

Basic guide to create a Azure Blob storage account and push a sample file using Rest Interface.

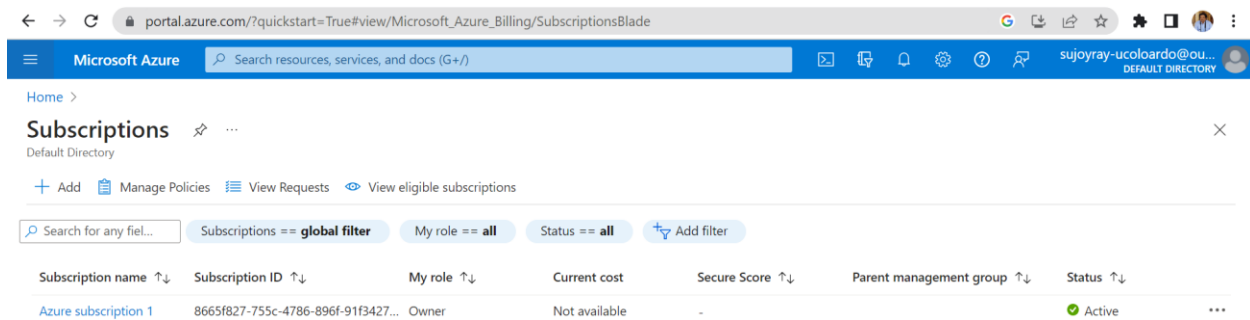
As more and more businesses rely on cloud computing to store and manage their data, Microsoft Azure has become a popular choice for its reliable and secure cloud services. One of the key offerings of Azure is its Blob Storage, which allows users to store and access large amounts of unstructured data, such as images, videos, and documents, from anywhere in the world. However, for those working with a 32-bit ARM controller, the popular data transfer tool, AzCopy, is not supported as it is only compatible with ARM 64-bit. In this article, an alternative ways will be discussed to synchronize data with Azure Blob Storage using REST API and local scripting. By following the steps outlined below, one can start storing and managing your data with ease, even without the use of AzCopy.

Below are the steps one can follow to create Azure Blob storage and start storing data using REST API.

Step1:

Create an azure account and please choose Pay As You Go service. A credit card is needed at this step.

Step 2: After step 1, one can see the following screen.



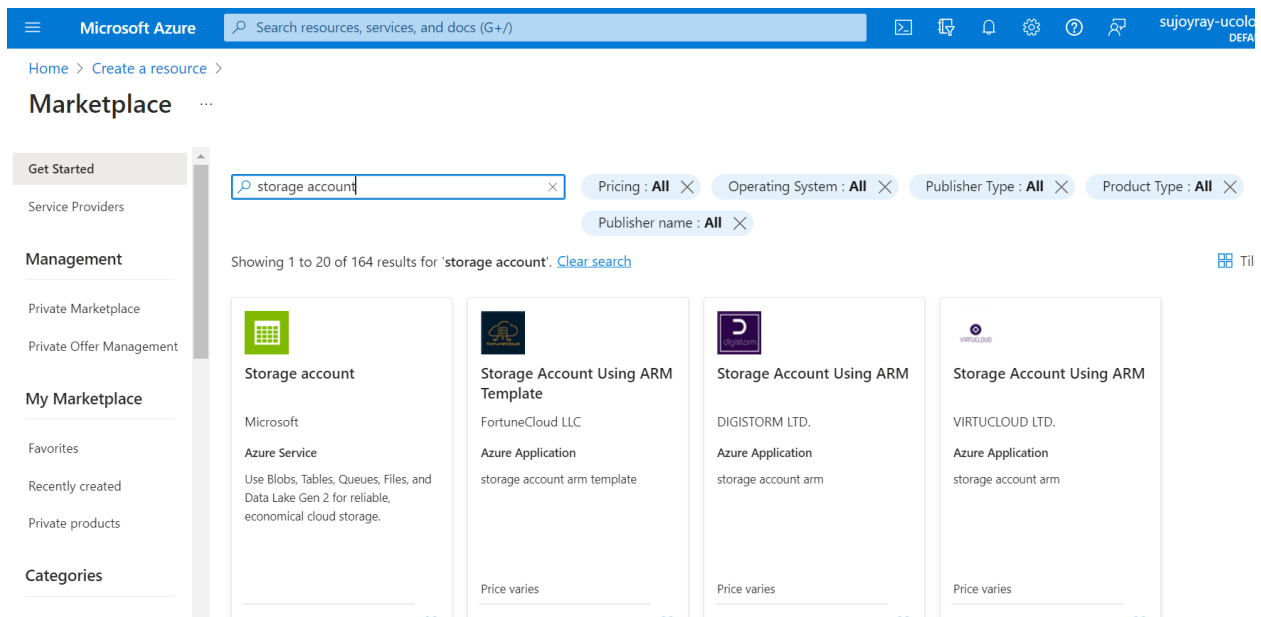
The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes the Microsoft Azure logo, a search bar, and user information. The main content area is titled 'Subscriptions' and shows a table of active subscriptions. The table has columns for Subscription name, Subscription ID, My role, Current cost, Secure Score, Parent management group, and Status. One subscription is listed: 'Azure subscription 1' with ID '8665f827-755c-4786-896f-91f3427...' and role 'Owner'. The status is 'Active'.

