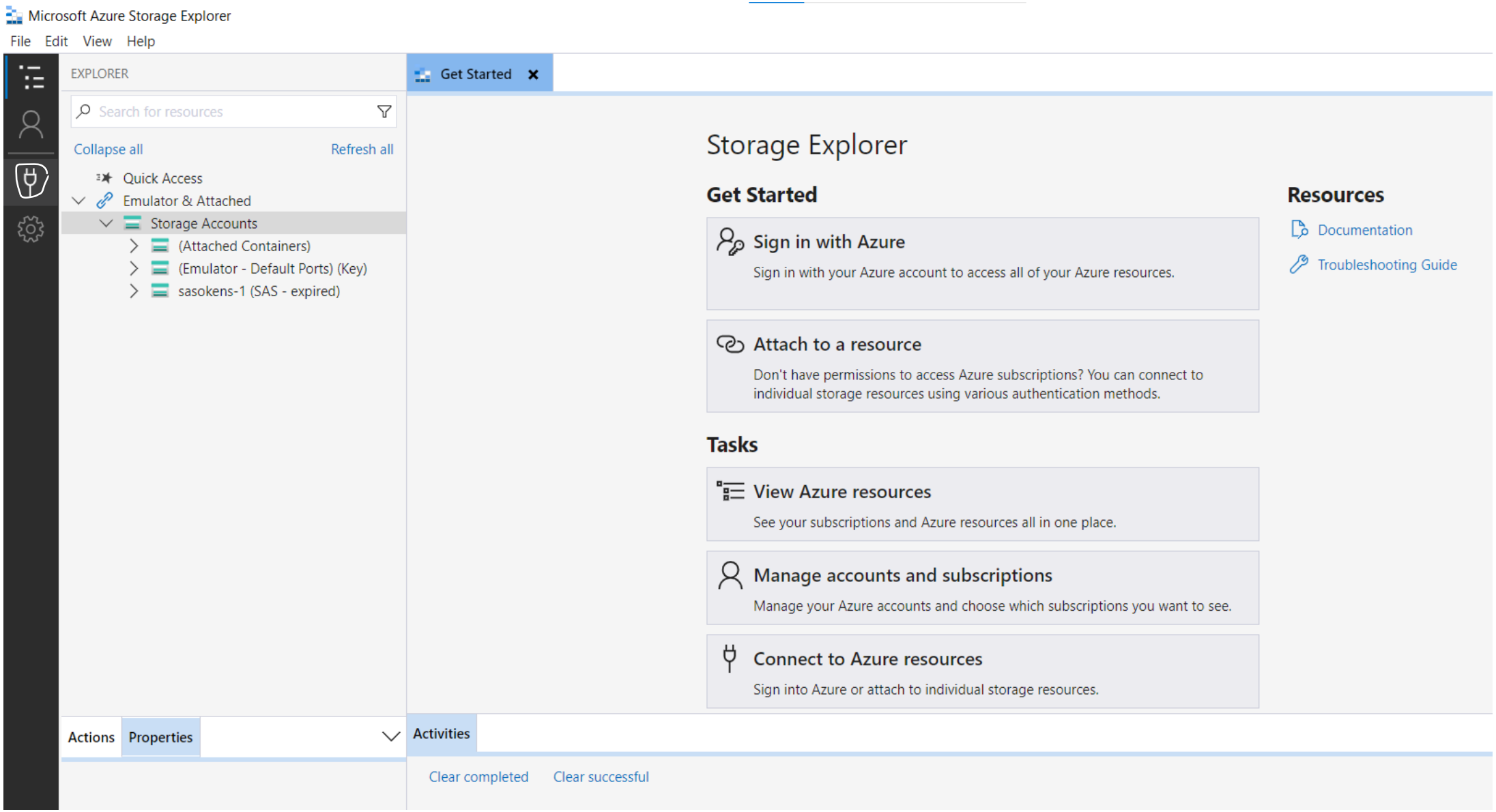
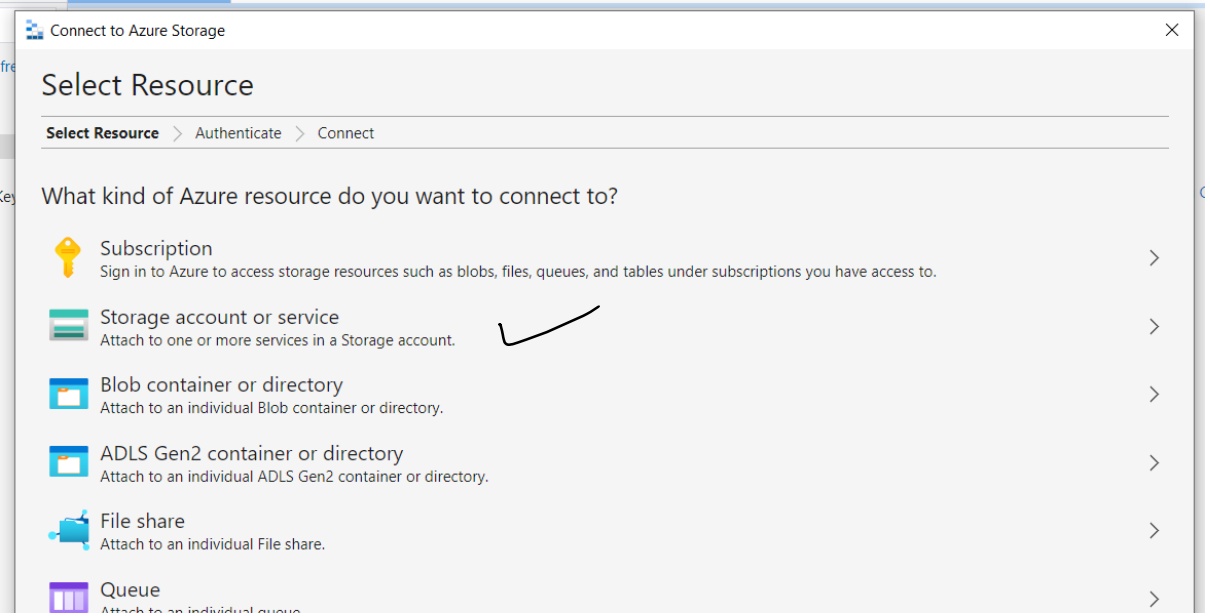
Assignment 1

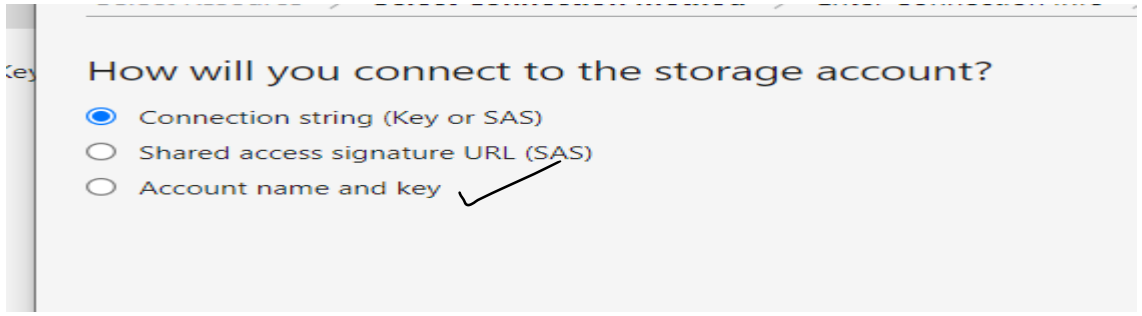
Tasks To Be Performed:

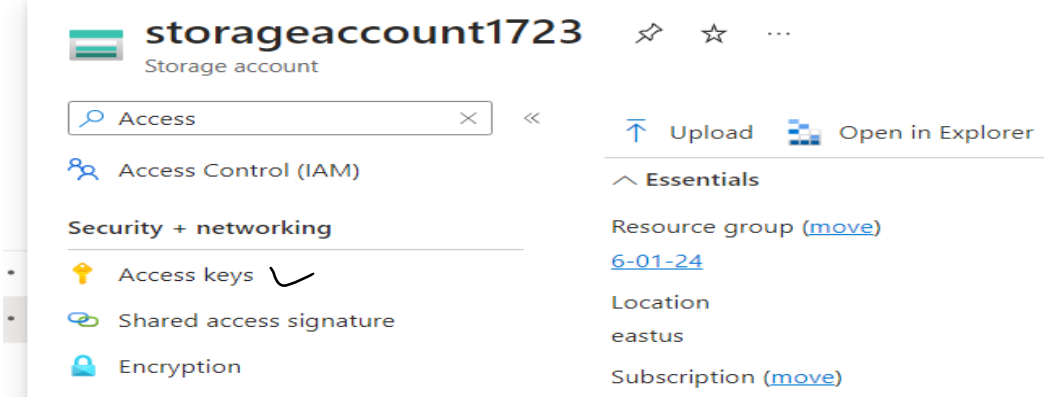
1. Create a storage account
2. Connect storage explorer to this storage account

Create a Resource group using RG create storage account. Download Storage Explorer in your system. Search for Microsoft Azure Storage Explorer and click on connect.

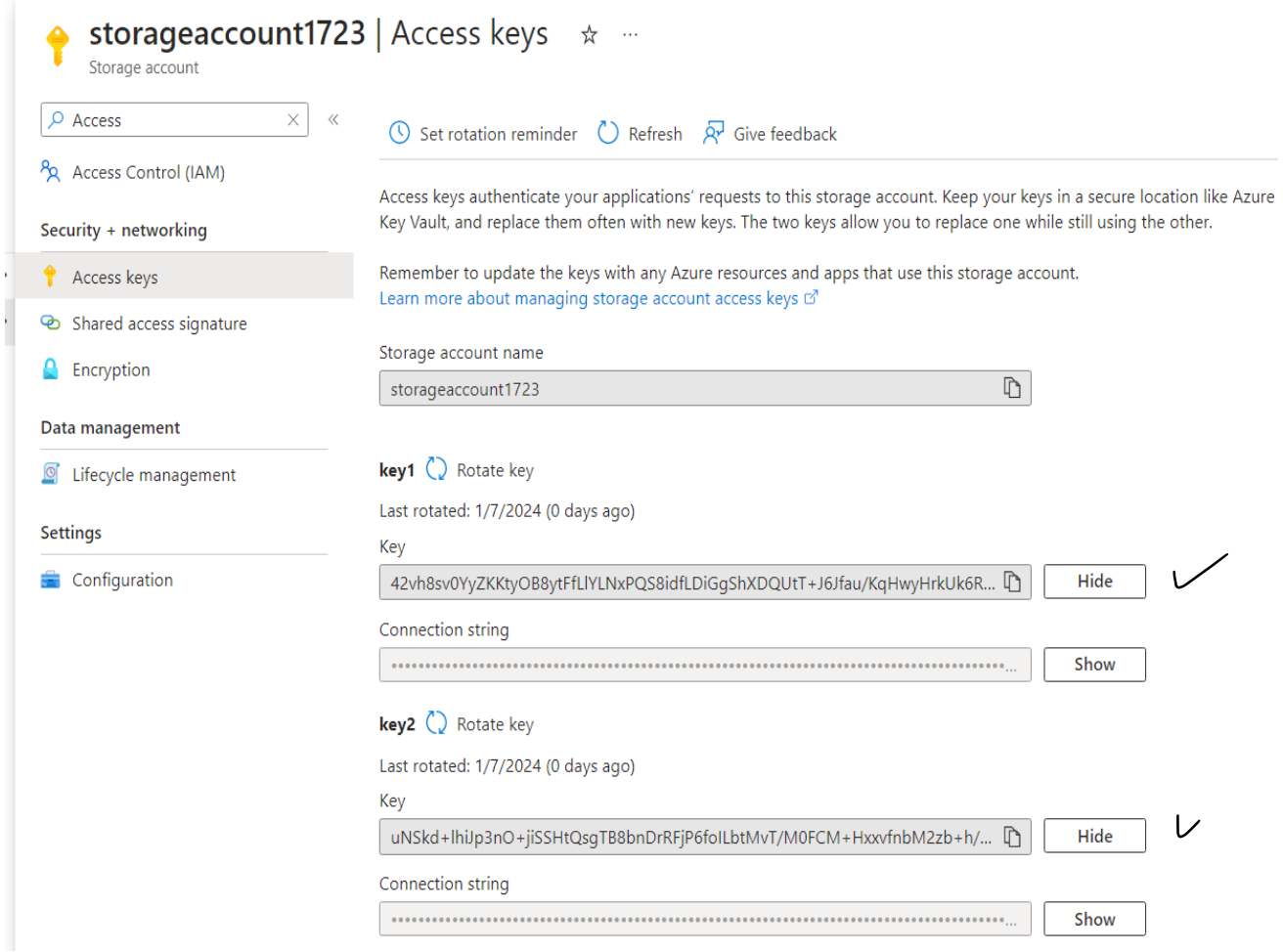


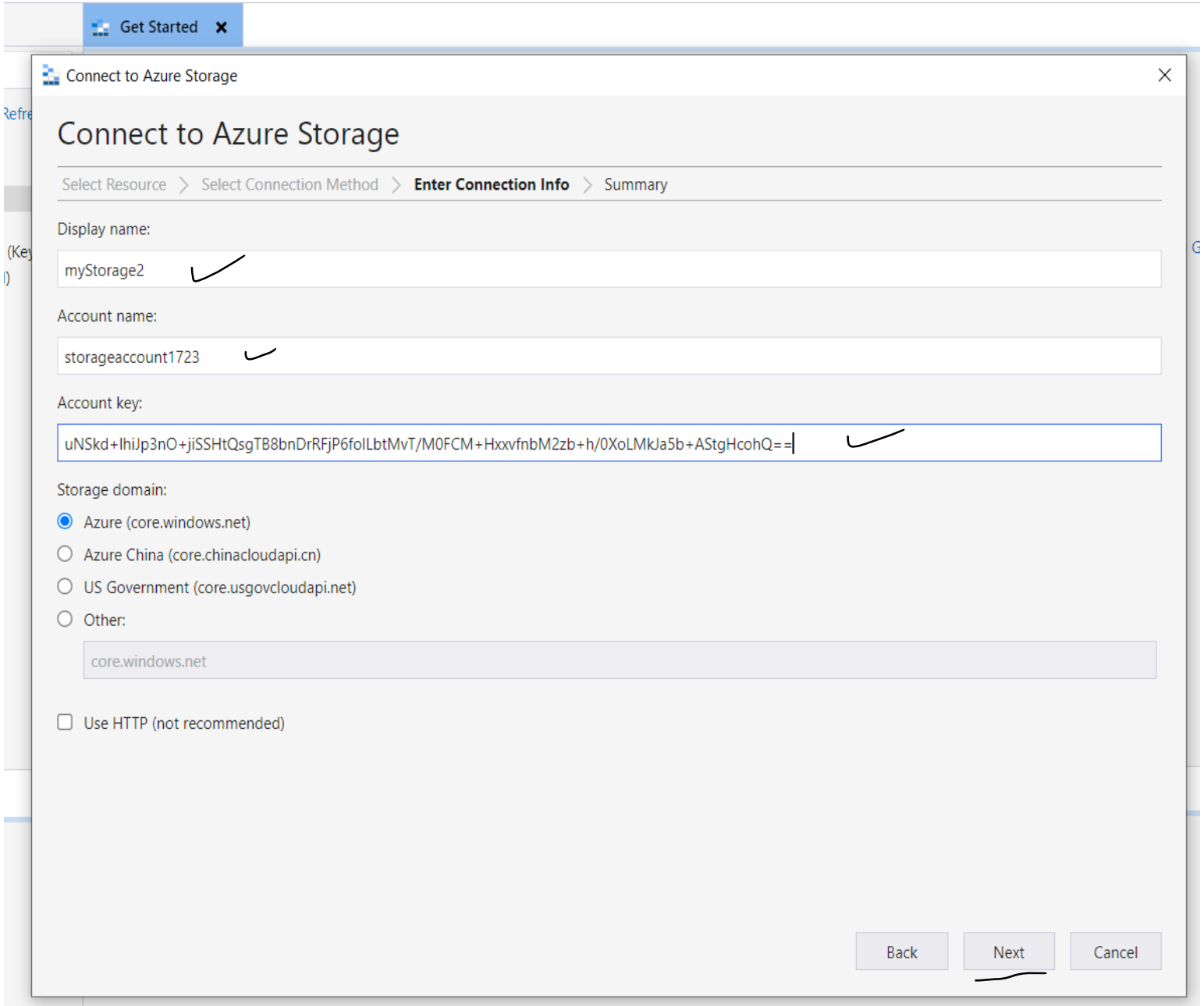

Connect to Azure Storage
Select Resource
Select Resource > Authenticate > Connect
What kind of Azure resource do you want to connect to?
Subscription
Sign in to Azure to access storage resources such as blobs, files, queues, and tables under subscriptions you have access to.
Storage account or service
Attach to one or more services in a Storage account.
Blob container or directory
Attach to an individual Blob container or directory.
ADLS Gen2 container or directory
Attach to an individual ADLS Gen2 container or directory.
File share
Attach to an individual File share.
Queue

