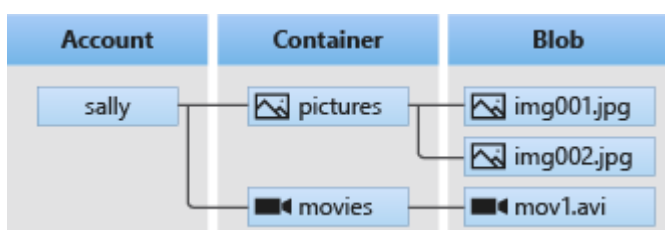


AZ-104 Azure - Conceptualizing Azure Blob Storage

- [What is blob storage](#)
- [Introduction to Azure Blob Storage](#)

1. Describing Azure Blob Storage
2. Components of Blob Architecture
3. Type of Blobs
4. Container Access Levels

Azure Blob Storage is Microsoft's object storage solution for the cloud. Blob Storage is optimized for storing massive amounts of unstructured data. Unstructured data is data that doesn't adhere to a particular data model or definition, such as text or binary data. Its object based and easily accessible from HTTP/REST



Blob Storage is designed for:

- Serving images or documents directly to a browser.
- Storing files for distributed access.
- Streaming video and audio.
- Writing to log files.
- Storing data for backup and restore, disaster recovery, and archiving.
- Storing data for analysis by an on-premises or Azure-hosted service.

Blob Architecture

- Blob Service: A sub service for storage accounts.
- Blob Container: The container where we store our blobs.
- Blobs: The data we store in our containers.

Types of Blobs

- Block blobs: Storing images or videos best suited for streaming.
- Append blobs: Log files
- Page Blobs: Virtual machine disks

Container Access Level

- Access control: By default, public access to blobs is granted at the storage account level

Container Access Levels:

- Private: No anonymous access.
- Blob: Anonymous access to blob
- Container: Anonymous access to container and blobs it contains.

Now let's access our Storage account ,below we can see the system storage account, here we will crate a container

The screenshot shows the Microsoft Azure portal interface. At the top, there's a navigation bar with 'Microsoft Azure' and a search bar. Below that, the breadcrumb path is 'Home > htflearning1_1709165080802 | Overview > htflearning1'. The main heading is 'htflearning1 | Containers' with a 'Storage account' label. A search bar is present with the text 'Search containers by prefix'. Below the search bar, there are several action links: '+ Container', 'Change access level', 'Restore containers', 'Refresh', 'Delete', and 'Give feedback'. A 'Show deleted containers' toggle is also visible. The main content area contains a table with the following data:

Name	Last modified	Anonymous access level	Lease state
<input type="checkbox"/> \$logs	2/28/2024, 6:05:06 PM	Private	Available

On the left side, there is a navigation menu with various options: Overview, Activity log, Tags, Diagnose and solve problems, Access Control (IAM), Data migration, Events, Storage browser, Storage Mover, Data storage (highlighted), Containers, File shares, Queues, and Tables.

First check if blob anonymous access its enabled if not click on the link to enable

- Upload
- Open in Explorer
- Delete
- Move
- Refresh
- Open in mobile
- CLI / PS
- Feedback

Overview

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

Data storage

- Containers
- File shares
- Queues
- Tables

Security + networking

- Networking
- Front Door and CDN
- Access keys
- Shared access signature
- Encryption

Essentials

Resource group (move) : [1-df4064bd-playground-sandbox](#)
Location : eastus
Subscription (move) : [P5-Real Hands-On Labs](#)
Subscription ID : 80ea84e8-afce-4851-928a-9e2219724c69
Disk state : Available
Tags (edit) : [Add tags](#)

- Properties
- Monitoring
- Capabilities (7)
- Recommendations (0)
- Tutorials
- Tools + SDKs

Blob service

Hierarchical namespace	Disabled
Default access tier	Cool
Blob anonymous access	Enabled
Blob soft delete	Enabled (7 days)
Container soft delete	Enabled (7 days)
Versioning	Disabled
Change feed	Disabled
NFS v3	Disabled
Allow cross-tenant replication	Disabled
Storage tasks assignments	None

File service

now create a new container, anonymous access level will only be available if blob anonymous access its enabled.

 + Container Change access level Restore containers Refresh Delete Give feedback Show deleted container

Name	Last modified	Anonymous access level
Slugs	2/28/2024, 6:05:06 PM	Private

New container

Name * privatecontainer

Anonymous access level Private (no anonymous access)

- Private (no anonymous access)
- Blob (anonymous read access for blobs only)
- Container (anonymous read access for containers and blobs)

3 different levels of containers with different access.

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

Home > htflerning1_1709165080802 | Overview > htflerning1

htflerning1 | Containers

Storage account

Search containers by prefix Show deleted containers

Name	Last modified	Anonymous access level	Lease state
<input type="checkbox"/> \$logs	2/28/2024, 6:05:06 PM	Private	Available
<input type="checkbox"/> blobcontainer	2/28/2024, 6:16:54 PM	Blob	Available
<input type="checkbox"/> containeraccesscontainer	2/28/2024, 6:17:09 PM	Container	Available
<input type="checkbox"/> privatecontainer	2/28/2024, 6:16:36 PM	Private	Available

Left sidebar: Overview, Activity log, Tags, Diagnose and solve problems, Access Control (IAM), Data migration, Events, Storage browser, Storage Mover

We can see each container has its own url to access the container

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

Home > htflerning1_1709165080802 | Overview > htflerning1 | Containers > containeraccesscontainer

containeraccesscontainer | Properties

Refresh Give feedback

NAME
containeraccesscontainer

URL
<https://htflerning1.blob.core.windows.net/containeraccesscontainer>

LAST MODIFIED
2/28/2024, 6:17:09 PM

ETAG
0x8DC388BC52E5805

LEASE STATUS
Unlocked

LEASE STATE
Available

LEASE DURATION
-

ENCRYPTION SCOPE
\$account-encryption-key

VERSION-LEVEL IMMUTABILITY SUPPORT
Disabled

now let's upload a random file to our private container, we can see it has its own url to access the file directly

Microsoft Azure

Home > Storage accounts > htlearning1 | Containers > privatecontainer >

privatecontainer

Container

Search

Upload Change access level

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

Search blobs by prefix (case-...)

Show deleted blobs

Add filter

Name

- azure.png

azure.png

Blob

Save Discard Download Refresh Delete Change tier Acquire lease Break lease Give feedback

Overview Versions Snapshots Edit Generate SAS

Properties

URL: <https://htlearning1.blob...>

LAST MODIFIED	2/28/2024, 6:21:08 PM
CREATION TIME	2/28/2024, 6:21:08 PM
VERSION ID	-
TYPE	Block blob
SIZE	288.39 KiB
ACCESS TIER	Cool (Inferred)
ACCESS TIER LAST MODIFIED	N/A
ARCHIVE STATUS	-
REHYDRATE PRIORITY	-
SERVER ENCRYPTED	true
ETAG	0x8DC38BC53BC6C26
VERSION-LEVEL IMMUTABILITY POLICY	Disabled
CACHE-CONTROL	
CONTENT-TYPE	image/png
CONTENT-MD5	RBEEeh9FaW1dsFVobvP28w==
CONTENT-ENCODING	
CONTENT-LANGUAGE	
CONTENT-DISPOSITION	
LEASE STATUS	Unlocked
LEASE STATE	Available
LEASE DURATION	-

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