, 3, '555-1215');

```



The screenshot shows the Microsoft Azure portal with the Query editor (preview) open. The database selected is 'dxcsqlldb231 (sqlserver231/dxcsqlldb231)'. The query editor displays a successful execution of an INSERT statement into the 'address' table. The results pane shows 'Affected rows: 19'.

```

1. INSERT INTO address (address_id, address_building_number, address_street, address_locality, address_city, address_state_province_county, address_country, address_zip_postal, address_street_number, address_locality_name, address_building_name, address_street_name, address_locality_name, address_city_name, address_state_province_name, address_country_name)
2. INSERT INTO address (address_id, address_building_number, address_street, address_locality, address_city, address_state_province_county, address_country, address_zip_postal, address_street_number, address_locality_name, address_building_name, address_street_name, address_locality_name, address_city_name, address_state_province_name, address_country_name)
3. INSERT INTO address (address_id, address_building_number, address_street, address_locality, address_city, address_state_province_county, address_country, address_zip_postal, address_street_number, address_locality_name, address_building_name, address_street_name, address_locality_name, address_city_name, address_state_province_name, address_country_name)
4. INSERT INTO address (address_id, address_building_number, address_street, address_locality, address_city, address_state_province_county, address_country, address_zip_postal, address_street_number, address_locality_name, address_building_name, address_street_name, address_locality_name, address_city_name, address_state_province_name, address_country_name)
5. INSERT INTO address (address_id, address_building_number, address_street, address_locality, address_city, address_state_province_county, address_country, address_zip_postal, address_street_number, address_locality_name, address_building_name, address_street_name, address_locality_name, address_city_name, address_state_province_name, address_country_name)
6. INSERT INTO email_address (email_address_id, email_address_person_id, email_address) VALUES (1, 1, 'jon.flanders@contoso.com')
7. INSERT INTO email_address (email_address_id, email_address_person_id, email_address) VALUES (2, 1, 'jof@anotherdomain.com')
8. INSERT INTO email_address (email_address_id, email_address_person_id, email_address) VALUES (4, 3, 'fritz@mailinator.com')
9. INSERT INTO email_address (email_address_id, email_address_person_id, email_address) VALUES (5, 3, 'aaron@mailinator.com')
10. INSERT INTO email_address (email_address_id, email_address_person_id, email_address) VALUES (6, 3, 'brian@mailinator.com')
11. INSERT INTO email_address (email_address_id, email_address_person_id, email_address) VALUES (7, 3, 'craig@mailinator.com')
12. INSERT INTO email_address (email_address_id, email_address_person_id, email_address) VALUES (8, 3, 'david@mailinator.com')
13. INSERT INTO email_address (email_address_id, email_address_person_id, email_address) VALUES (9, 3, 'eric@mailinator.com')
14. INSERT INTO email_address (email_address_id, email_address_person_id, email_address) VALUES (10, 3, 'frank@mailinator.com')
15. INSERT INTO email_address (email_address_id, email_address_person_id, email_address) VALUES (11, 3, 'glen@mailinator.com')
16. INSERT INTO email_address (email_address_id, email_address_person_id, email_address) VALUES (12, 3, 'jason@mailinator.com')
17. INSERT INTO email_address (email_address_id, email_address_person_id, email_address) VALUES (13, 3, 'jerry@mailinator.com')
18. INSERT INTO email_address (email_address_id, email_address_person_id, email_address) VALUES (14, 3, 'karen@mailinator.com')
19. INSERT INTO email_address (email_address_id, email_address_person_id, email_address) VALUES (15, 3, 'larry@mailinator.com')

```

Run `SELECT * FROM address;` to see **address** table.

The screenshot shows the Microsoft Azure portal interface for a SQL database named 'dxcsqlldb231'. The left sidebar contains navigation links for Overview, Activity log, Tags, Diagnose and solve problems, Getting started, and Query editor (preview). The main area displays the 'Query editor (preview)' for the 'dxcsqlldb231' database. A message indicates 'Showing limited object explorer here. For full capability please open SSDT.' The 'Tables' section shows the 'dbo.address' table with columns: address\_id (PK, int, not null), address\_building\_number (varchar, not null), address\_street (varchar, not null), address\_locality (varchar, null), address\_city (varchar, not null), address\_zip\_postal (varchar, not null), address\_state\_province\_county (varchar, not null), address\_country (varchar, not null), email\_address (varchar, not null), person (varchar, not null), and person\_address (varchar, not null). A query 'SELECT \* FROM address;' is run, resulting in 4 rows of data:

address_id	address_building_n...	address_street	address_locality	address_city	address_zip_postal	ad...
1	555	azure203Demo		Los Angeles	91001	Cal...
2	555	azure203Demo		Toronto	7777	On...
3	555	azure203Demo	Boones	Somewhere	11111	Ma...
4	555	azure203Demo		San Francisco	91001	Cal...

The status bar at the bottom right shows the date as 07-06-2022 and the time as 19:26.

Run `SELECT * FROM email_address;` to see `email_address` table.

The screenshot shows the Microsoft Azure portal interface for the same SQL database 'dxcsqlldb231'. The left sidebar is identical to the previous screenshot. The main area displays the 'Query editor (preview)' for the 'dxcsqlldb231' database. A message indicates 'Showing limited object explorer here. For full capability please open SSDT.' The 'Tables' section shows the 'dbo.email\_address' table with columns: email\_address\_id (PK, int, not null), email\_address\_person\_id (int, not null), and email\_address (varchar, not null). A query 'SELECT \* FROM email\_address;' is run, resulting in 5 rows of data:

email_address_id	email_address_person_id	email_address
1	1	jon.flanders@mail.com
2	1	jonf@anothermail.com
4	3	fritz@mail.com
5		aaron@mail.com

The status bar at the bottom right shows the date as 07-06-2022 and the time as 19:27.

THANK YOU!

ASHOK KUMAR