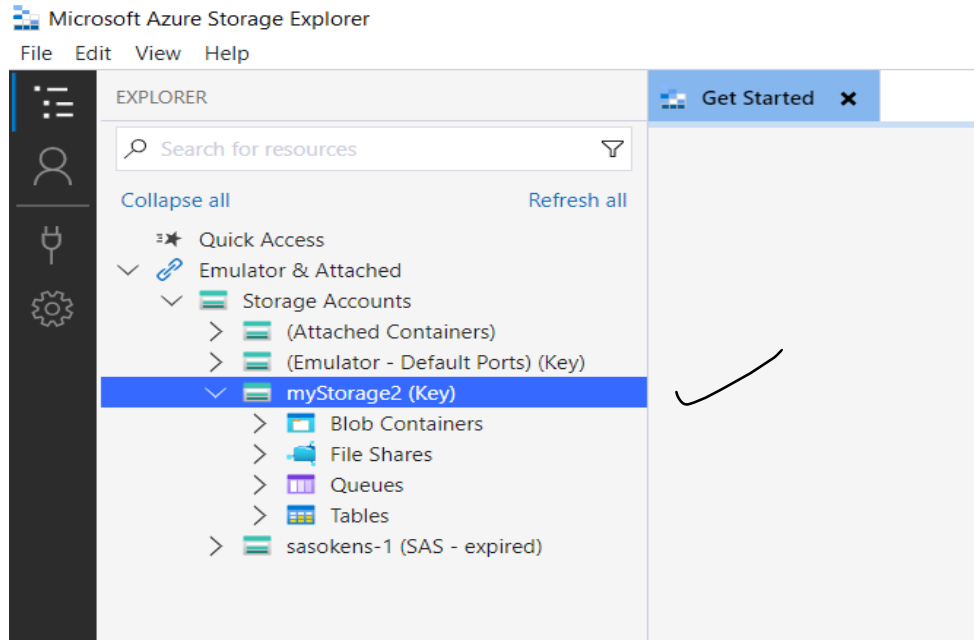

How will you connect to the storage account?
Connection string (Key or SAS)
Shared access signature URL (SAS)
Account name and key


storageaccount1723
Storage account
Access
Access Control (IAM)
Security + networking
Access keys
Shared access signature
Encryption
Upload
Open in Explorer
Essentials
Resource group (move)
6-01-24
Location
eastus
Subscription (move)

1723


storageaccount1723 | Access keys
Storage account
Access
Access Control (IAM)
Security + networking
Access keys
Shared access signature
Encryption
Data management
Lifecycle management
Settings
Configuration
Set rotation reminder
Refresh
Give feedback
Access keys authenticate your applications' requests to this storage account. Keep your keys in a secure location like Azure Key Vault, and replace them often with new keys. The two keys allow you to replace one while still using the other.
Remember to update the keys with any Azure resources and apps that use this storage account.
Learn more about managing storage account access keys
Storage account name
storageaccount1723
key1
Rotate key
Last rotated: 1/7/2024 (0 days ago)
Key
42vh8sv0YyZKKtyOB8ytFfLlYLNxPQS8idfLDiGgShXDQUtT+J6Jfau/KqHwyHrkUk6R...
Hide
Connection string
Show
key2
Rotate key
Last rotated: 1/7/2024 (0 days ago)
Key
uNSkd+IhiJp3nO+jiSSHtQsgTB8bnDrRFjP6foILbtMvT/M0FCM+HxxvfnbM2zb+h/...
Hide
Connection string
Show


Get Started
Connect to Azure Storage
Connect to Azure Storage
Select Resource > Select Connection Method > Enter Connection Info > Summary
Display name:
myStorage2
Account name:
storageaccount1723
Account key:
uNSkd+IhiJp3nO+jiSSHtQsgTB8bnDrRFjP6folLbtMvT/M0FCM+Hxxvfnbm2zb+h/0XoLMkJa5b+AStgHcohQ==
Storage domain:
Azure (core.windows.net)
Azure China (core.chinacloudapi.cn)
US Government (core.usgovcloudapi.net)
Other:
core.windows.net
Use HTTP (not recommended)
Back
Next
Cancel


Microsoft Azure Storage Explorer
File Edit View Help
EXPLORER
Get Started
Search for resources
Collapse all
Refresh all
Quick Access
Emulator & Attached
Storage Accounts
(Attached Containers)
(Emulator - Default Ports) (Key)
myStorage2 (Key)
Blob Containers
File Shares
Queues
Tables
sasokens-1 (SAS - expired)

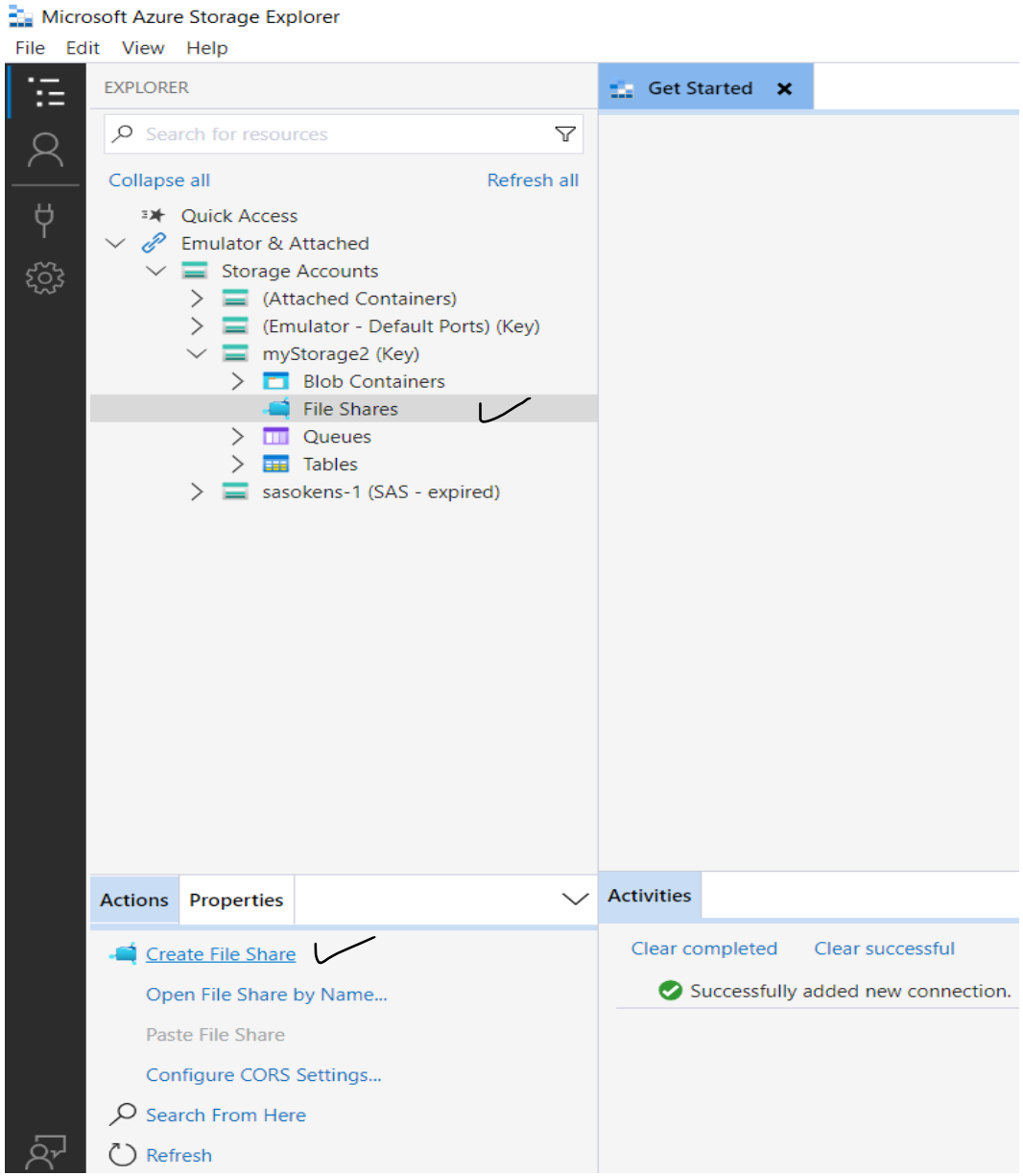
Assignment 2

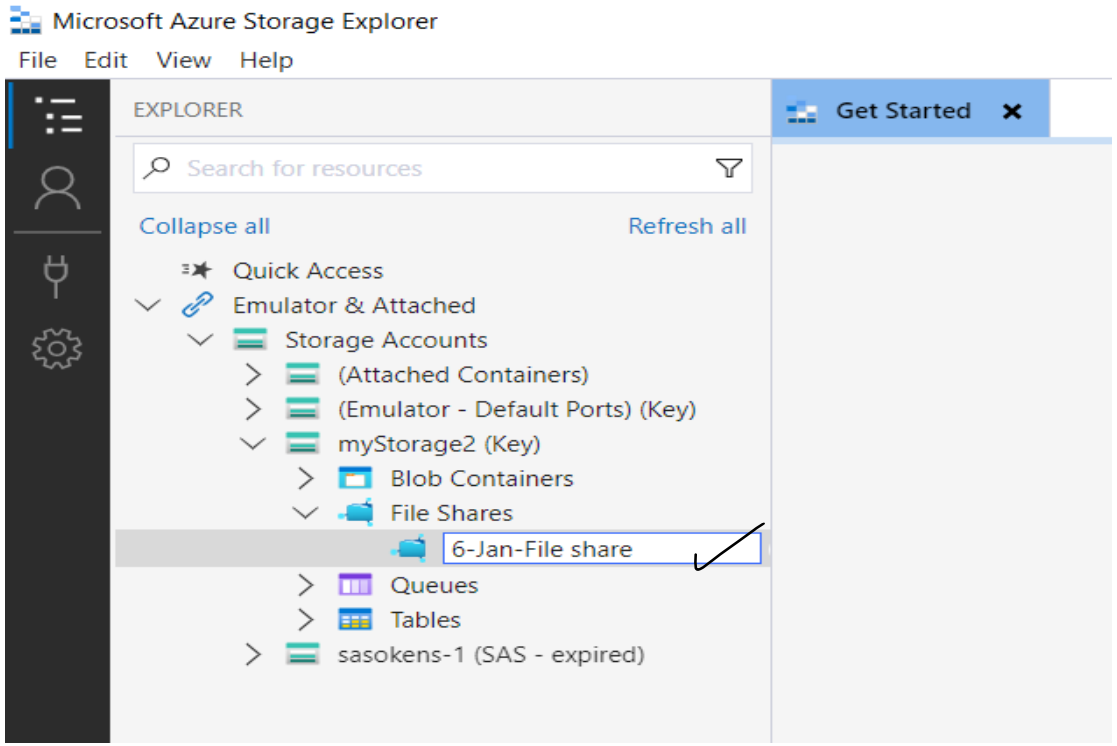
Tasks To Be Performed:

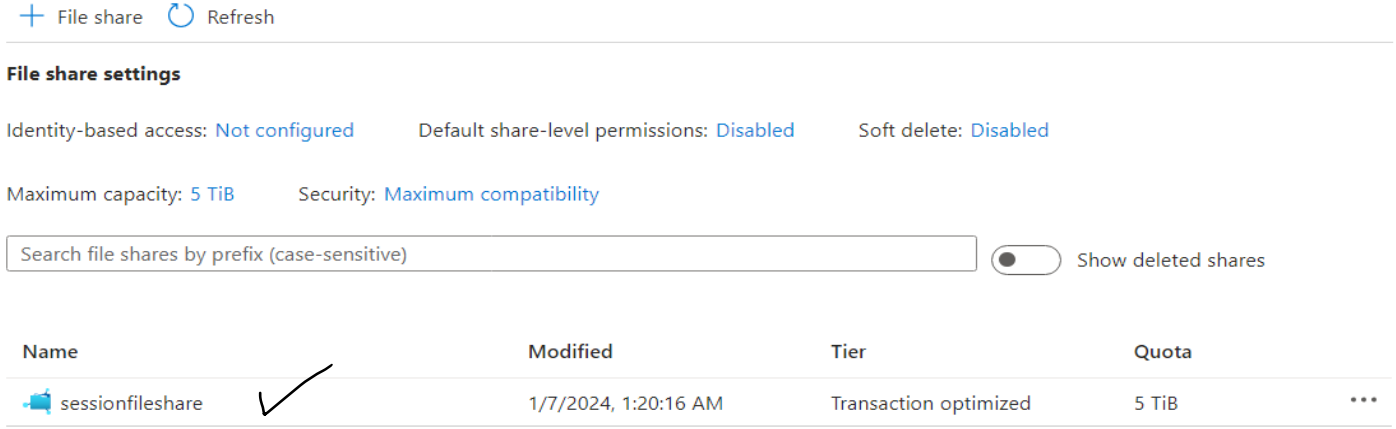
Do the following using the Storage explorer:

1. Create a file share using the Storage explorer
2. Upload files to the blob service
3. Create an Azure Table and insert a record