Subscription name ↑↓	Subscription ID ↑↓	My role ↑↓	Current cost	Secure Score ↑↓	Parent management group ↑↓	Status ↑↓
Azure subscription 1	8665f827-755c-4786-896f-91f3427...	Owner	Not available	-		Active

Step 3: Click on resource icon. This will take to the next screen, where storage service will be searched.



Step 4: Search for a storage account and once it appears on the screen, click on the green icon named as “Storage Account”



Step 5: After clicking on the account, below screen will appear and one has to click on the “create” button.

The screenshot shows the Microsoft Azure Marketplace page for the 'Storage account' service. The browser address bar displays the URL: `portal.azure.com/?quickstart=True#view/Microsoft_Azure_Marketplace/Gallery/ItemDetailsBladeNopdl/id/Microsoft.StorageAccount/selecti...`. The page header includes the Microsoft Azure logo, a search bar, and a user profile for 'sujoyray-ucolobardo@ou...'. The main content area features a green icon for the Storage account, its name, and a rating of 4.2 stars from 1802 reviews. Below this, there is a 'Plan' section with a dropdown menu set to 'Storage account' and a blue 'Create' button. The page also has tabs for 'Overview', 'Plans', 'Usage Information + Support', and 'Ratings + Reviews'. A descriptive paragraph states: 'Microsoft Azure provides scalable, durable cloud storage, backup, and recovery solutions for any data, big or small. It works with the infrastructure you already have to cost-effectively enhance your existing applications and business continuity strategy, and provide the storage required by your cloud applications, including unstructured text or binary data such as video, audio, and images.' At the bottom, there is a section titled 'More products from Microsoft' with a 'See All' link, followed by four product tiles: 'Active Directory Health Check', 'AD Replication Status', 'Device Update for IoT Hub', and 'Front Door and CDN profiles'.

Step 6: After Step 4, next page will appear. Where one has to create a **“Resource Group”**. Next one has to provide storage account name as shown below.

[Home](#) > [Create a resource](#) > [Marketplace](#) > [Storage account](#) >

Create a storage account ...

Basics Advanced Networking Data protection Encryption Tags Review

Project details

Select the subscription in which to create the new storage account. Choose a new or existing resource group to organize and manage your storage account together with other resources.

Subscription *

Resource group *

[Create new](#)

Instance details

If you need to create a legacy storage account, select the legacy storage account type.

A resource group is a container that holds related resources for an Azure solution.

Name *

[Review](#)

[< Previous](#)

[OK](#)

[Cancel](#)

Storage account name ⓘ *

Region ⓘ *

[Deploy to an edge zone](#)

Performance ⓘ *

☒ **Standard:** Recommended for most scenarios (general-purpose v2 account)

☐ **Premium:** Recommended for scenarios that require low latency.

Redundancy ⓘ *

☒ Make read access to data available in the event of regional unavailability.

Step 7: Under advanced tab, select REST API, storage account key access. Also, enable Blob storage, select region as shown below.

Basics **Advanced** Networking Data protection Encryption Tags Review

Configure security settings that impact your storage account.

Require secure transfer for REST API operations ⓘ



Allow enabling public access on individual containers ⓘ



Enable storage account key access ⓘ



Default to Azure Active Directory authorization in the Azure portal ⓘ



Minimum TLS version ⓘ

Version 1.2



Permitted scope for copy operations

-

Blob storage

Allow cross-tenant replication ⓘ



Access tier ⓘ



Hot: Frequently accessed data and day-to-day usage scenarios



Cool: Infrequently accessed data and backup scenarios

Azure Files

Enable large file shares ⓘ



Instance details

If you need to create a legacy storage account type, please click [here](#).

