Stories 11 : Storage account, blob storage and azure file Explorer

Azure Storage Account is a Microsoft Azure service that provides highly scalable and secure cloud storage solutions. It is a fundamental building block for many Azure services and applications. Azure Storage supports various types of data services, including blobs (binary large objects), tables, queues, and files.

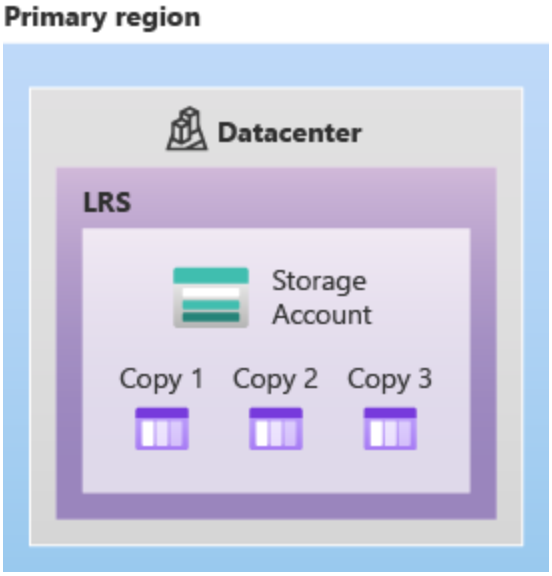
Here are some key features and components of Azure Storage Accounts:

1. **Blob Storage:** Azure Blob Storage is used to store and manage **unstructured data**, such as documents, images, videos, and more. Blobs are organized into containers, and each blob is assigned a unique URL.
2. **Table Storage:** Azure Table Storage is a **NoSQL** data store that allows you to store and retrieve **semi-structured data**. It is suitable for scenarios where you need to store large amounts of data without the need for a traditional relational database.
3. **Queue Storage:** Azure Queue Storage provides a **messaging solution** for scalable and loosely coupled communication between components of cloud services.
4. **File Storage:** Azure File Storage allows you to create a **distributed file system** that can be accessed using the standard SMB (Server Message Block) protocol. This is useful for sharing files across multiple virtual machines in the cloud.

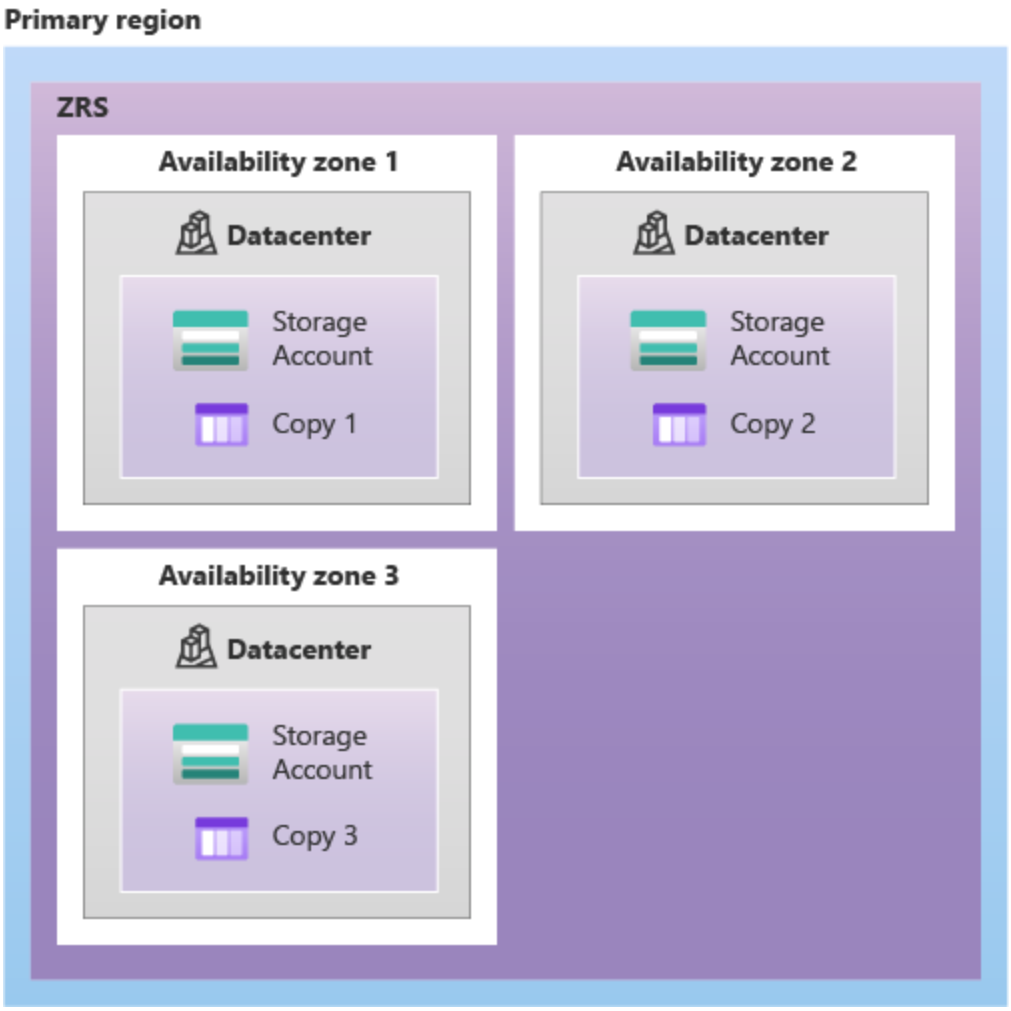
Azure Storage always stores multiple copies of your data so that it's protected from planned and unplanned events, including transient hardware failures, network or power outages, and massive natural disasters.