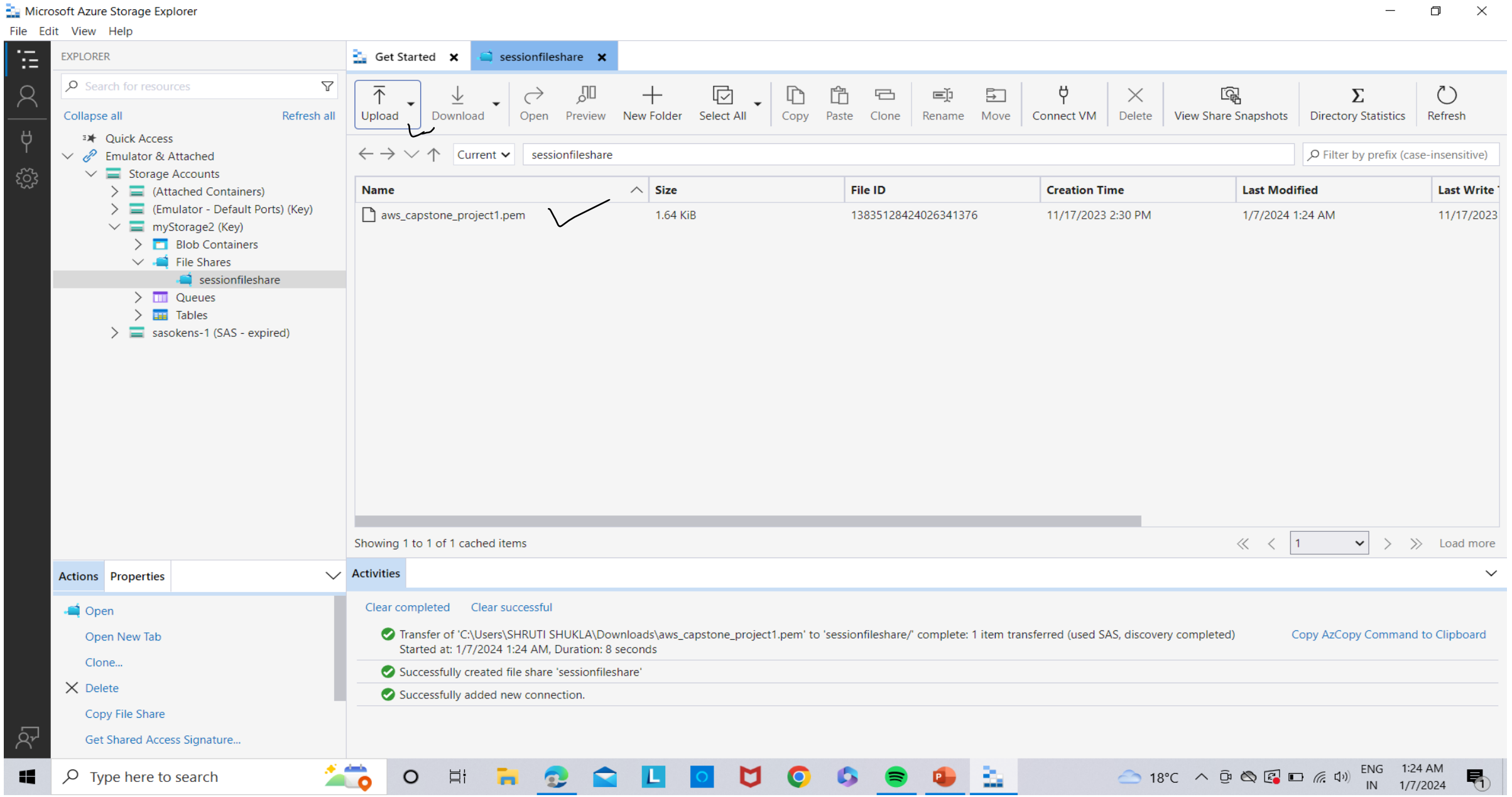
Go to Storage explore – Actions or right click – choose Create file share . Name the file share and Enter.







We can also upload some files from here.



sessionfileshare | Browse

SMB File share

Search

Overview
Diagnose and solve problems
Access Control (IAM)
Browse

Operations
Snapshots
Backup

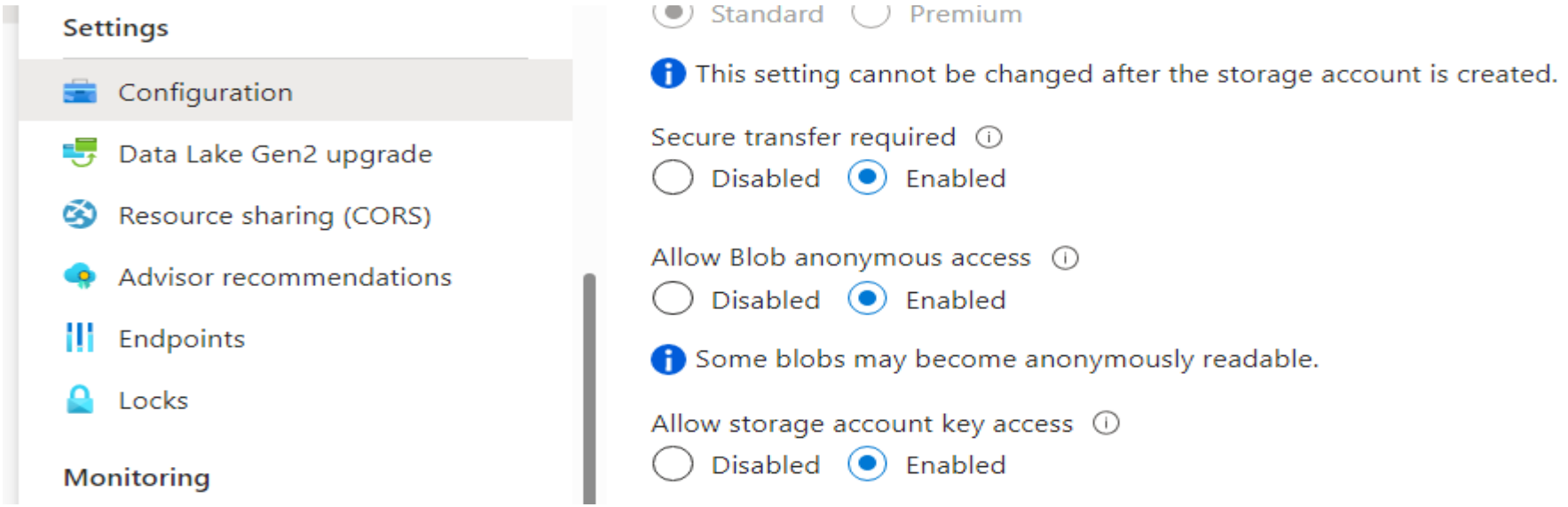
Connect | Upload | Add directory | Refresh | Delete share | Change tier | Edit quota

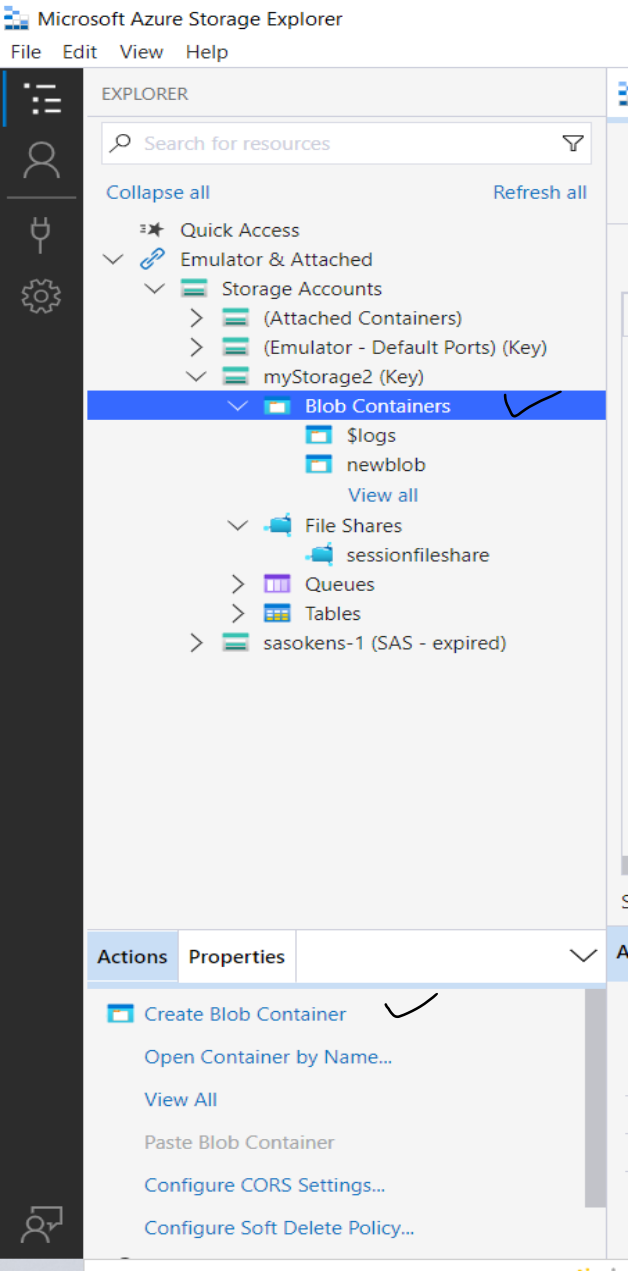
Authentication method: Access key (Switch to Microsoft Entra user account)

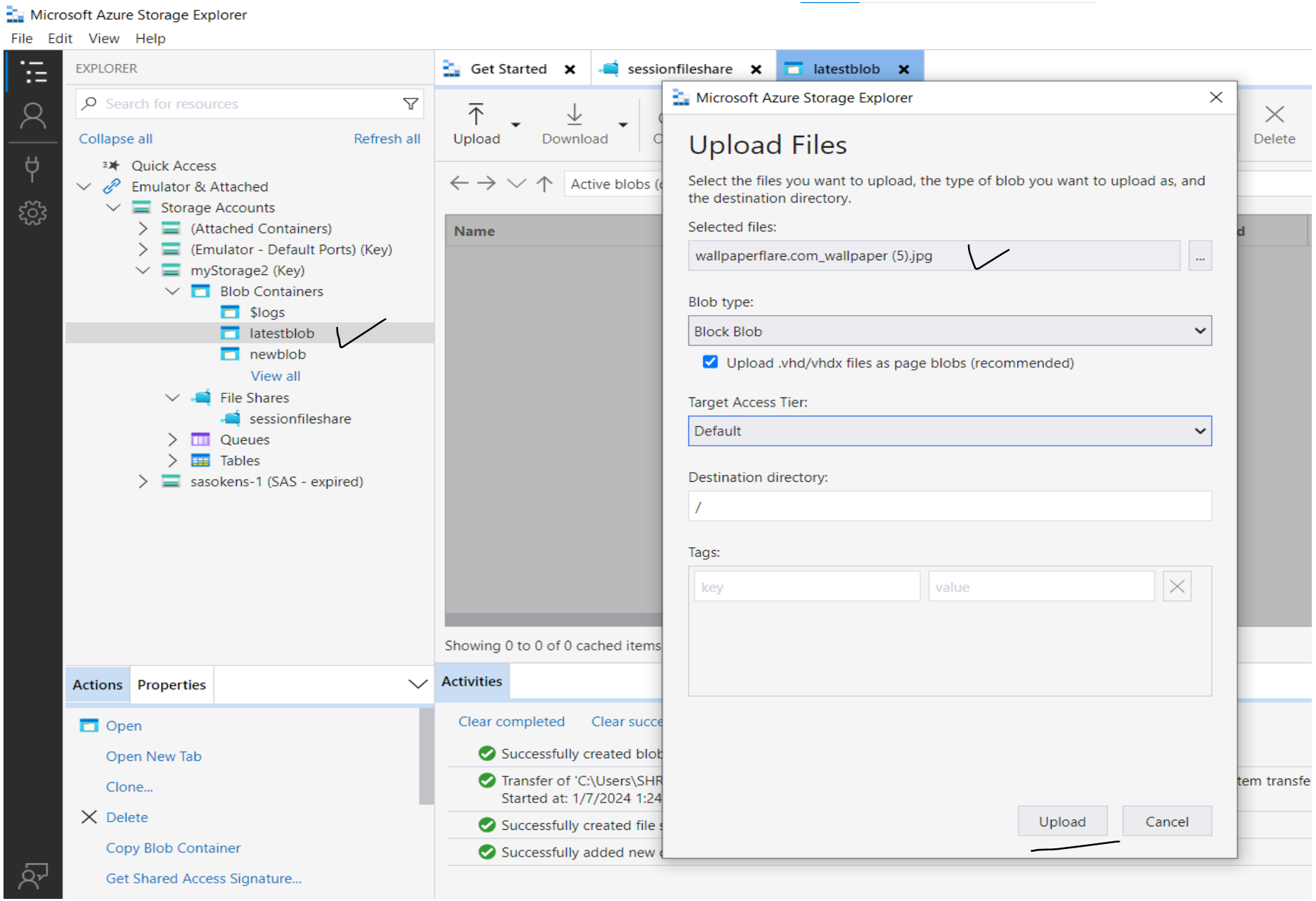
Search files by prefix

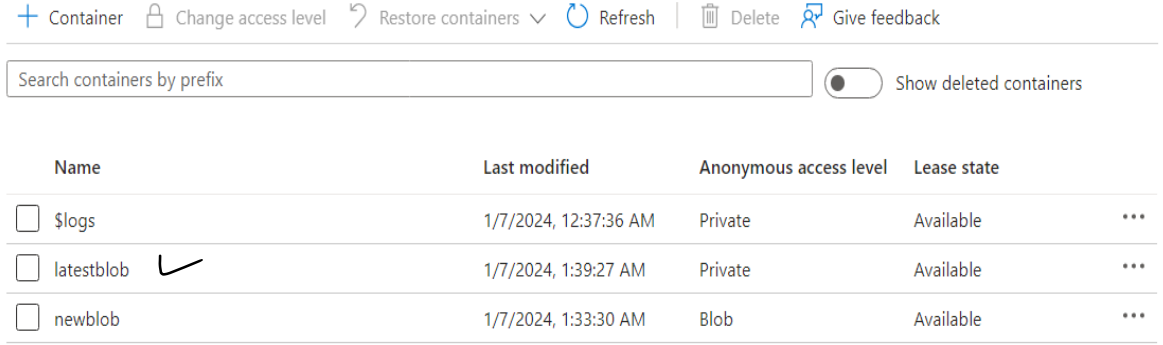
Name	Type	Size
aws_capstone_project1.pem	File	1.64 KiB

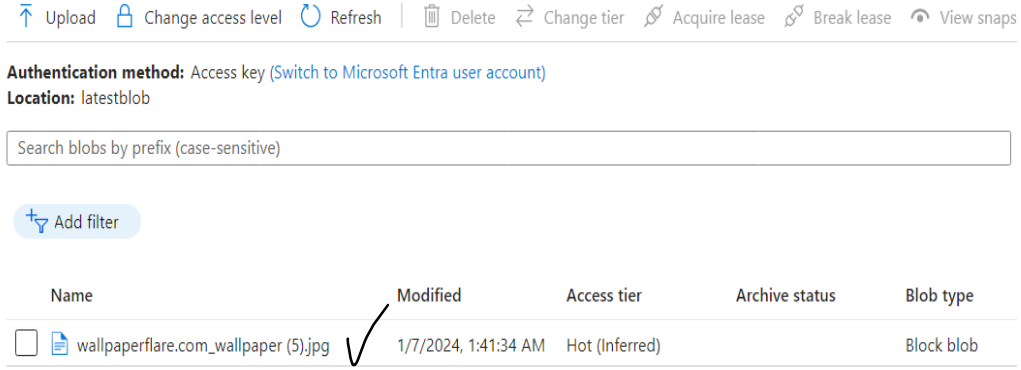
Configuration – Allow Anonymous Blob Access which allow public access.