Storage account name ⓘ *

Region ⓘ *

(US) East US

[Deploy to an edge zone](#)

Performance ⓘ *



Standard: Recommended for most scenarios (general-purpose v2 account)

Step 8: In the review tab, ensure all desired settings are present. Once satisfied, hit **create**,

[Home](#) > [Create a resource](#) > [Marketplace](#) > [Storage account](#) >

Create a storage account ...

Basics Advanced Networking Data protection Encryption Tags Review

Basics

Subscription	Azure subscription 1
Resource Group	ColoadoEduProject
Location	eastus
Storage account name	aesdfinalproject001
Deployment model	Resource manager
Performance	Standard
Replication	Read-access geo-redundant storage (RA-GRS)

Advanced

Encryption Networking Data protection Encryption Tags

Create

< Previous

Next >

[Download a template for automation](#)

Step 9: Once create button is pressed, deployment screen will start and eventually it will finish as shown below. Click on **“Go to resource”**

The image displays two screenshots of the Azure portal's deployment overview page for a resource named 'aesdfinalproject001_1682269424108'.

Top Screenshot (Deployment in progress):

- Header:** Home > aesdfinalproject001_1682269424108 | Overview
- Left Navigation:** Overview (selected), Inputs, Outputs, Template.
- Search Bar:** Search
- Actions:** Delete, Cancel, Redeploy, Download, Refresh.
- Deployment Status:** Deployment is in progress.
- Deployment Details:**
 - Deployment name: aesdfinalproject001_16822...
 - Subscription: Azure subscription 1
 - Resource group: ColoadoEduProject
 - Start time: 4/23/2023, 10:03:43 AM
 - Correlation ID: 54bae35c-2f17-4153-96ea-52b10d889f
- Deployment details table:**

Resource	Type	Status	Operation details
No results.			
- Feedback:** Give feedback, Tell us about your experience with deployment.
- Right Panel:** Microsoft Defender for Cloud, Free Microsoft tutorials, Work with an expert.

Bottom Screenshot (Deployment complete):

- Header:** Home > aesdfinalproject001_1682269424108 | Overview
- Left Navigation:** Overview (selected), Inputs, Outputs, Template.
- Search Bar:** Search
- Actions:** Delete, Cancel, Redeploy, Download, Refresh.
- Deployment Status:** Your deployment is complete.
- Deployment Details:**
 - Deployment name: aesdfinalproject001_1682...
 - Subscription: Azure subscription 1
 - Resource group: ColoadoEduProject
 - Start time: 4/23/2023, 10:03:43 AM
 - Correlation ID: 54bae35c-2f17-4153-96ea-52b10d889f
- Next steps:** Go to resource (button).
- Feedback:** Give feedback, Tell us about your experience with deployment.
- Right Panel:** Cost Management, Microsoft Defender for Cloud, Free Microsoft tutorials, Work with an expert.

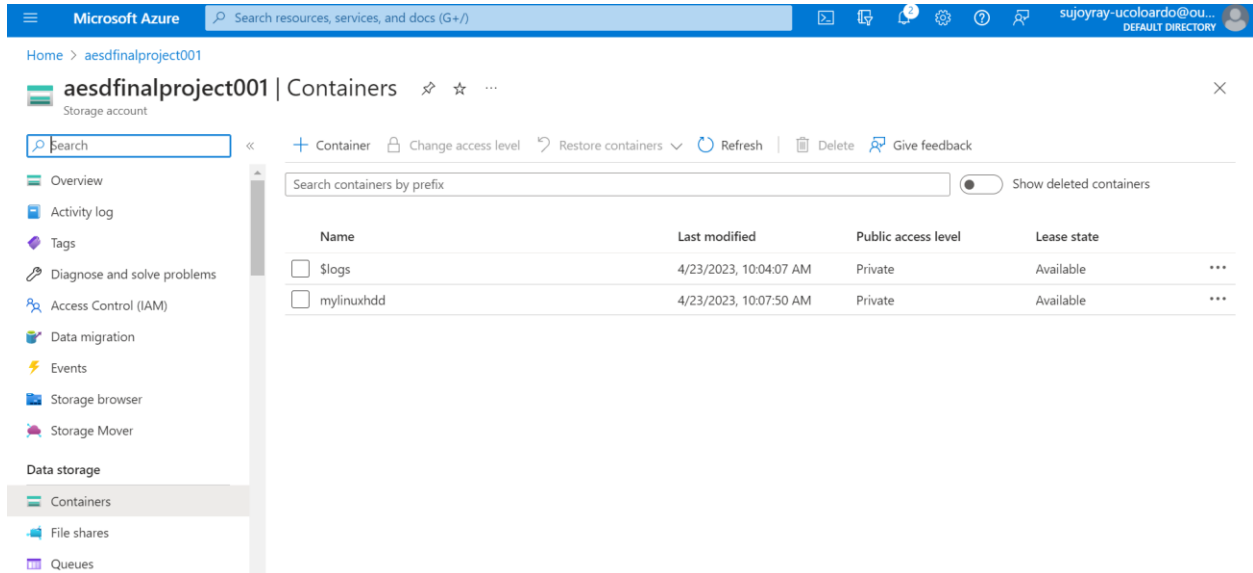
Step 10: After Step 9, following screen will appear. Click on the **Blob Service**.

