

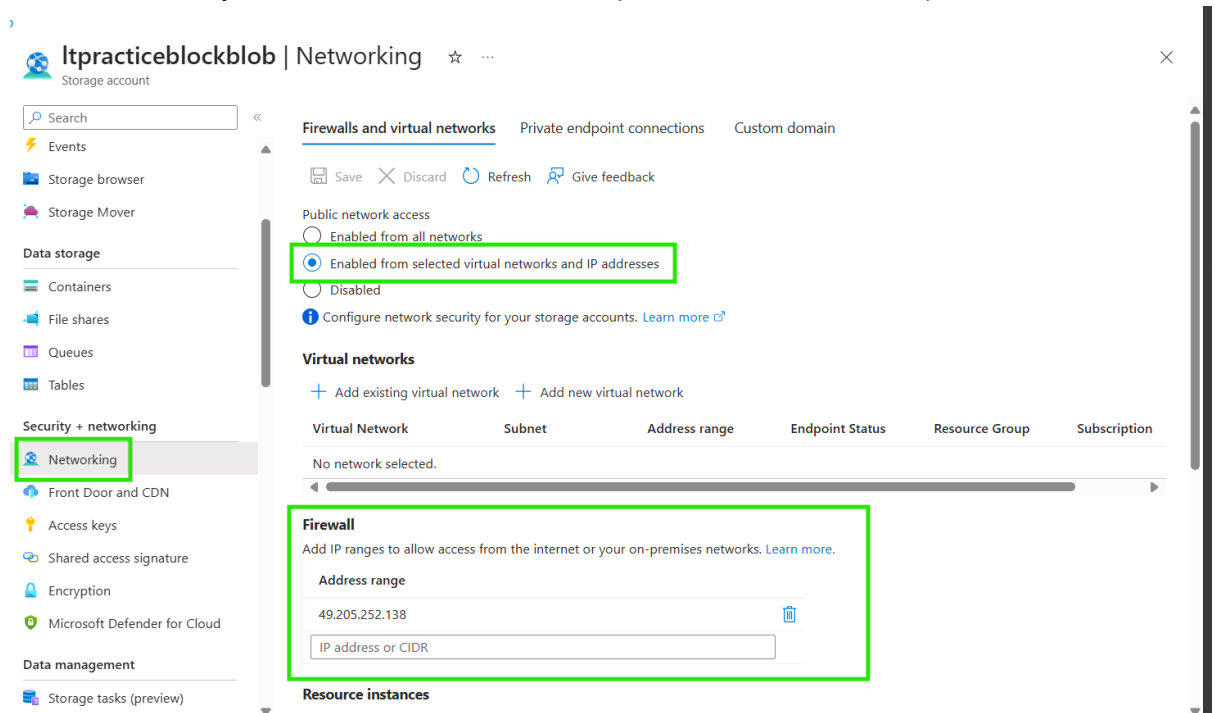
Azure Storage Account

- Tiers:
 - Standard:
 - offers lowest cost per gb and is backed by HDDs
 - Premium:
 - Offers low latency performance & is backed by SSD
- Storage Account Type
 - General purpose Storage:
 - This is of tier standard
 - Redundancy options:
 - LRS
 - ZRS
 - GRS
 - GZRS
 - Block Blob Storage
 - Redundancy options:
 - LRS
 - ZRS
 - File Storage
 - Redundancy options:
 - LRS
 - ZRS
 - Page Blob storage
 - Redundancy options:
 - LRS
 - ZRS