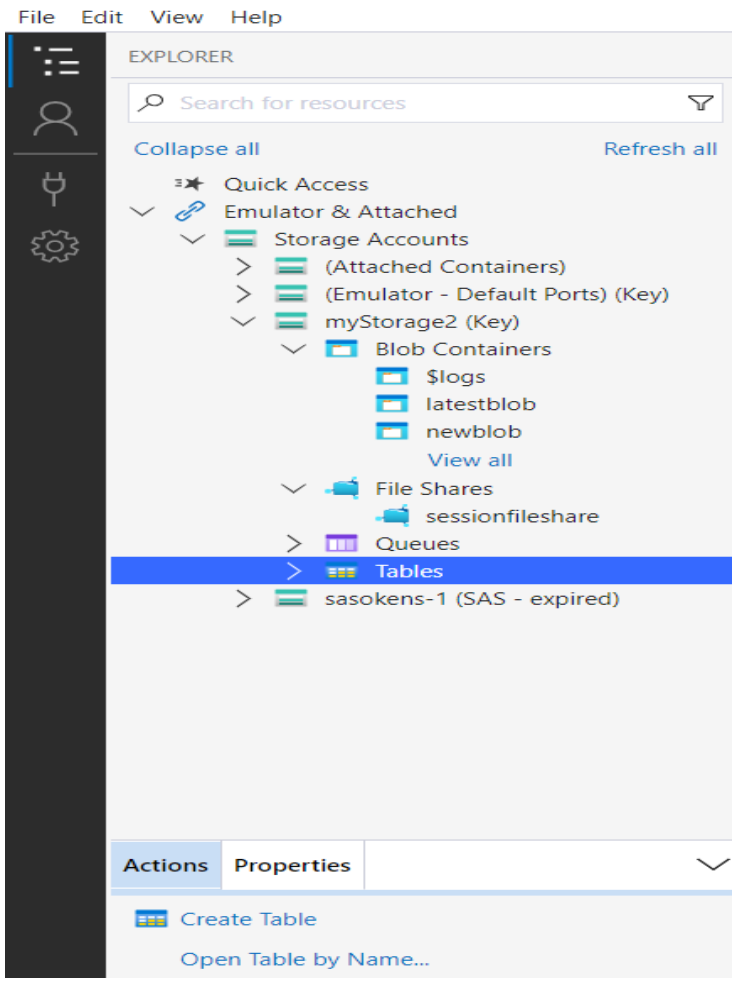


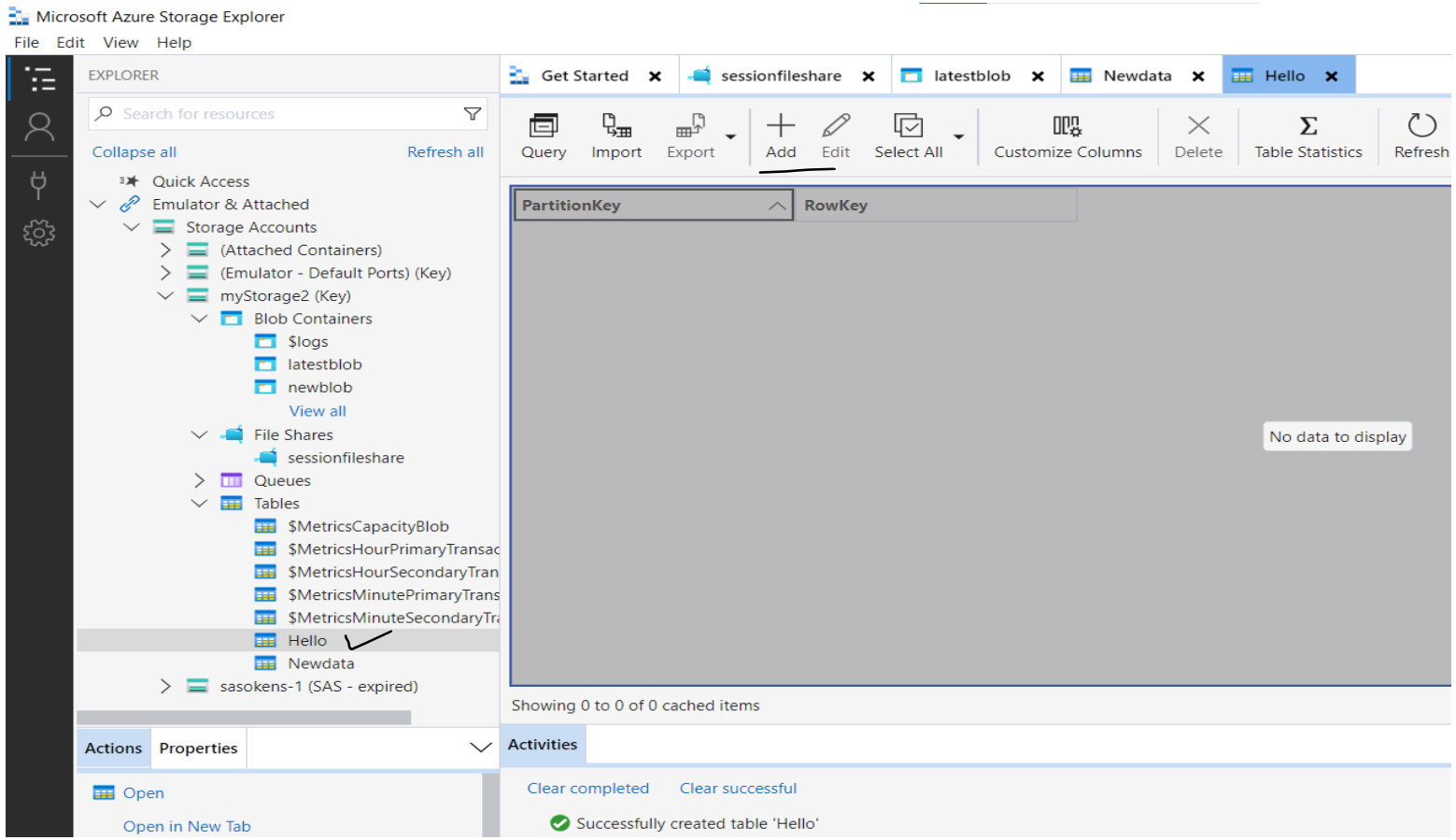

Microsoft Azure Storage Explorer
File Edit View Help
EXPLORER
Search for resources
Collapse all
Refresh all
Quick Access
Emulator & Attached
Storage Accounts
(Attached Containers)
(Emulator - Default Ports) (Key)
myStorage2 (Key)
Blob Containers
$logs
newblob
View all
File Shares
sessionfileshare
Queues
Tables
sasokens-1 (SAS - expired)
Actions
Properties
Create Blob Container
Open Container by Name...
View All
Paste Blob Container
Configure CORS Settings...
Configure Soft Delete Policy...

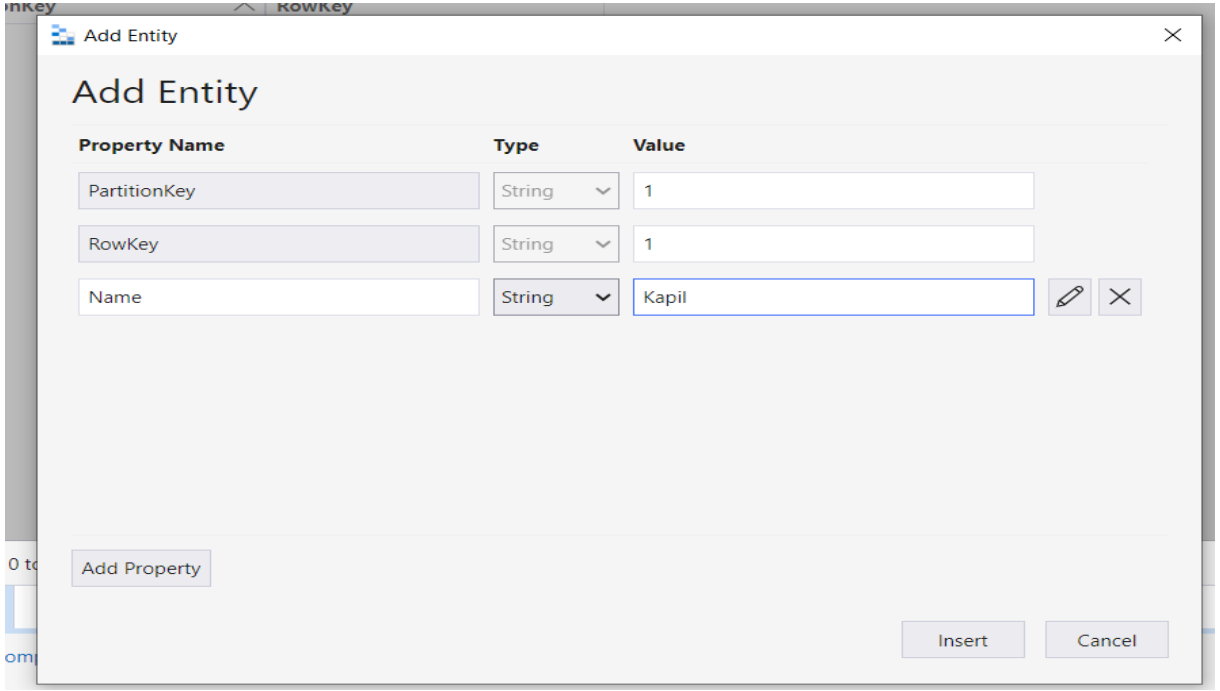

Microsoft Azure Storage Explorer
File Edit View Help
EXPLORER
Search for resources
Collapse all
Refresh all
Quick Access
Emulator & Attached
Storage Accounts
(Attached Containers)
(Emulator - Default Ports) (Key)
myStorage2 (Key)
Blob Containers
$logs
latestblob
newblob
View all
File Shares
sessionfileshare
Queues
Tables
sasokens-1 (SAS - expired)
Actions
Properties
Open
Open New Tab
Clone...
Delete
Copy Blob Container
Get Shared Access Signature...
Get Started
sessionfileshare
latestblob
Upload
Download
Delete
Active blobs
Name
Showing 0 to 0 of 0 cached items
Activities
Clear completed
Successfully created blob
Transfer of 'C:\Users\SHR
Started at: 1/7/2024 1:24
Successfully created file
Successfully added new
Microsoft Azure Storage Explorer
Upload Files
Select the files you want to upload, the type of blob you want to upload as, and the destination directory.
Selected files:
wallpaperflare.com_wallpaper (5).jpg
Blob type:
Block Blob
Upload .vhd/vhdx files as page blobs (recommended)
Target Access Tier:
Default
Destination directory:
/
Tags:
key
value
Upload
Cancel

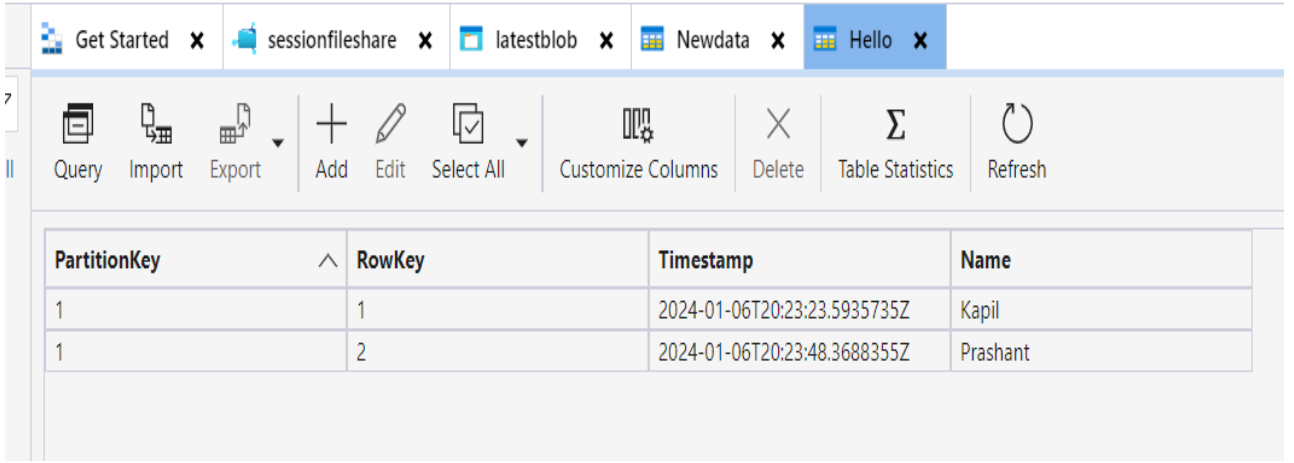

Container
Change access level
Restore containers
Refresh
Delete
Give feedback
Search containers by prefix
Show deleted containers
Name
Last modified
Anonymous access level
Lease state
$logs
1/7/2024, 12:37:36 AM
Private
Available
latestblob
1/7/2024, 1:39:27 AM
Private
Available
newblob
1/7/2024, 1:33:30 AM
Blob
Available

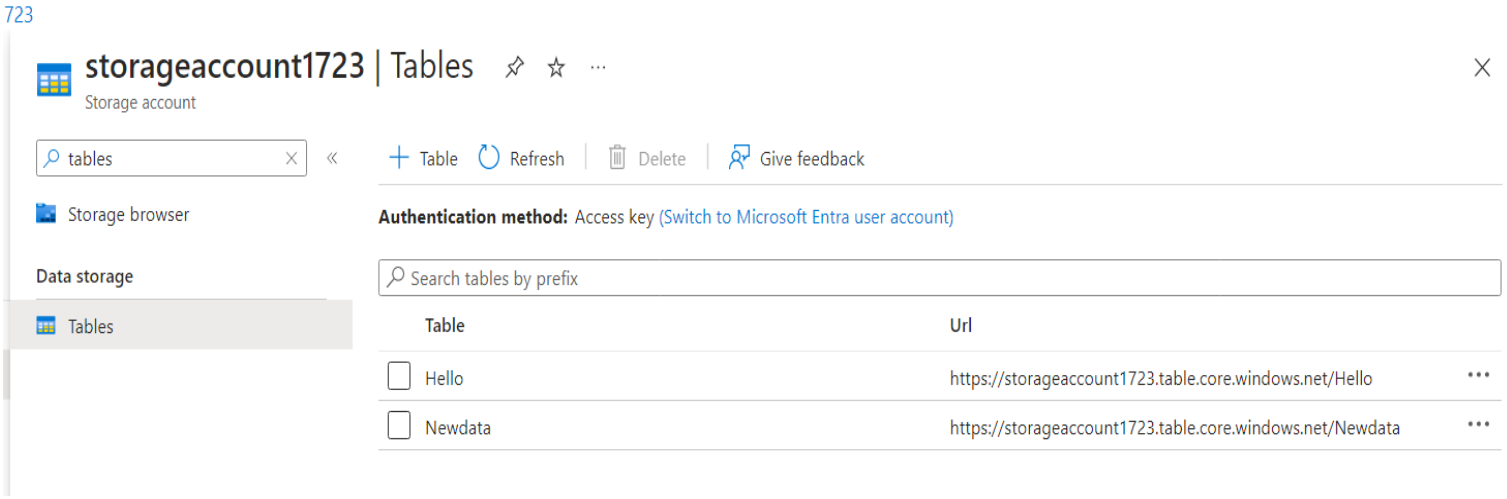

Upload
Change access level
Refresh
Delete
Change tier
Acquire lease
Break lease
View snaps
Authentication method: Access key (Switch to Microsoft Entra user account)
Location: latestblob
Search blobs by prefix (case-sensitive)
Add filter
Name
Modified
Access tier
Archive status
Blob type
wallpaperflare.com_wallpaper (5).jpg
1/7/2024, 1:41:34 AM
Hot (Inferred)
Block blob