1. **Locally Redundant Storage (LRS):**

- **Description:** LRS replicates your data multiple times within a single data center in a specific region. This means that your data is stored redundantly within the same facility.
- **Benefits:** LRS is the most cost-effective option, suitable for scenarios where high availability across different data centers is not a critical requirement.

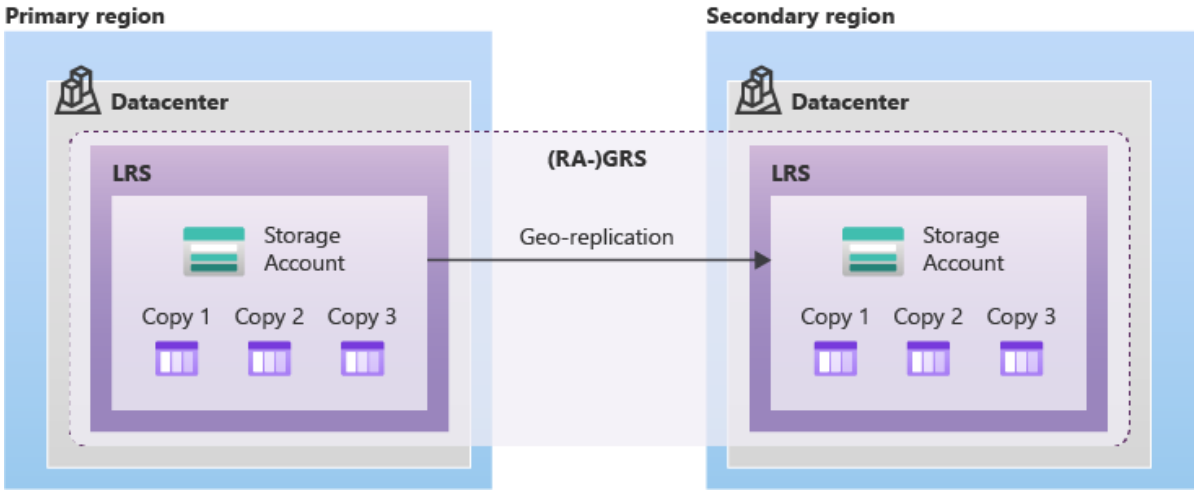


2. **Geo-Redundant Storage (GRS):**
   - **Description:** GRS provides data redundancy not only within the primary region but also asynchronously replicates your data to a secondary region that is geographically distant from the primary region.
   - **Benefits:** In the event of a regional outage or disaster, your data remains accessible from the secondary region. GRS provides higher data durability and availability compared to LRS.