The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes the Microsoft Azure logo, a search bar, and user information. The main content area displays the configuration for the storage account 'aesdfinalproject001'. The left sidebar lists various services, with 'Data storage' expanded and 'Containers' selected. The main panel shows the 'Blob service' configuration, including properties like 'Primary/Secondary Location', 'Subscription', 'Account kind', and 'Provisioning state'. The 'Properties' tab is active, showing settings for 'Hierarchical namespace', 'Default access tier', 'Blob public access', 'Blob soft delete', 'Container soft delete', 'Versioning', 'Change feed', and 'NFS v3'. The 'Security' and 'Networking' sections are also visible, showing settings for 'Require secure transfer for REST API operations', 'Storage account key access', 'Minimum TLS version', 'Infrastructure encryption', 'Allow access from', and 'Number of private endpoint connections'.

Step 11: In this step storage container will be created. Click on the **+Container** which will bring-up New Container page, provide the name and hit **create** button.

The screenshot shows the Microsoft Azure portal interface with the 'New container' dialog box open. The dialog box is titled 'New container' and has a close button. It contains a 'Name' field with the value 'mylinuxhdd', a 'Public access level' dropdown set to 'Private (no anonymous access)', and an 'Advanced' section. A message states: 'The public access level is set to private because public access is disabled on this storage account.' The 'Create' button is at the bottom. The background shows the 'Containers' page for the storage account 'aesdfinalproject001', with a table listing containers. The table has columns 'Name' and 'Last modified'. One container is listed: '\$logs' with a last modified date of '4/23/2023, 10:04:07 AM'.

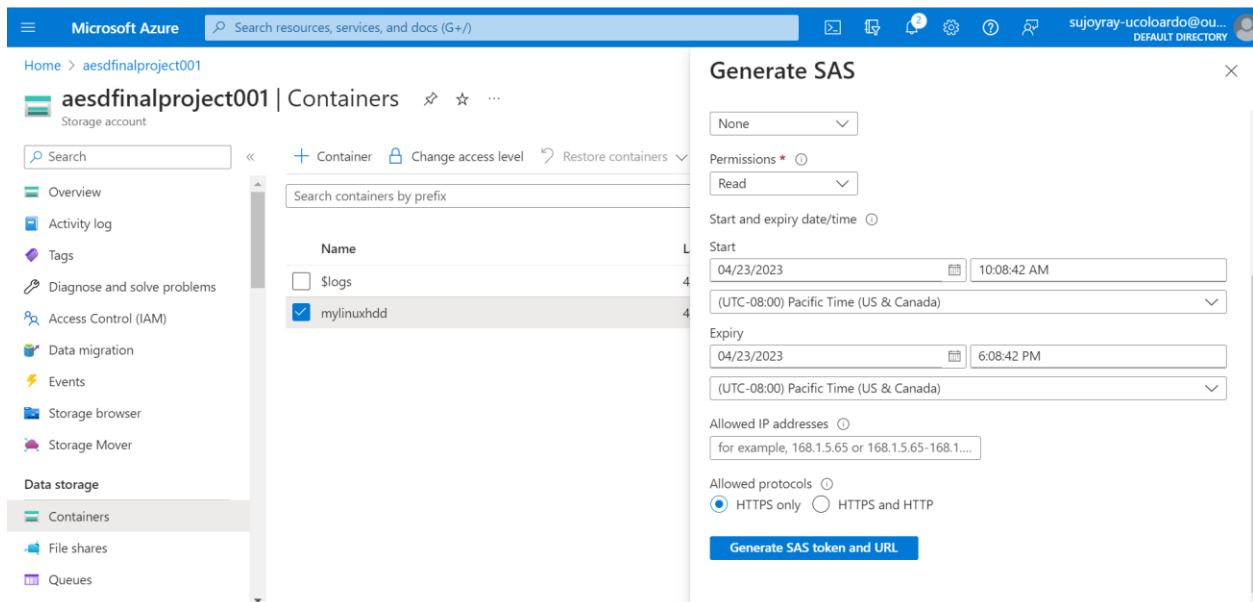
Step 12: Screen below shows the new container called “mylinuxhdd”