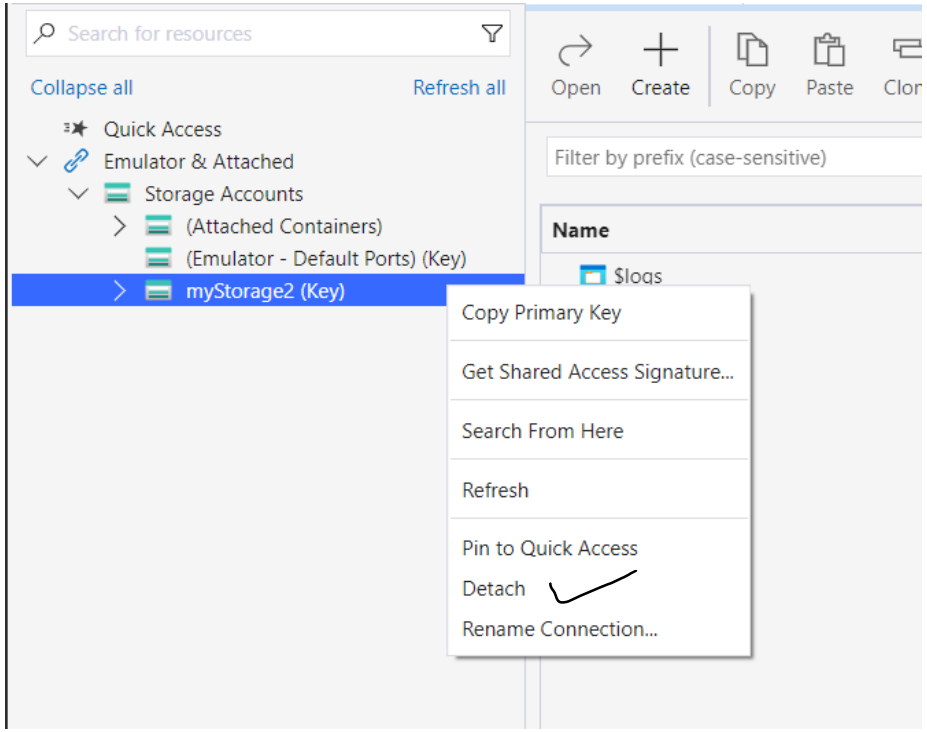

File Edit View Help
EXPLORER
Search for resources
Collapse all
Refresh all
Quick Access
Emulator & Attached
Storage Accounts
(Attached Containers)
(Emulator - Default Ports) (Key)
myStorage2 (Key)
Blob Containers
$logs
latestblob
newblob
View all
File Shares
sessionfileshare
Queues
Tables
sasokens-1 (SAS - expired)
Actions
Properties
Create Table
Open Table by Name...


Microsoft Azure Storage Explorer
File Edit View Help
EXPLORER
Search for resources
Collapse all
Refresh all
Quick Access
Emulator & Attached
Storage Accounts
(Attached Containers)
(Emulator - Default Ports) (Key)
myStorage2 (Key)
Blob Containers
$logs
latestblob
newblob
View all
File Shares
sessionfileshare
Queues
Tables
$MetricsCapacityBlob
$MetricsHourPrimaryTransac
$MetricsHourSecondaryTran
$MetricsMinutePrimaryTrans
$MetricsMinuteSecondaryTra
Hello
Newdata
sasokens-1 (SAS - expired)
Actions
Properties
Open
Open in New Tab
Get Started
sessionfileshare
latestblob
Newdata
Hello
Query
Import
Export
Add
Edit
Select All
Customize Columns
Delete
Table Statistics
Refresh
PartitionKey
RowKey
No data to display
Showing 0 to 0 of 0 cached items
Activities
Clear completed
Clear successful
Successfully created table 'Hello'









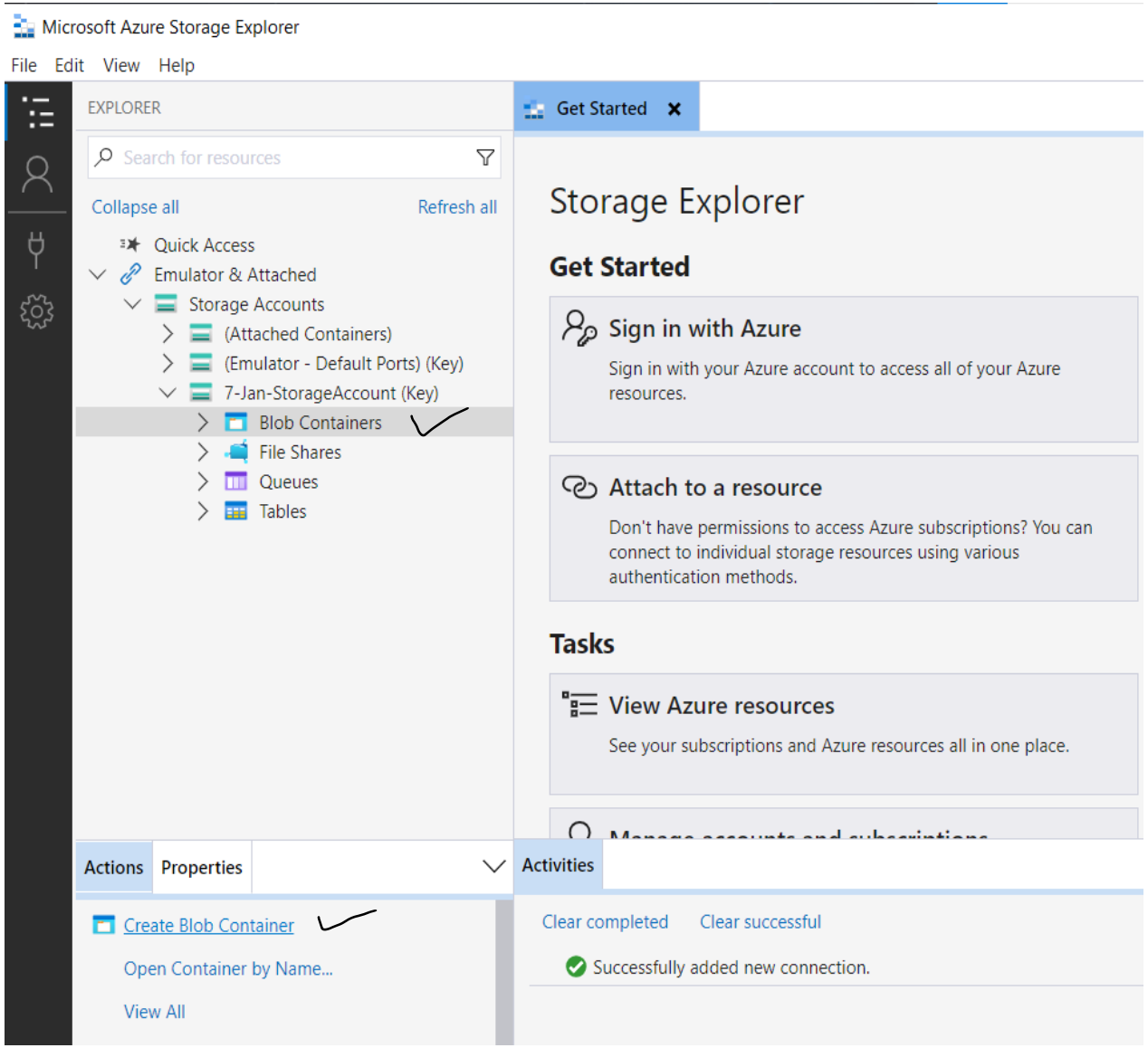
If we want to disconnect to Storage account – detach.

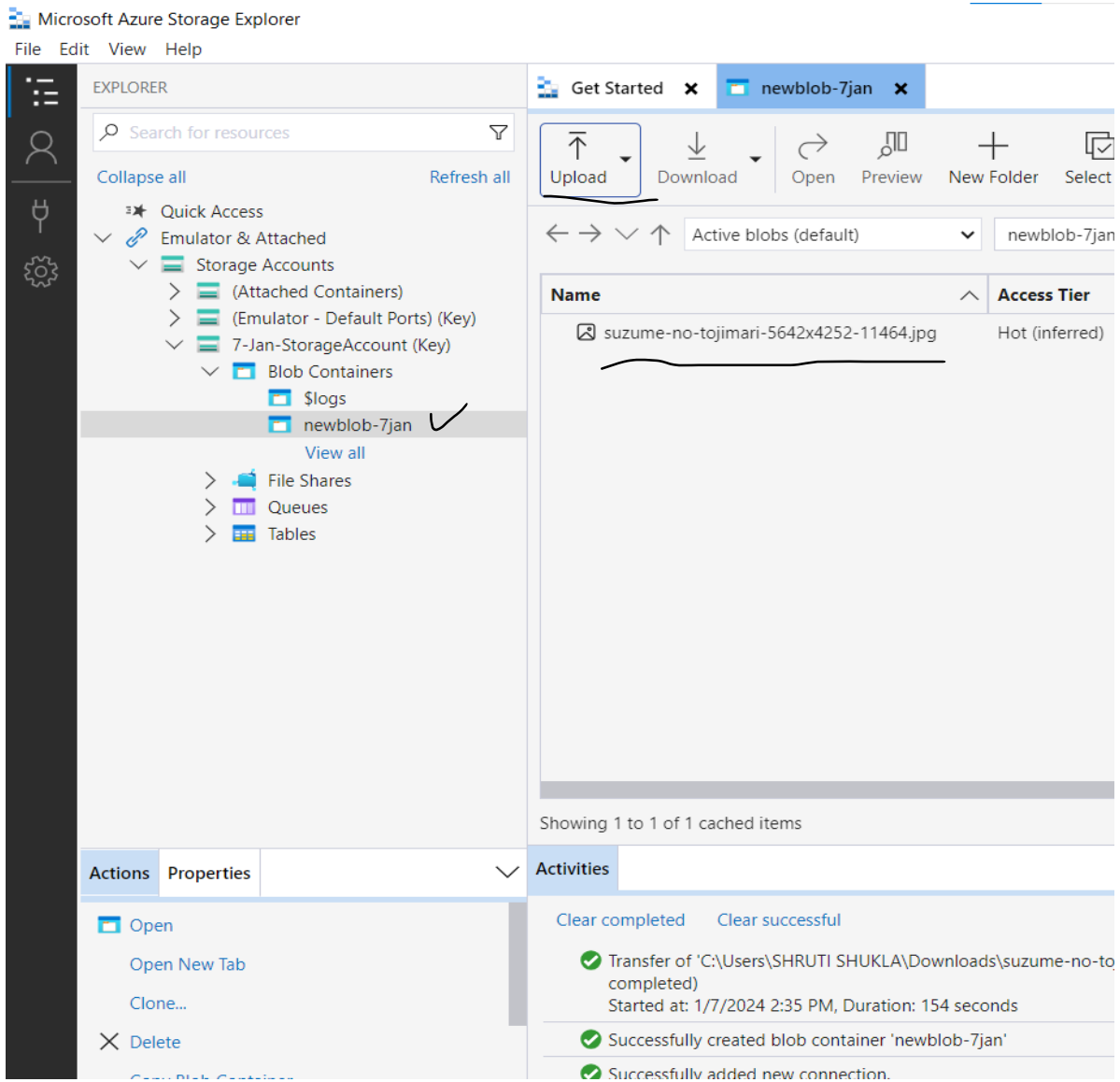
Assignment 3

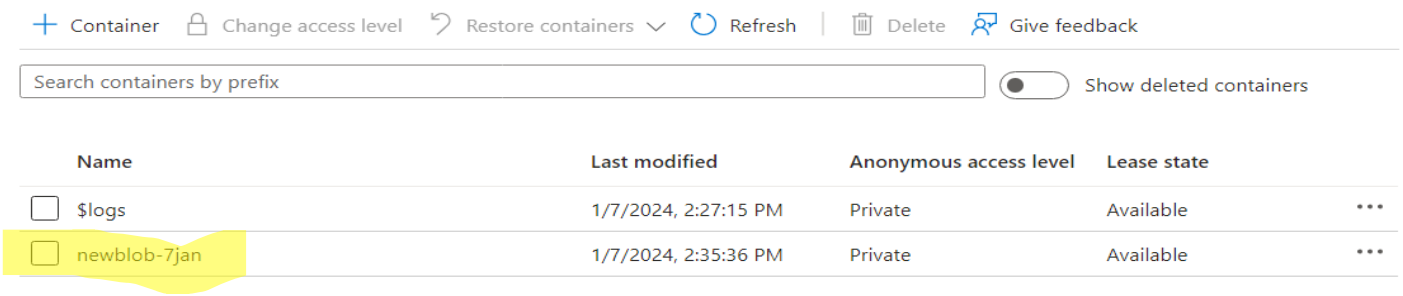
Tasks To Be Performed:

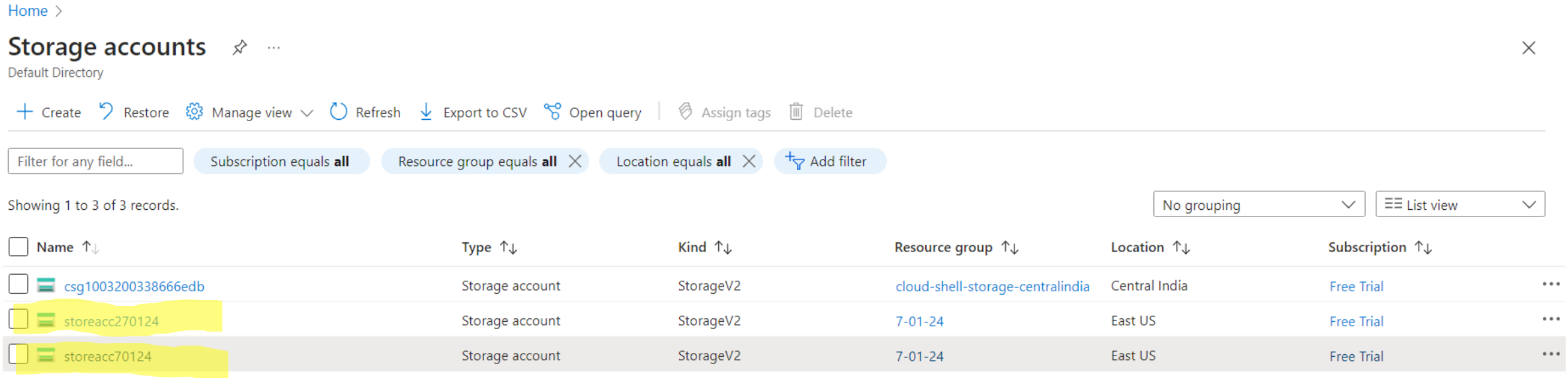
1. Create two storage accounts and create a container inside it
2. Upload some data to the first Blob service
3. Using Data Factory copy data to the second storage service's container

Create two Storage Account and upload some file in blob container.