3. **Zone-Redundant Storage (ZRS):**
    - **Description:** ZRS replicates your data across multiple availability zones within a single region. Availability zones are physically separate data centers with independent power, cooling, and networking.
    - **Benefits:** ZRS provides higher availability within a region compared to LRS. It helps protect your data against localized failures, such as a power outage or network failure affecting one availability zone.
4. **Geo-Zone-Redundant Storage (GZRS):**
    - **Description:** GZRS combines the features of GRS and ZRS. It replicates data across availability zones within the primary region and asynchronously replicates to a secondary region.

- **Benefits:** GZRS offers a high level of data durability and availability. It protects against both local failures within the primary region and regional outages by maintaining a secondary copy in a geographically distant region.



In summary:

- **LRS:** Redundancy within a single data center in one region.
- **GRS:** Redundancy within a primary region and asynchronous replication to a secondary region.
- **ZRS:** Redundancy across availability zones within a single region.

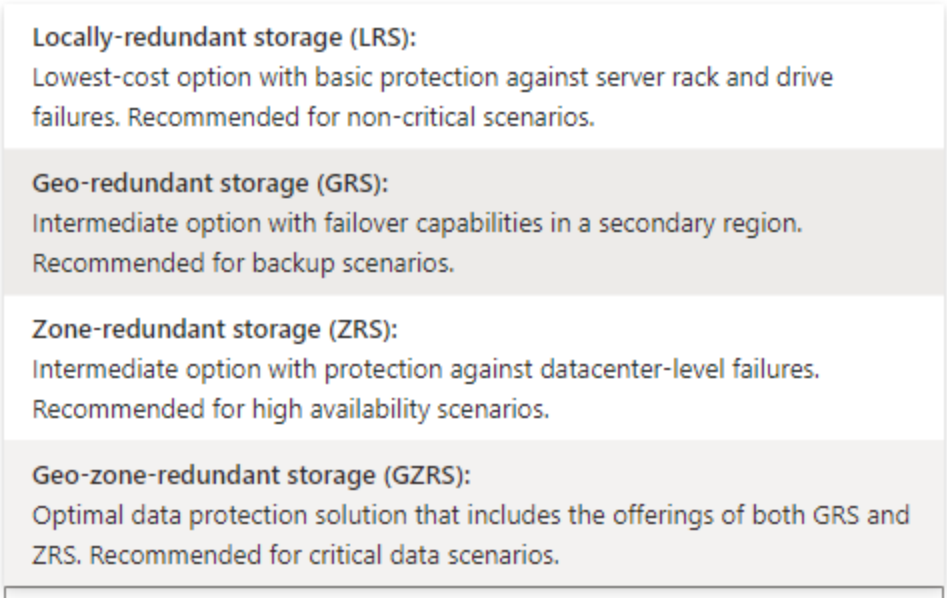
GZRS: Redundancy across availability zones within a primary region and asynchronous replication to a secondary region.

Storage Classes

1. **Hot Storage:**

- **Definition:** Hot storage is designed for data that is accessed **frequently** or needs to be quickly available. It's like the front shelves in your storage, easily accessible and quick to retrieve.
- **Use Case:** Use Hot Storage for data that requires low-latency access, such as frequently used files, applications, or data that needs to be retrieved in real-time.

2. **Cool Storage:**
    - **Definition:** Cool storage is intended for data that is accessed **less frequently**, but still needs to be stored for future use. It's like the back shelves or storage bins under your bed—not as quick to reach, but still there when you need it.
    - **Use Case:** Cool Storage is suitable for backups, archived data, or data that is accessed infrequently but should be retained for compliance or other reasons.
3. **Archive Storage:**
    - **Definition:** Archive storage is the least expensive option and is designed for data that is rarely accessed and can tolerate longer retrieval times. It's like storing your belongings in a basement or attic—takes a bit more time to retrieve, but cost-effective for l**ong-term storage.**
    - **Use Case:** Archive Storage is ideal for data that is rarely accessed and can be stored for a long time, such as compliance data, legal records, or historical archives. Retrieval times are longer compared to Hot or Cool storage.