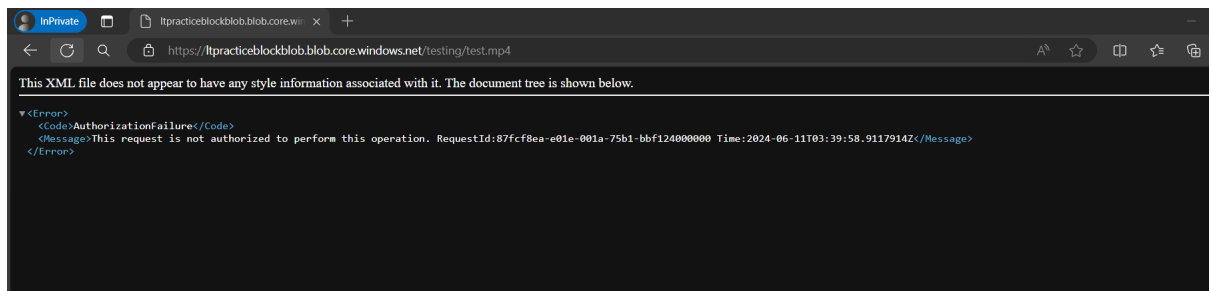
Storage Account Endpoints

- The name for storage account has to be unique across all accounts in Azure.
- sample blob endpoint
<https://ltpracticeblobblob.blob.core.windows.net/testing/test.mp4>
- Securing the endpoints:

- We can make only selected virtual networks and ip address access the endpoints



- For all other than selected ip addresses and virtual networks when we access data we get authorization failure