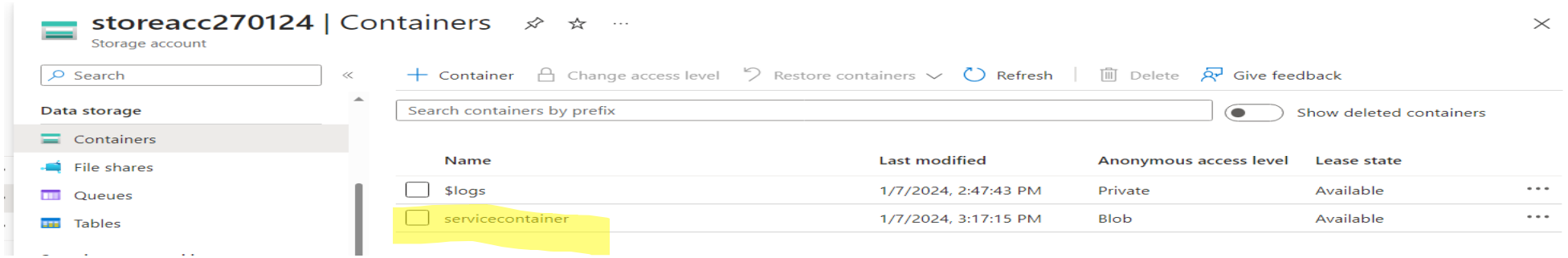








Create another container in second Storage Account.



Home >

Data factories

Default Directory

Create | Manage view | Refresh | Export to CSV | Open query | Assign tags

Filter for any | ype equals **all** | Resource group equals **all** | Location equals **all** | Add filter

Save the current columns, sorting, filtering and summary as a view and access your saved views here.

NEXT

Showing 0 to

No grouping | List view

Name | Type | Subscription | Resource group | Location

Search for Data Factory - create

No data factories to display

Try changing or clearing your filters.

Create data factory

Home > Data factories >

Create Data Factory

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

One-click to create data factory with sample pipeline and datasets. Try it

Project details

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

Subscription * : Free Trial

Resource group * : 7-01-24

Create new

Instance details

Name * : Datafac7jan

Region * : East US

Version * : V2

Previous | Next | Review + create

Create | Manage view | Refresh | Export to CSV | Open query | Assign tags

Filter for any field... | Subscription equals **all** | Type equals **all** | Resource group equals **all**

Showing 1 to 1 of 1 records.

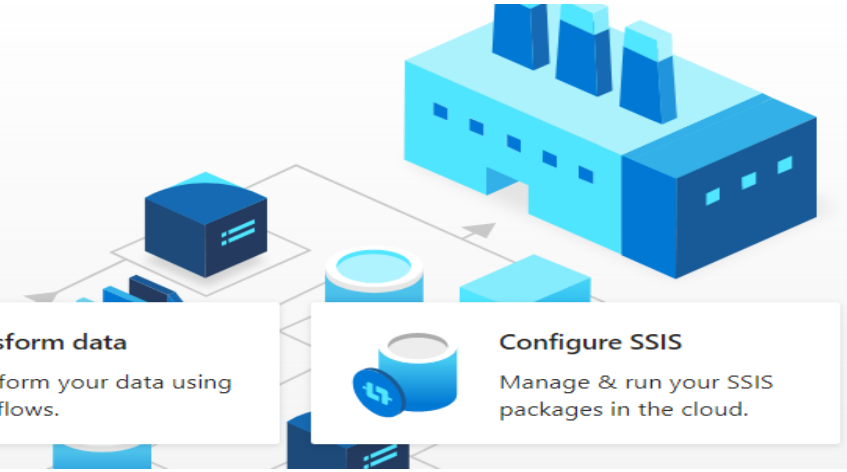
Name	Type
Datafac7jan	Data factory (V2)

Data factory

Datafac7jan

New

Launch studio - ingest



Ingest
Copy data at scale once or on a schedule.

Orchestrate
Code-free data pipelines.

Transform data
Transform your data using data flows.

Configure SSIS
Manage & run your SSIS packages in the cloud.

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, inclu

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 >

Source data store

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

Source type: All

Connection *: Select... + New connection

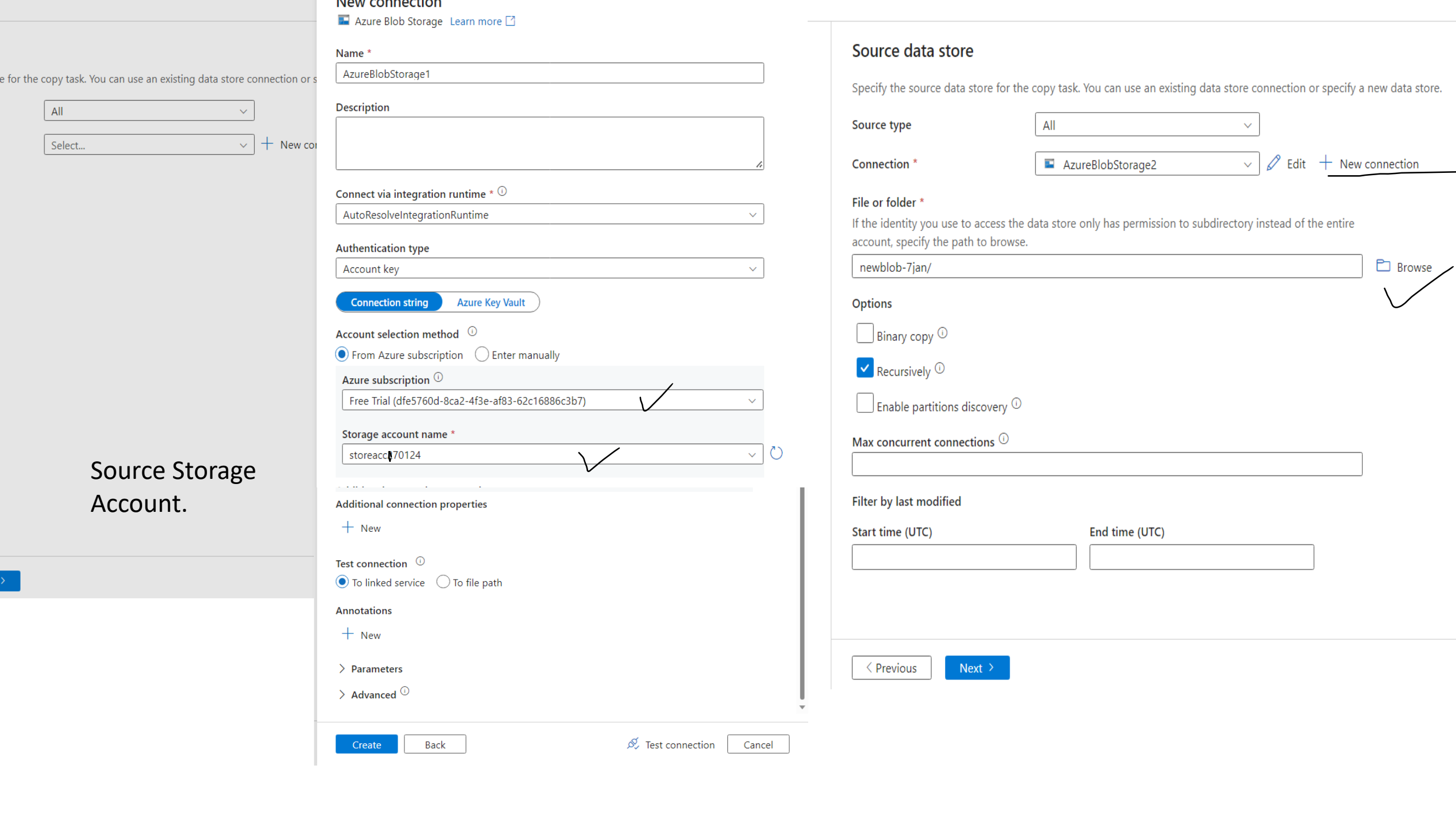
Search

All | Azure | Database | File | Generic protocol | NoSQL | Services and apps

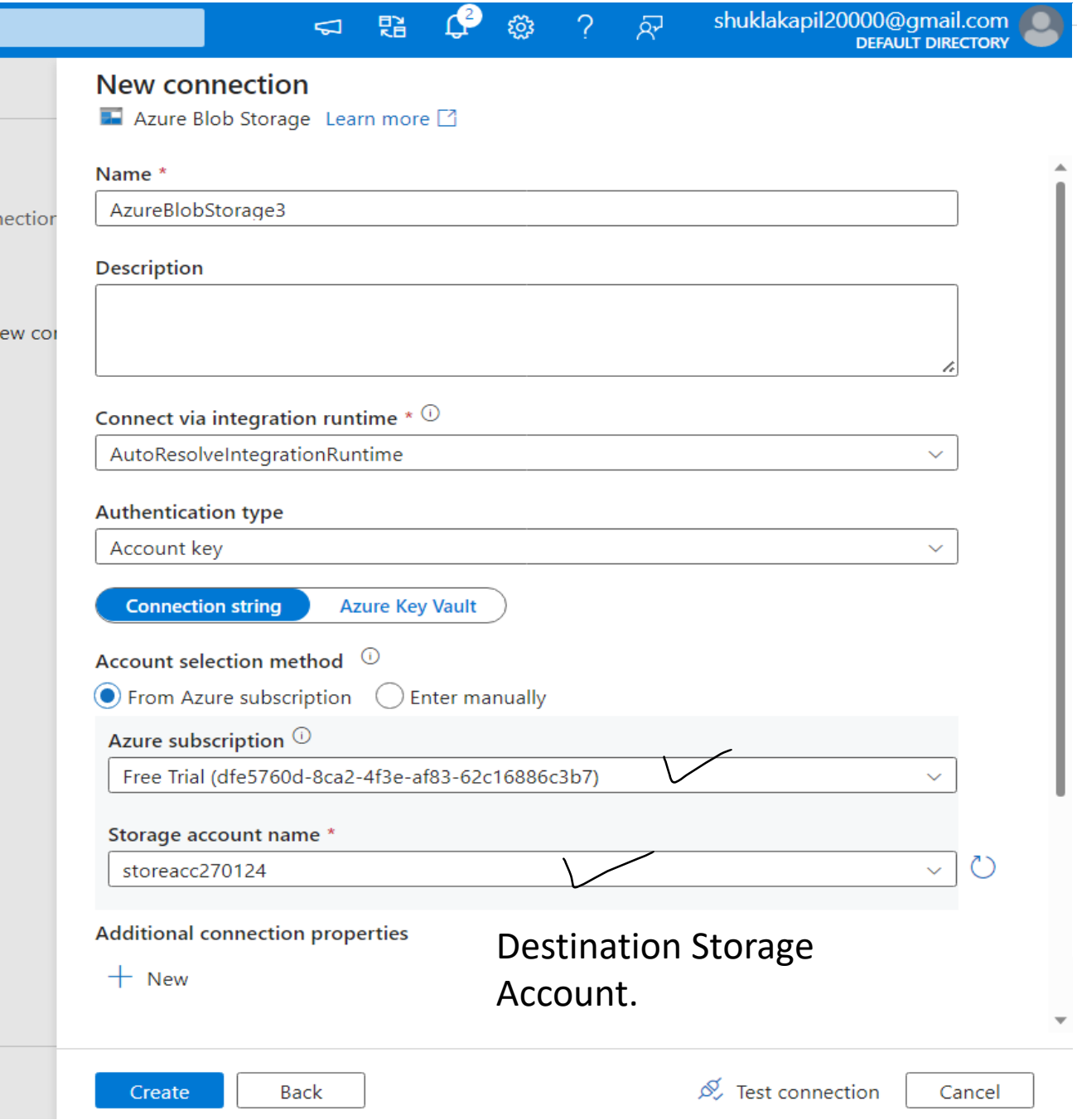
Apache Impala

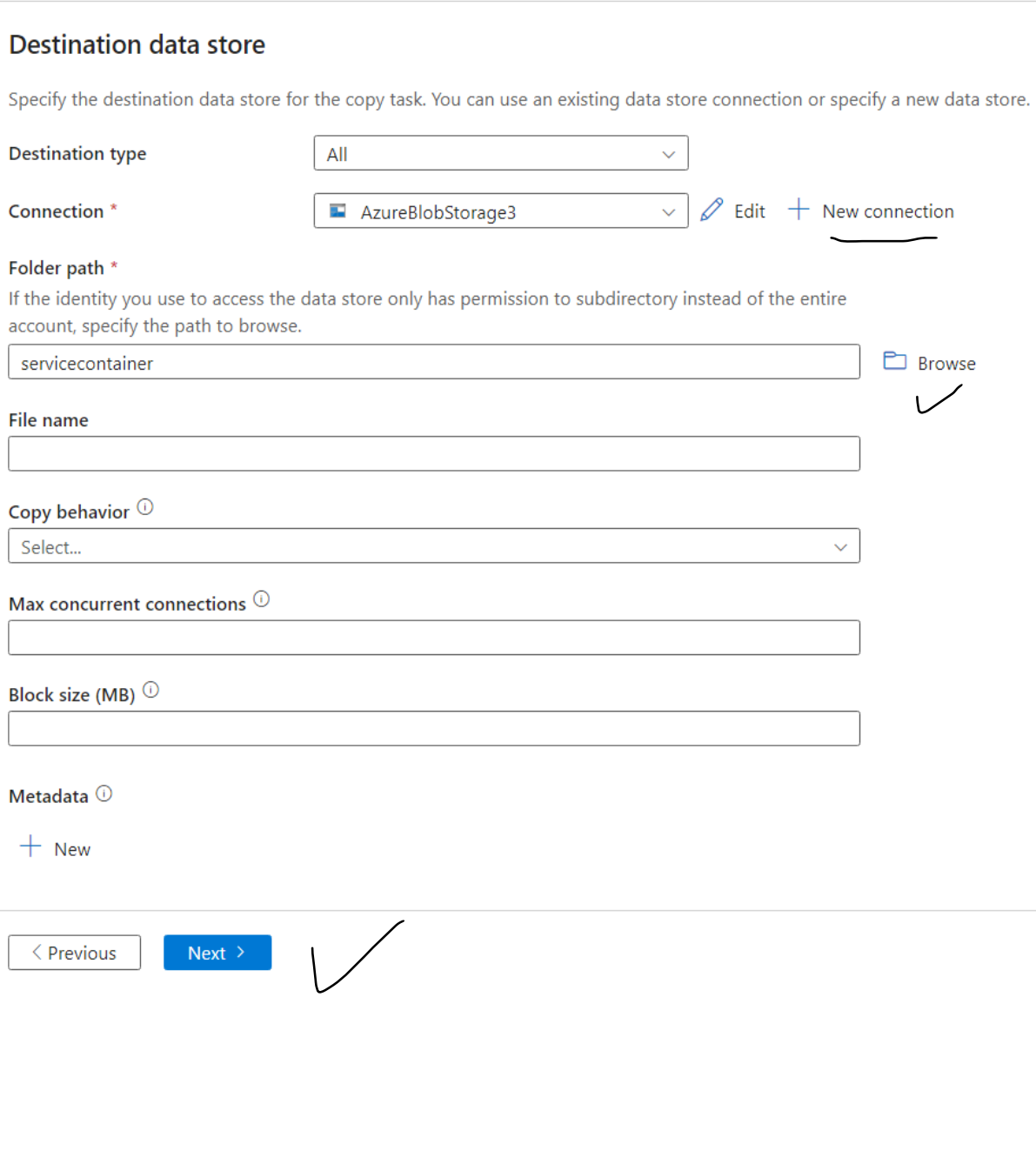
Azure Blob Storage

Azure Cosmos DB for MongoDB



Source Storage Account.