The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes the Microsoft Azure logo, a search bar, and the user profile 'sujoyray-ucoloardo@ou...'. The main content area is titled 'aesdfinalproject001 | Containers'. On the left, there is a sidebar with various navigation options. The main table lists containers with columns for Name, Last modified, Public access level, and Lease state. The 'mylinuxhdd' container is highlighted.

Name	Last modified	Public access level	Lease state
<input type="checkbox"/> \$logs	4/23/2023, 10:04:07 AM	Private	Available
<input checked="" type="checkbox"/> mylinuxhdd	4/23/2023, 10:07:50 AM	Private	Available

Step 13: In order to access the container using REST API, SAS token is created by hitting the “...” beside the name of storage container name.



The screenshot shows the Microsoft Azure portal interface with the 'Generate SAS' dialog box open. The dialog box is titled 'Generate SAS' and has a close button. It contains several fields for configuring the SAS token: 'Permissions' (set to 'Read'), 'Start and expiry date/time' (Start: 04/23/2023 10:08:42 AM, Expiry: 04/23/2023 6:08:42 PM), 'Allowed IP addresses' (with a placeholder for example), and 'Allowed protocols' (set to 'HTTPS only'). A 'Generate SAS token and URL' button is at the bottom.

Step 14: Set access rights as shown below

Generate SAS



Signing key ⓘ

Key 1 ▼

Stored access policy

None ▼

Permissions * ⓘ

7 selected ▼

- ☒ Read
- ☒ Add
- ☒ Create
- ☒ Write
- ☒ Delete
- ☒ List
- ☒ Immutable storage



10:08:42 AM

(US & Canada) ▼



6:08:42 PM

(US & Canada) ▼

Allowed IP addresses ⓘ

for example, 168.1.5.65 or 168.1.5.65-168.1....

Allowed protocols ⓘ

☒ HTTPS only ☐ HTTPS and HTTP

Step 15: Using curl, push a file to cloud

```
sujoy@ubuntu: ~/work/temp
sujoy@ubuntu:~/work/temp$ echo "This is my first push to cloud" > file1.txt
sujoy@ubuntu:~/work/temp$ ls
file1.txt  file3.txt  test.php  test.sh
sujoy@ubuntu:~/work/temp$ cat file1.txt
This is my first push to cloud
sujoy@ubuntu:~/work/temp$ curl -k -X PUT -T file1.txt -H "x-ms-date: $(date -u)"
-H "x-ms-blob-type: BlockBlob" "https://aesdfinalproject001.blob.core.windows.n
et/mylinuxhdd/file1.txt?sp=racwdli&st=2023-04-23T17:08:42Z&se=2023-04-24T01:08:4
2Z&spr=https&sv=2021-12-02&sr=c&sig=ONw0u4z8k0SkhvhpRgtpOPMNeS92kA2toEq%2ByHnzUb
E%3D"
sujoy@ubuntu:~/work/temp$
```

Step 16: Verify data by right clicking on file1.txt, view/edit option.