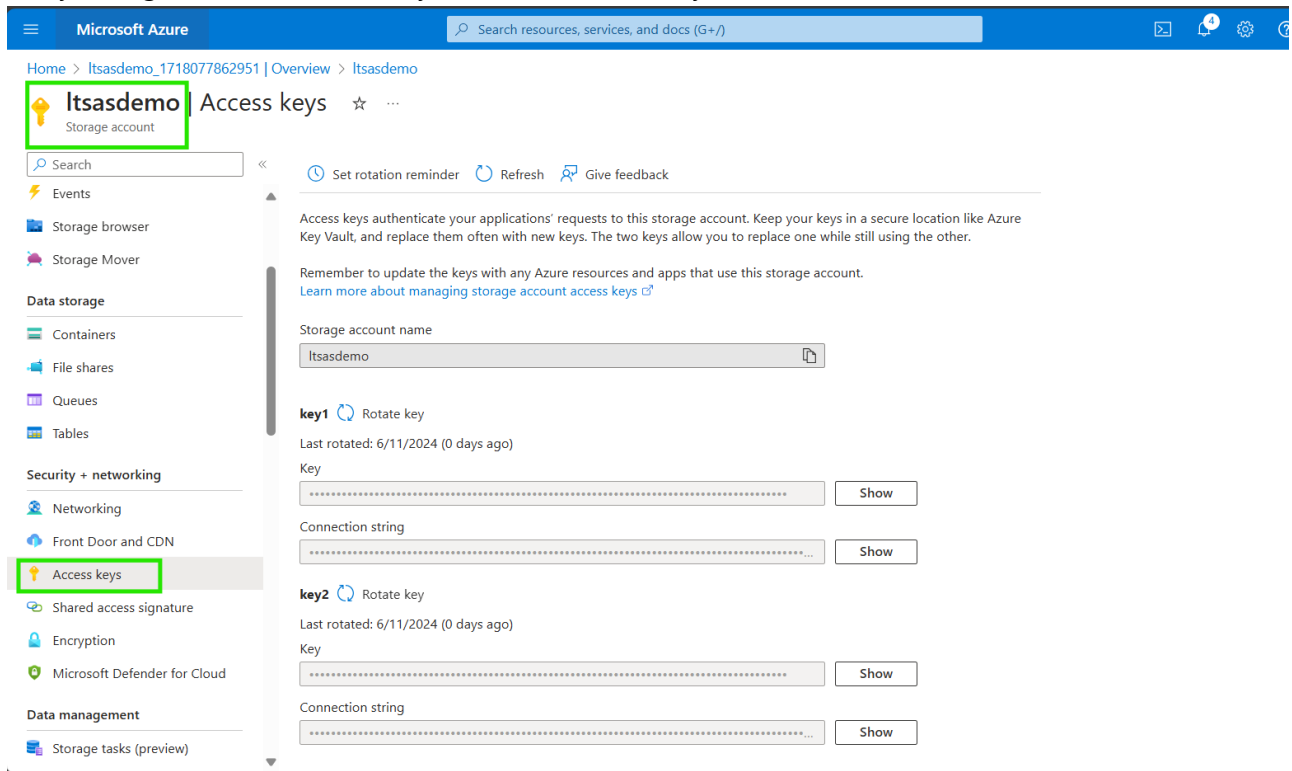


Azure Storage Security

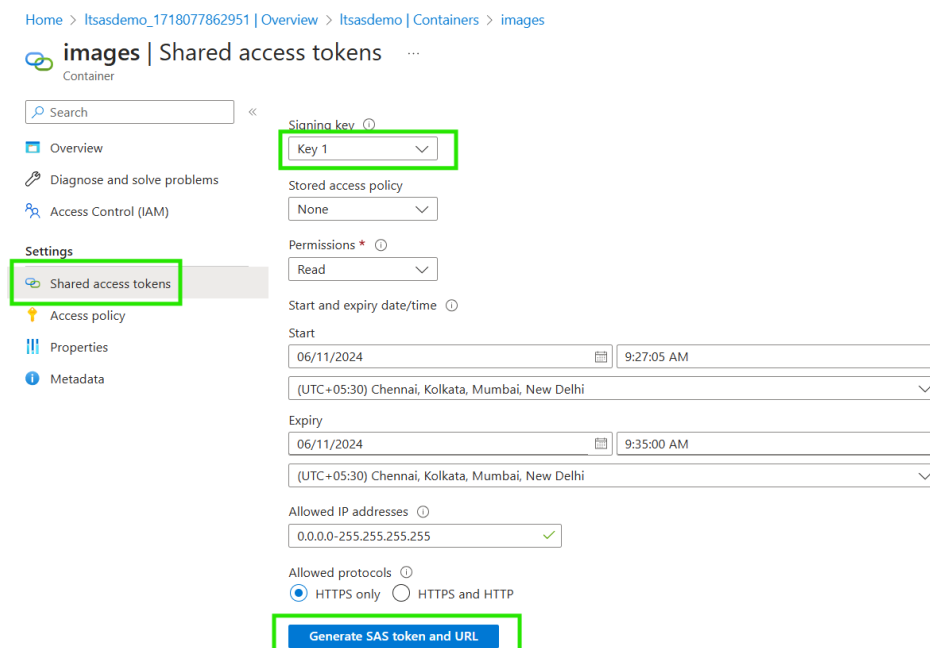
- Security is a major concern for organizations storing data in public cloud.
- Azure provides a set of comprehensive security capabilities to address the concerns of organizations.
 - Encryption: Azure encrypts all data written in azure storage account automatically using storage encryption service.
 - Authentication: Azure storage supports Azure AD based authentication for Azure blobs. Using RBAC we can control the access of storage account
 - Data in transit: (HTTPS)
 - Azure Disk encryption
 - Shared Access signatures: We can control fine-grained access to data objects using SAS keys

Shared access signature

- Every storage account has two keys called the access keys



- We can share these access keys with users and they can use this as Authorization header of API calls to get authenticated.
- This is not considered to be a good approach as the user gets full access as long as keys are not rotated
- SAS is a UR that is composed of various parameters by which you can restrict access to Azure storage
- SAS gives us the ability to grant granular access to the objects. Using SAS
 - Control access at the service level
 - Set the time frame during which SAS is valid
 - Set permissions like read, write, delete etc
 - Set IP ranges from which SAS Keys are accepted
 - Set the protocol to HTTP or HTTPS
- Create a SAS for read access



Data Protection in Azure storage Accounts

- Lets create a new resource group original
- Lets create a storage account with randomname and focus on Data protection tab

Home > Storage accounts >

Create a storage account ...

- Basics
- Advanced
- Networking
- Data protection
- Encryption
- Tags
- Review + create

Recovery

Protect your data from accidental or erroneous deletion or modification.

☐ Enable point-in-time restore for containers

Use point-in-time restore to restore one or more containers to an earlier state. If point-in-time restore is enabled, then versioning, change feed, and blob soft delete must also be enabled. [Learn more](#)

☒ Enable soft delete for blobs

Soft delete enables you to recover blobs that were previously marked for deletion, including blobs that were overwritten. [Learn more](#)

Days to retain deleted blobs 7

☒ Enable soft delete for containers

Soft delete enables you to recover containers that were previously marked for deletion. [Learn more](#)

Days to retain deleted containers 7

☒ Enable soft delete for file shares

Soft delete enables you to recover file shares that were previously marked for deletion. [Learn more](#)

Days to retain deleted file shares 7

- Previous
- Next
- Review + create

Days to retain deleted file shares 7

Tracking

Manage versions and keep track of changes made to your blob data.