shuklakapil20000@gmail.com
DEFAULT DIRECTORY
New connection
Azure Blob Storage
Learn more
Name *
AzureBlobStorage3
Description
Connect via integration runtime *
AutoResolveIntegrationRuntime
Authentication type
Account key
Connection string
Azure Key Vault
Account selection method
From Azure subscription
Enter manually
Azure subscription
Free Trial (dfe5760d-8ca2-4f3e-af83-62c16886c3b7)
Storage account name *
storeacc270124
Additional connection properties
New
Destination Storage Account.
Create
Back
Test connection
Cancel


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.
Destination type
All
Connection *
AzureBlobStorage3
Edit
New connection
Folder path *
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.
servicecontainer
Browse
File name
Copy behavior
Select...
Max concurrent connections
Block size (MB)
Metadata
New
Previous
Next

Copy Data tool

- Properties
- Source
- Destination
- Settings
- 5 Review and finish
- Review
- Deployment

Summary

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

Properties

Edit

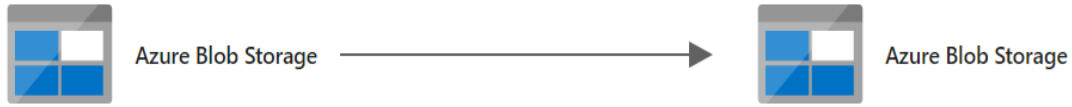
Task name	CopyPipeline_u2c
Task description	

Source

Edit

Connection name	AzureBlobStorage2
Dataset name	SourceDataset_u2c
Column delimiter	,
Row delimiter	
Escape character	\
First row as header	false
Container	newblob-7jan

Previous | Next

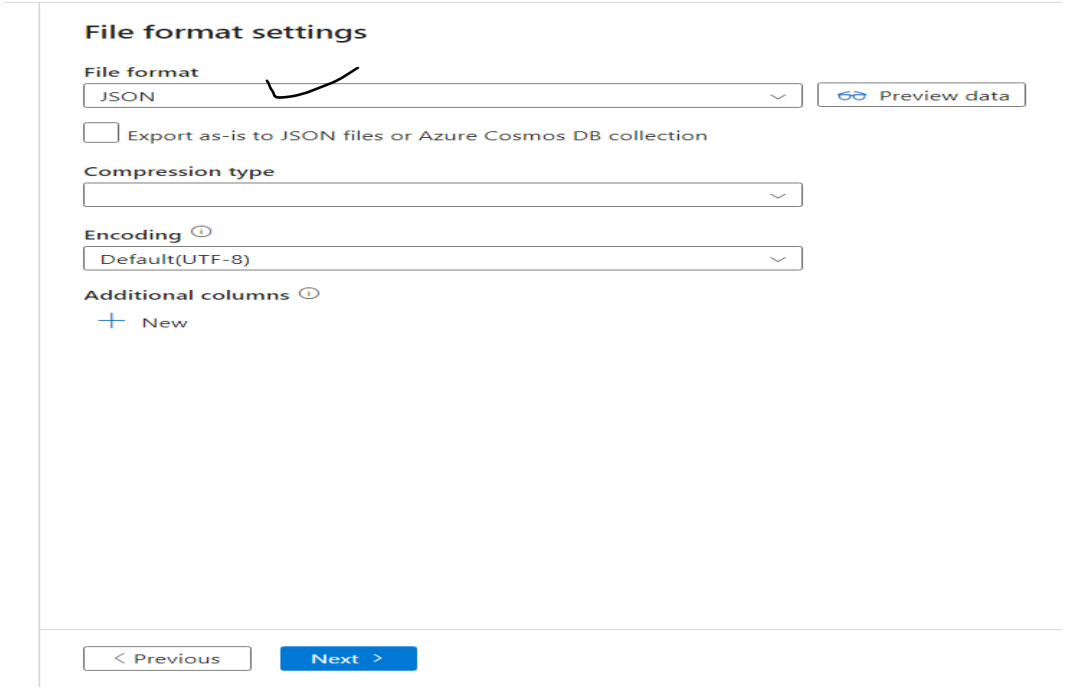


Deployment complete

Deployment step	Status
Validating copy runtime environment	Succeeded
Creating datasets	Succeeded
Creating pipelines	Succeeded
Running pipelines	Succeeded

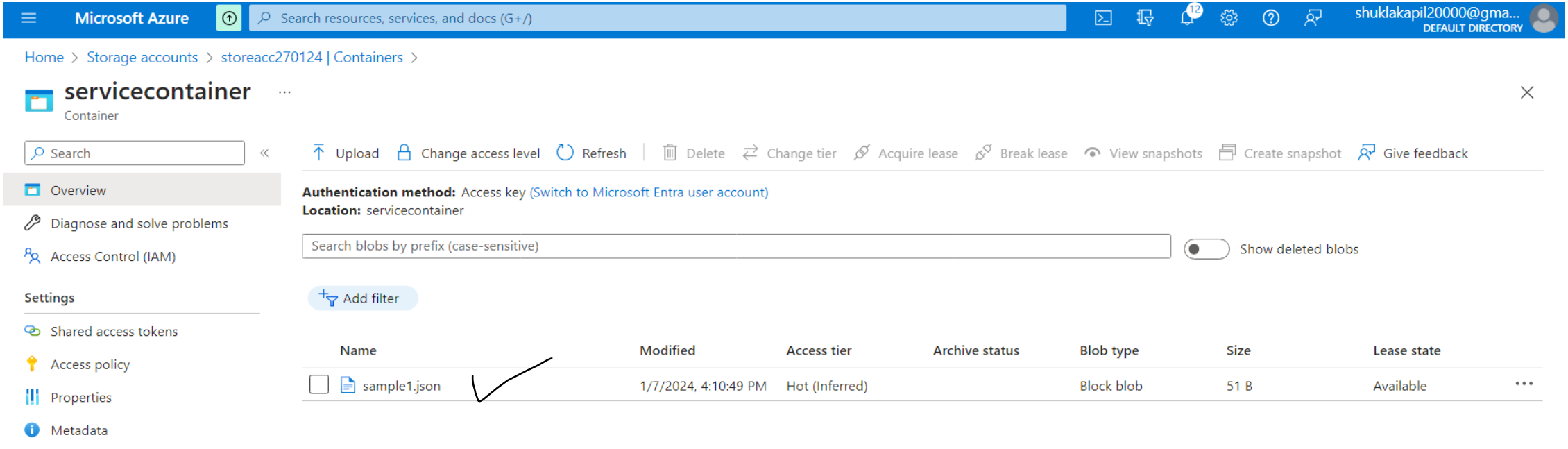
Datasets and pipelines have been created. You can now monitor and edit the copy pipelines or click finish to close Copy Data Tool.

Finish | Edit pipeline | Monitor



Select which file format you want to copy and Data factory could support only few file formats.

First source container will Add and then Destination Storage account.

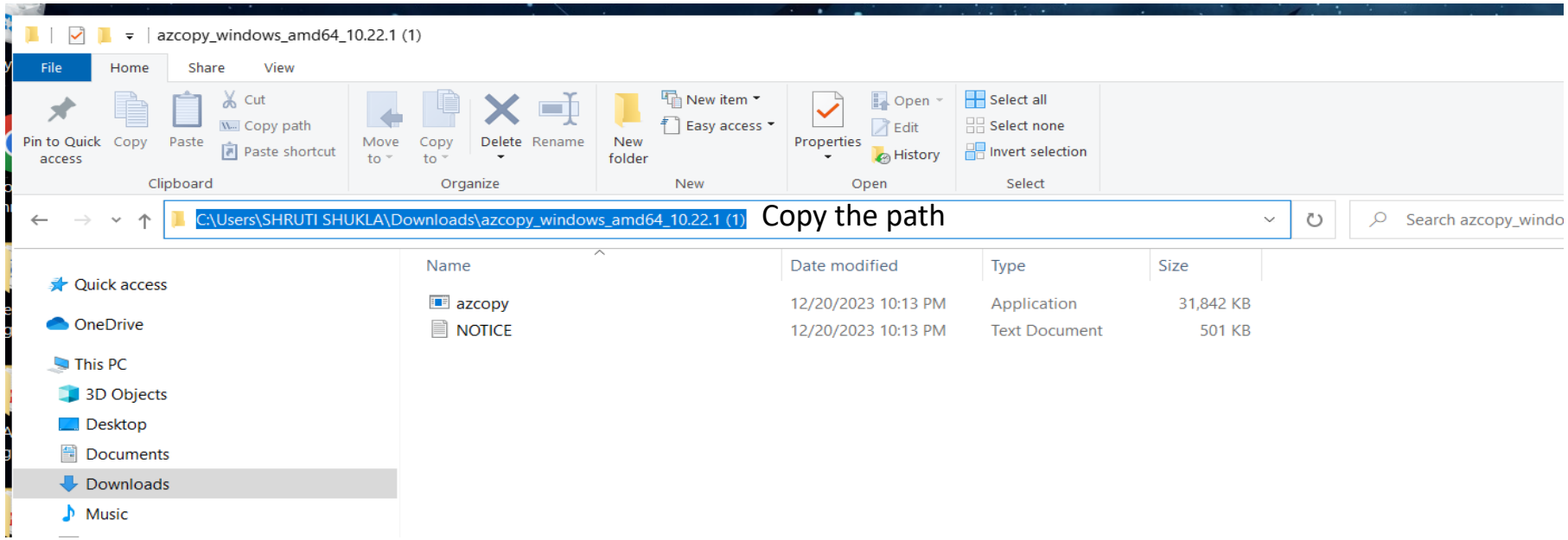


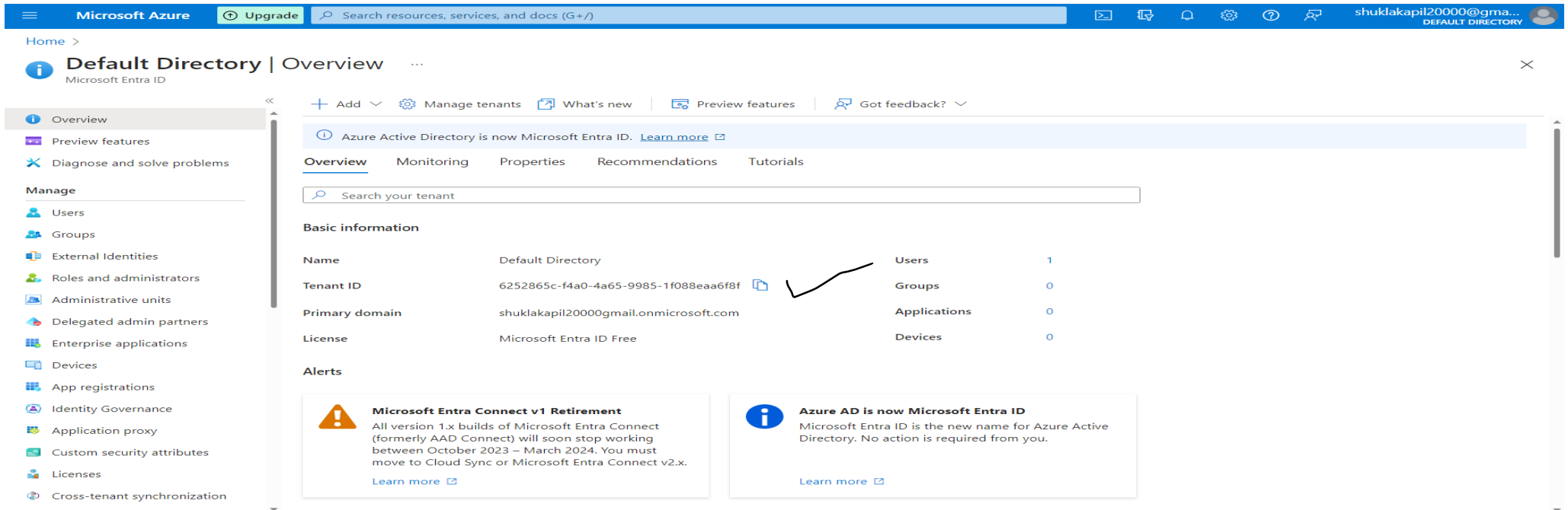
Assignment 4

Tasks To Be Performed:

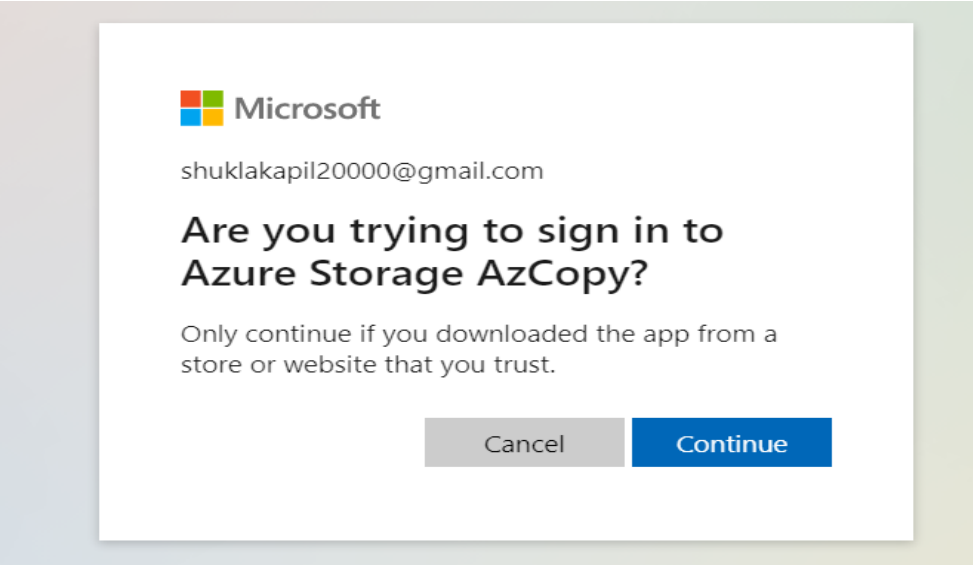
1. Use the same storage accounts from previous assignment
2. Use AzCopy utility to copy data from one storage container to another

Download the AZ copy . Extract the file – copy the path – open CMD – Run as admin.