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

Home > aesdfinalproject001 | Containers >

mylinuxhdd Container

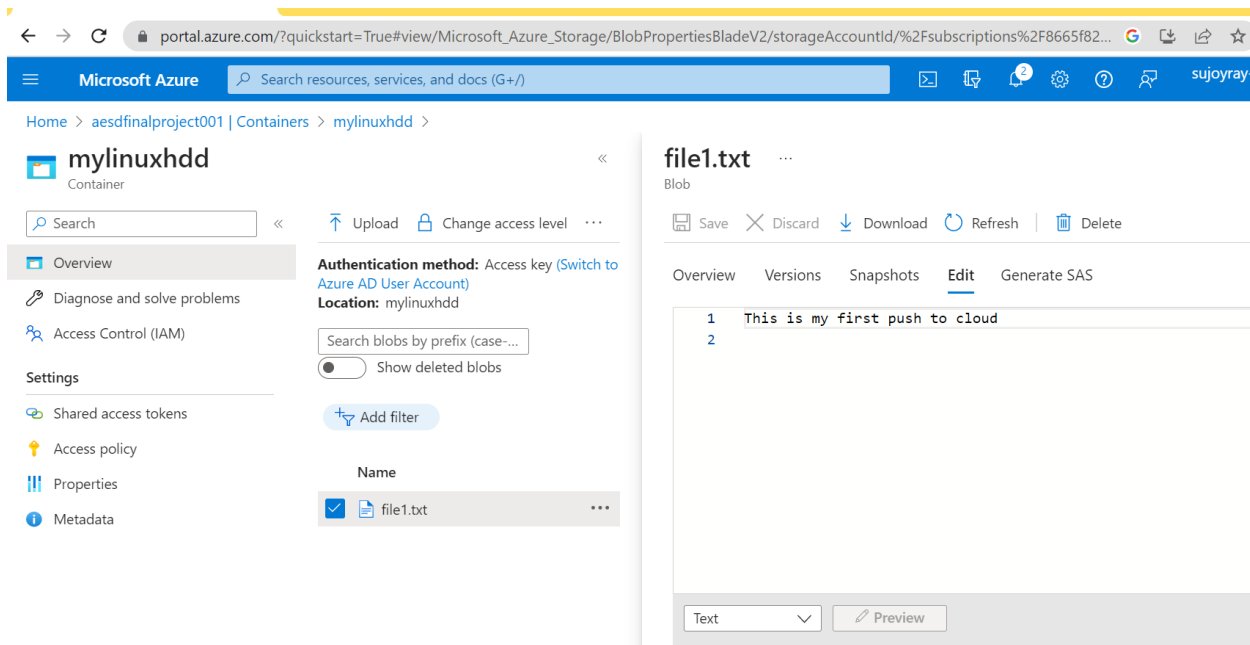
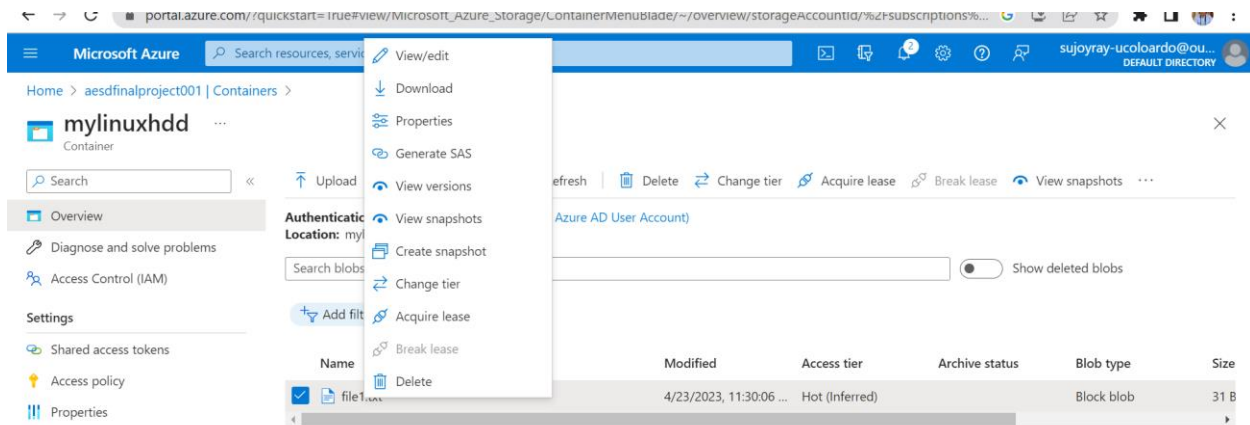
Search

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

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

+ Add filter

Name	Modified	Access tier	Archive status	Blob type	Size
<input type="checkbox"/> file1.txt	4/23/2023, 11:30:06 ...	Hot (Inferred)		Block blob	31 B



In conclusion, creating an Azure Blob Storage account is a straightforward process that can greatly benefit businesses of all sizes. With its scalability, security, and accessibility features, Azure Blob Storage is a reliable solution for storing and managing large amounts of unstructured data. Whether you're a small startup or a large corporation, Azure Blob Storage can help to streamline the data management and improve overall business operations. I hope this guide has been helpful in getting someone started with Azure Blob Storage, and I encourage the reader to explore the many other features that Azure has to offer.