☐ Enable versioning for blobs

Use versioning to automatically maintain previous versions of your blobs. [Learn more](#)

Consider your workloads, their impact on the number of versions created, and the resulting costs. Optimize costs by automatically managing the data lifecycle. [Learn more](#)

- Previous
- Next
- Review + create

- Now create a container and upload some items into it

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images

Container

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Upload

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Change tier

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Break lease

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Settings

Shared access tokens

Access policy

Properties

Metadata

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

Location: images

Search blobs by prefix (case-sensitive)

Show deleted blobs

Add filter

Name	Modified	Access tier	Archive status	Blob type	Size	Lease state
<input type="checkbox"/> storage1.png	6/11/2024, 9:43:29 AM	Hot (Inferred)		Block blob	25.02 KiB	Available ***
<input type="checkbox"/> storage10.png	6/11/2024, 9:43:28 AM	Hot (Inferred)		Block blob	35.41 KiB	Available ***
<input type="checkbox"/> storage2.png	6/11/2024, 9:43:29 AM	Hot (Inferred)		Block blob	68.04 KiB	Available ***
<input type="checkbox"/> storage3.png	6/11/2024, 9:43:29 AM	Hot (Inferred)		Block blob	30.68 KiB	Available ***
<input type="checkbox"/> storage4.png	6/11/2024, 9:43:29 AM	Hot (Inferred)		Block blob	58.82 KiB	Available ***
<input type="checkbox"/> storage5.png	6/11/2024, 9:43:29 AM	Hot (Inferred)		Block blob	63.27 KiB	Available ***
<input type="checkbox"/> storage6.png	6/11/2024, 9:43:28 AM	Hot (Inferred)		Block blob	72.14 KiB	Available ***
<input type="checkbox"/> storage7.png	6/11/2024, 9:43:28 AM	Hot (Inferred)		Block blob	72.86 KiB	Available ***
<input type="checkbox"/> storage8.png	6/11/2024, 9:43:28 AM	Hot (Inferred)		Block blob	63.06 KiB	Available ***
<input type="checkbox"/> storage9.png	6/11/2024, 9:43:28 AM	Hot (Inferred)		Block blob	63.15 KiB	Available ***

- Since soft delete is enabled for 7 days, lets delete storage10.png

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<input checked="" type="checkbox"/> storage10.png	6/11/2024, 9:43:28 AM	Hot (Inferred)		Block blob	35.41 KiB	Available ***
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<input type="checkbox"/> storage6.png	6/11/2024, 9:43:28 AM	Hot (Inferred)		Block blob	72.14 KiB	Available ***
<input type="checkbox"/> storage7.png	6/11/2024, 9:43:28 AM	Hot (Inferred)		Block blob	72.86 KiB	Available ***
<input type="checkbox"/> storage8.png	6/11/2024, 9:43:28 AM	Hot (Inferred)		Block blob	63.06 KiB	Available ***
<input type="checkbox"/> storage9.png	6/11/2024, 9:43:28 AM	Hot (Inferred)		Block blob	63.15 KiB	Available ***

View/edit

Download

Properties

Generate SAS

View versions

View snapshots

Create snapshot

Change tier

Acquire lease

Break lease

Delete

- Now lets view the items and select show deleted blobs

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Location: images

Search blobs by prefix (case-sensitive)

Show deleted blobs

Add filter

Name	Modified	Access tier	Archive status	Blob type	Size	Lease state
<input type="checkbox"/> storage1.png	6/11/2024, 9:43:29 AM	Hot (Inferred)		Block blob	25.02 KiB	Available ***
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<input type="checkbox"/> storage6.png	6/11/2024, 9:43:28 AM	Hot (Inferred)		Block blob	72.14 KiB	Available ***
<input type="checkbox"/> storage7.png	6/11/2024, 9:43:28 AM	Hot (Inferred)		Block blob	72.86 KiB	Available ***
<input type="checkbox"/> storage8.png	6/11/2024, 9:43:28 AM	Hot (Inferred)		Block blob	63.06 KiB	Available ***
<input type="checkbox"/> storage9.png	6/11/2024, 9:43:28 AM	Hot (Inferred)		Block blob	63.15 KiB	Available ***

Successfully deleted blob(s)

Successfully deleted 1 blobs(s).