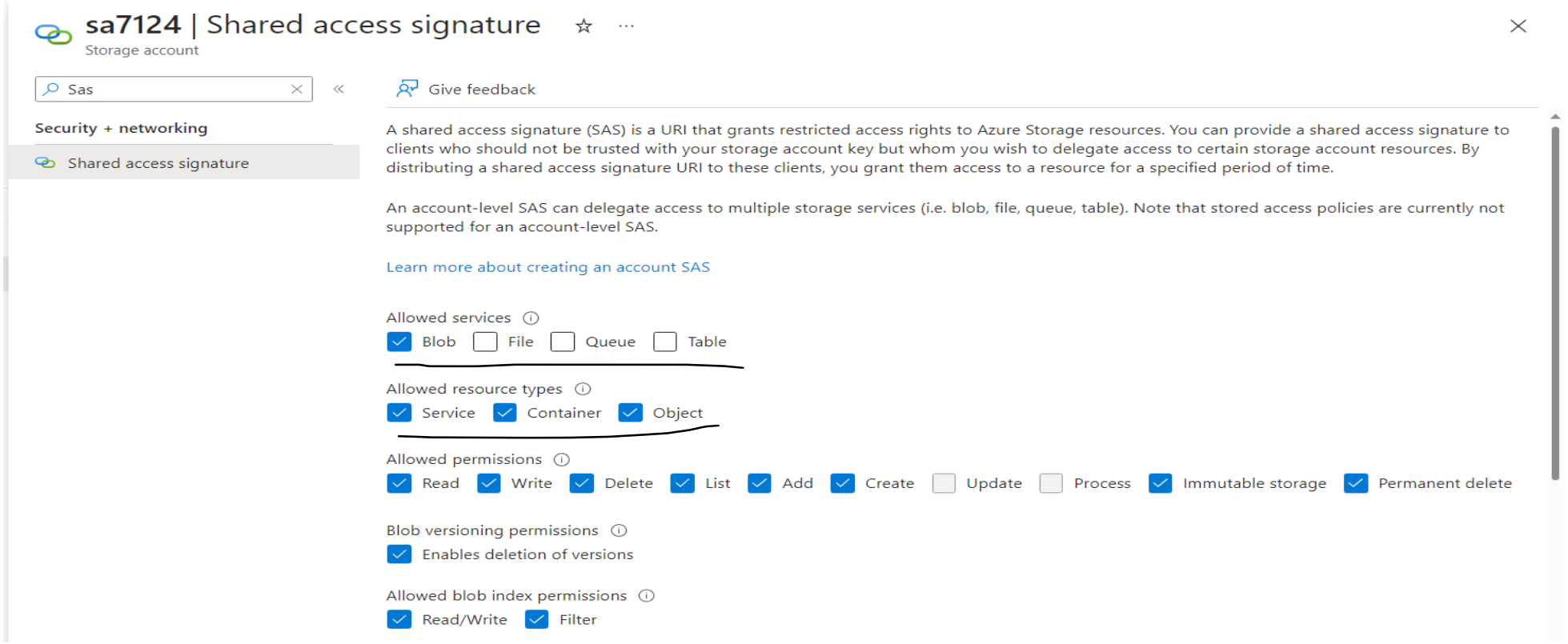


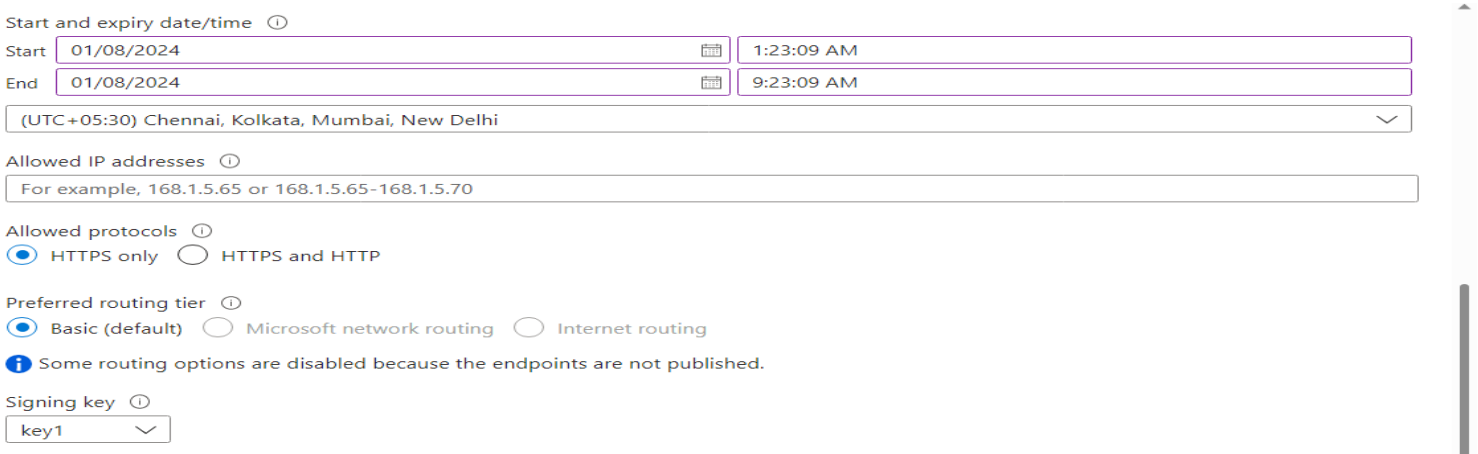
azcopy login – tenant-id _____- copy the URL and browse – enter password.

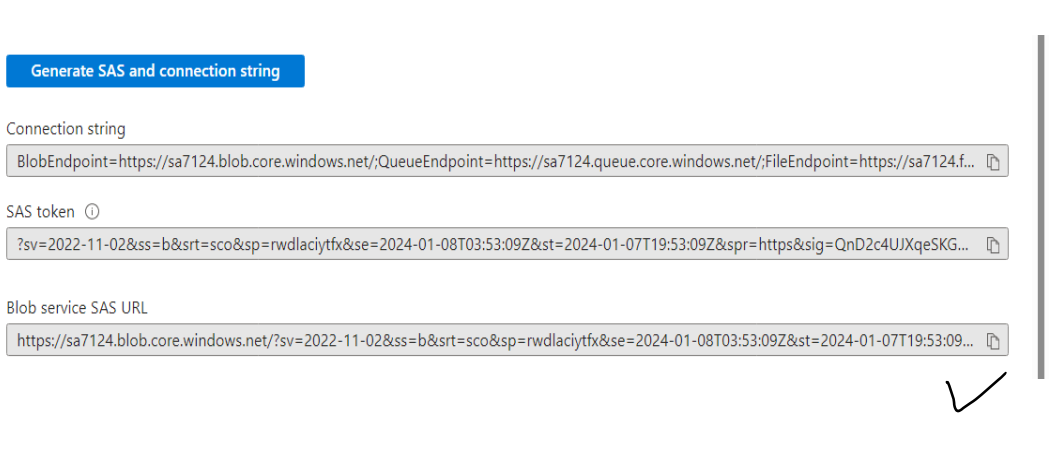



```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.19044.1645]
(c) Microsoft Corporation. All rights reserved.

C:\Windows\system32>cd C:\Users\SHRUTI SHUKLA\Downloads\azcopy_windows_amd64_10.22.1 (1)

C:\Users\SHRUTI SHUKLA\Downloads\azcopy_windows_amd64_10.22.1 (1)>azcopy login --tenant-id 6252865c-f4a0-4a65-9985-1f088eaa6f8f
INFO: 'azcopy login' command will be deprecated starting release 10.22. Use auto-login instead. Visit https://learn.microsoft.com/en-us/azure/storage/common/storage-use-azcopy-authorize-azure-active-directory#au
thorize-without-a-secret-store  to know more.
To sign in, use a web browser to open the page https://microsoft.com/devicelogin and enter the code NJ3GZLWHH to authenticate.

INFO: Login succeeded.

C:\Users\SHRUTI SHUKLA\Downloads\azcopy_windows_amd64_10.22.1 (1)>
```

Create SAS in both storage Account – give command azcopy copy “SAS1” “SAS2” --recursive

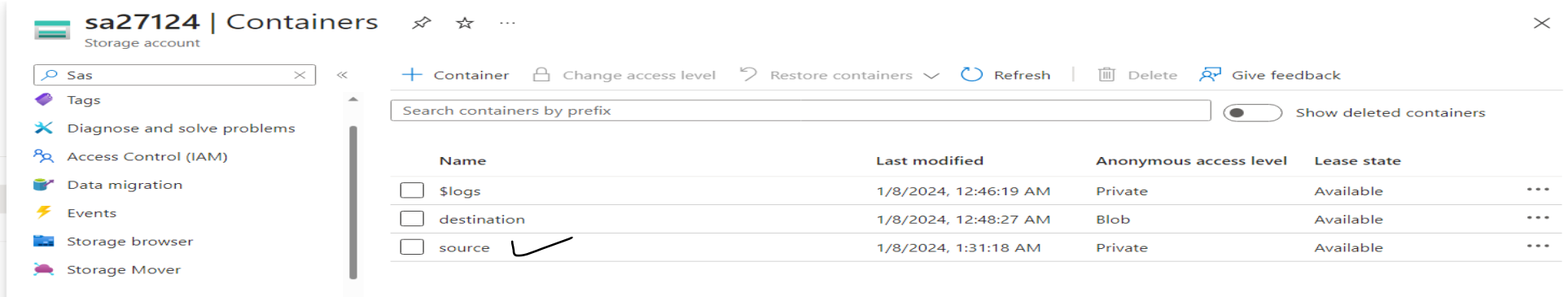
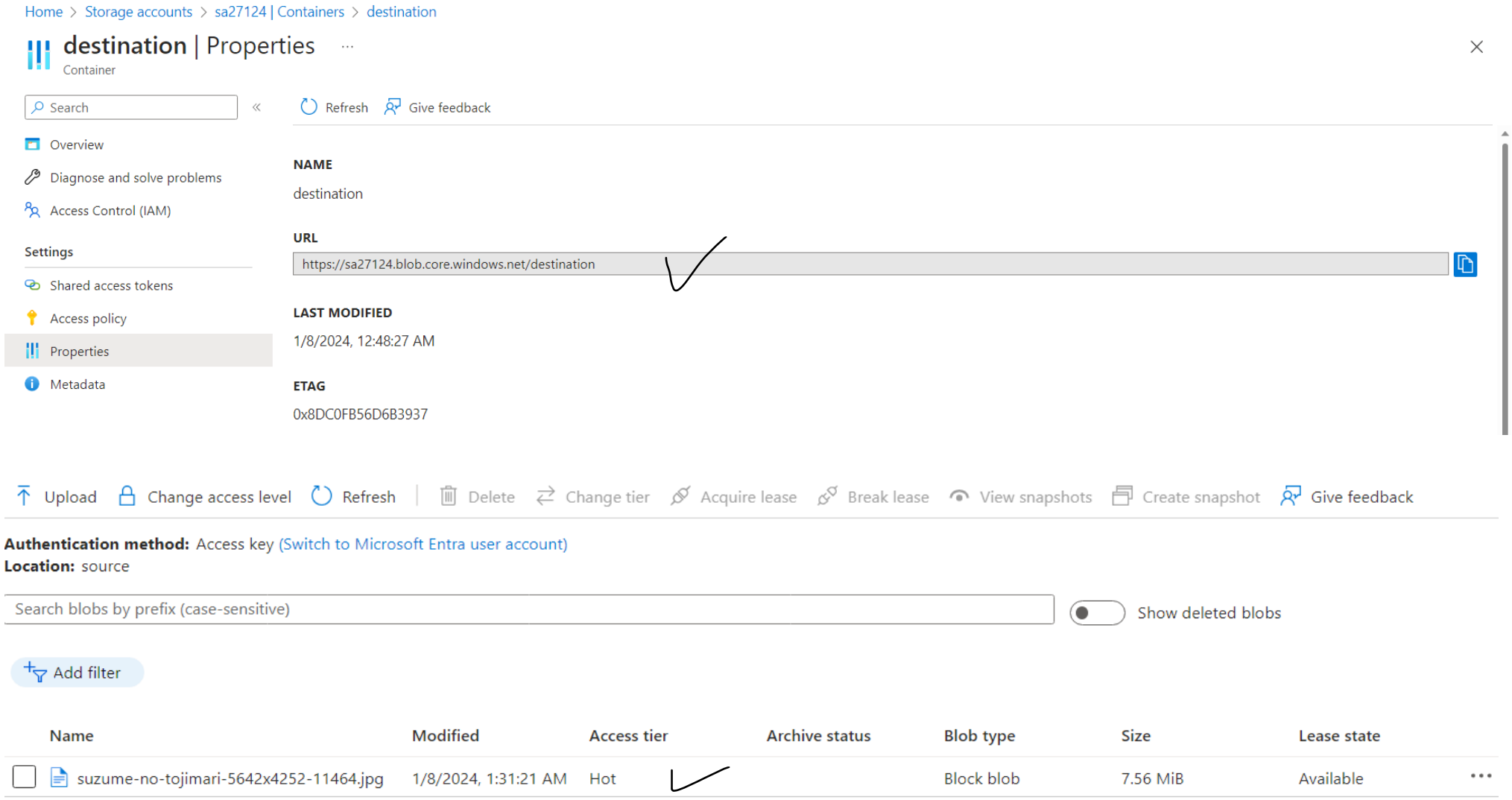






Administrator: Command Prompt

```
Microsoft Windows [Version 10.0.19044.1645]
(c) Microsoft Corporation. All rights reserved.

C:\Windows\system32>cd C:\Users\SHRUTI SHUKLA\Downloads\azcopy_windows_amd64_10.22.1 (1)

C:\Users\SHRUTI SHUKLA\Downloads\azcopy_windows_amd64_10.22.1 (1)>azcopy login --tenant-id 6252865c-f4a0-4a65-9985-1f088eaa6f8f
INFO: 'azcopy login' command will be deprecated starting release 10.22. Use auto-login instead. Visit https://learn.microsoft.com/en-us/azure/storage/common/storage-use-azcopy-authorize-azure-active-directory#au
thorize-without-a-secret-store  to know more.
To sign in, use a web browser to open the page https://microsoft.com/devicelogin and enter the code NJ3GZLWHH to authenticate.

INFO: Login succeeded.

C:\Users\SHRUTI SHUKLA\Downloads\azcopy_windows_amd64_10.22.1 (1)>azcopy copy "https://sa7124.blob.core.windows.net/?sv=2022-11-02&ss=b&srt=sco&sp=rwdlaciytfx&se=2024-01-08T03:53:09Z&st=2024-01-07T19:53:09Z&spr=
https&sig=QnD2c4UJXqeSKGMcHpEOCZBnSA%2FenQPJgYzofXD%2BtlI%3D" "https://sa27124.blob.core.windows.net/?sv=2022-11-02&ss=b&srt=sco&sp=rwdlaciytfx&se=2024-01-08T03:57:25Z&st=2024-01-07T19:57:25Z&spr=https&sig=UfbIm
m9B7Nq%2FATWzfONSOACvWMOoujWh8kaS6jP06YQ%3D" --recursive
INFO: Scanning...
INFO: Any empty folders will not be processed, because source and/or destination doesn't have full folder support

Job f6eb0d55-9ef1-f141-7bae-8410ca78d6ae has started
Log file is located at: C:\Users\SHRUTI SHUKLA\.azcopy\f6eb0d55-9ef1-f141-7bae-8410ca78d6ae.log

100.0 %, 1 Done, 0 Failed, 0 Pending, 0 Skipped, 1 Total,


Job f6eb0d55-9ef1-f141-7bae-8410ca78d6ae summary
Elapsed Time (Minutes): 0.0673
Number of File Transfers: 1
Number of Folder Property Transfers: 0
Number of Symlink Transfers: 0
Total Number of Transfers: 1
Number of File Transfers Completed: 1
Number of Folder Transfers Completed: 0
Number of File Transfers Failed: 0
Number of Folder Transfers Failed: 0
Number of File Transfers Skipped: 0
Number of Folder Transfers Skipped: 0
TotalBytesTransferred: 7931328
Final Job Status: Completed


C:\Users\SHRUTI SHUKLA\Downloads\azcopy_windows_amd64_10.22.1 (1)>
```



You can also give command azcopy copy “SAS1” “CONTAINER-URL” –recursive to copy data in particular container.