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Location: images

Search blobs by prefix (case-sensitive)

Show deleted blobs

Add filter

Name	Status	Retention (days)	Modified	Access tier	Archive status	Blob type
storage1.png	Current version	-	6/11/2024, 9:43:29 AM	Hot (Inferred)		Block blob
storage10.png	Deleted	6	6/11/2024, 9:43:28 AM	Hot (Inferred)		Block blob
storage2.png	Current version	-	6/11/2024, 9:43:29 AM	Hot (Inferred)		Block blob
storage3.png	Current version	-	6/11/2024, 9:43:29 AM	Hot (Inferred)		Block blob
storage4.png	Current version	-	6/11/2024, 9:43:29 AM	Hot (Inferred)		Block blob
storage5.png	Current version	-	6/11/2024, 9:43:29 AM	Hot (Inferred)		Block blob
storage6.png	Current version	-	6/11/2024, 9:43:28 AM	Hot (Inferred)		Block blob
storage7.png	Current version	-	6/11/2024, 9:43:28 AM	Hot (Inferred)		Block blob
storage8.png	Current version	-	6/11/2024, 9:43:28 AM	Hot (Inferred)		Block blob
storage9.png	Current version	-	6/11/2024, 9:43:28 AM	Hot (Inferred)		Block blob

- To undelete the storage10.png

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Upload

Change access level

Refresh

Delete

Change tier

Acquire lease

Break lease

View snapshots

Create snapshot

Give feedback

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

Location: images

Search blobs by prefix (case-sensitive)

Show deleted blobs

Add filter

Status	Retention (days)	Modified	Access tier	Archive status	Blob type	Size	Lease state	
Current version	-	6/11/2024, 9:43:29 AM	Hot (Inferred)		Block blob	25.02 KiB	Available	...
Deleted	6	6/11/2024, 9:43:28 AM	Hot (Inferred)		Block blob	35.41 KiB		Properties View snapshots Undelete
Current version	-	6/11/2024, 9:43:29 AM	Hot (Inferred)		Block blob	68.04 KiB		...
Current version	-	6/11/2024, 9:43:29 AM	Hot (Inferred)		Block blob	30.68 KiB		...
Current version	-	6/11/2024, 9:43:29 AM	Hot (Inferred)		Block blob	58.82 KiB		...
Current version	-	6/11/2024, 9:43:29 AM	Hot (Inferred)		Block blob	63.27 KiB	Available	...
Current version	-	6/11/2024, 9:43:28 AM	Hot (Inferred)		Block blob	72.14 KiB	Available	...
Current version	-	6/11/2024, 9:43:28 AM	Hot (Inferred)		Block blob	72.86 KiB	Available	...
Current version	-	6/11/2024, 9:43:28 AM	Hot (Inferred)		Block blob	63.06 KiB	Available	...
Current version	-	6/11/2024, 9:43:28 AM	Hot (Inferred)		Block blob	63.15 KiB	Available	...

Microsoft Azure

Search resources, services, and docs (G+)

admin@khaja.tech
KHAJA.TECH (KHAJA.TECH)

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Success! Successfully undeleted blob(s)
Successfully undeleted 1 blob(s).

Images

Upload Change access level Refresh Delete Change tier Acquire lease Break lease View snapshots Create snapshot Give feedback

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

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

Add filter

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<input type="checkbox"/> storage3.png	Current version	-	6/11/2024, 9:43:29 AM	Hot (Inferred)		Block blob
<input type="checkbox"/> storage4.png	Current version	-	6/11/2024, 9:43:29 AM	Hot (Inferred)		Block blob
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<input type="checkbox"/> storage6.png	Current version	-	6/11/2024, 9:43:28 AM	Hot (Inferred)		Block blob
<input type="checkbox"/> storage7.png	Current version	-	6/11/2024, 9:43:28 AM	Hot (Inferred)		Block blob
<input type="checkbox"/> storage8.png	Current version	-	6/11/2024, 9:43:28 AM	Hot (Inferred)		Block blob
<input type="checkbox"/> storage9.png	Current version	-	6/11/2024, 9:43:28 AM	Hot (Inferred)		Block blob

- We can undelete containers within 7 days
- We can undelete storage account within 14 days as long as you have not create a new storage account with a same name and resource group.