Container: Refers to a storage container within an Azure Storage Account. Azure Storage provides a service for storing and retrieving large amounts of unstructured data, and containers are used to organize and manage this data.

Soft delete container : Soft Delete is like a safety net for your digital stuff inside that box. Normally, when you delete something from the box, it's gone forever. But with Soft Delete turned on, when you delete a photo or even the whole box (container), it doesn't immediately disappear. Instead, it goes into a special "backup" area for a certain time (let's say a week).

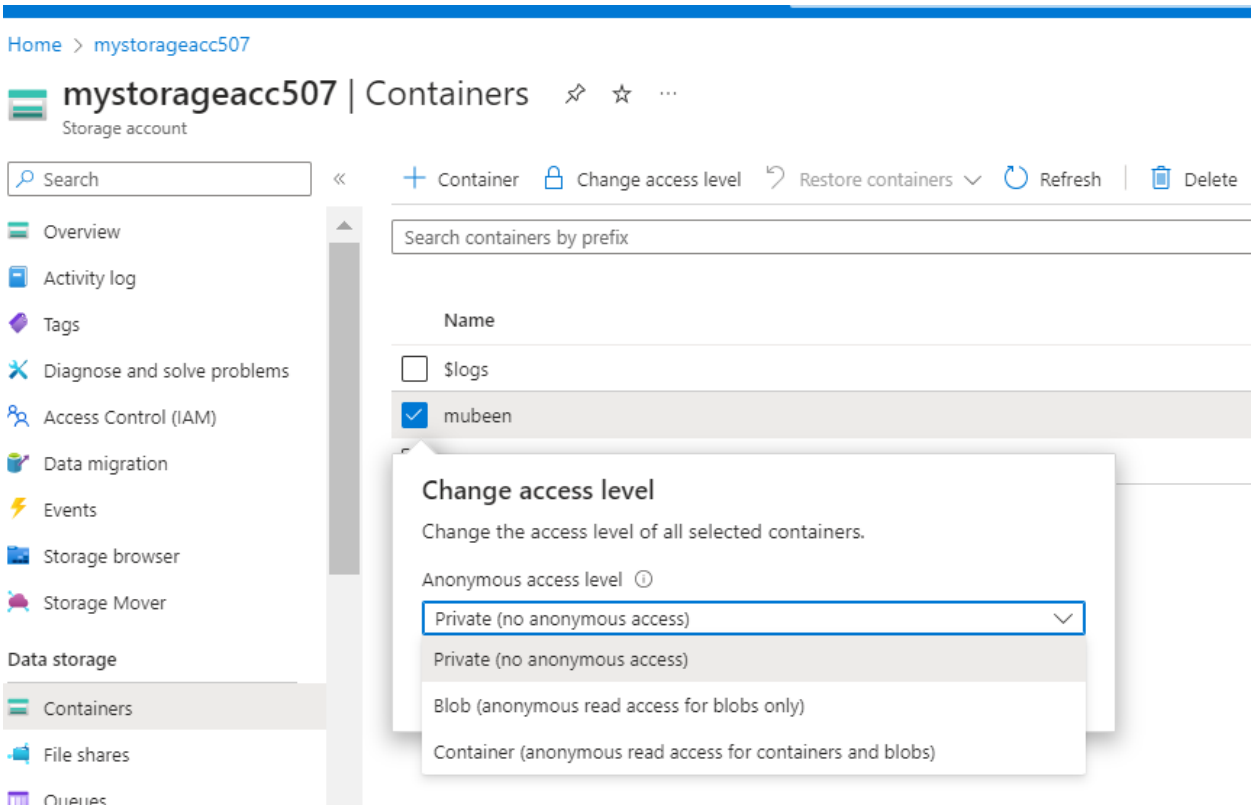
Download Azure file Explorer:

link

https://azure.microsoft.com/en-in/products/storage/storage-explorer

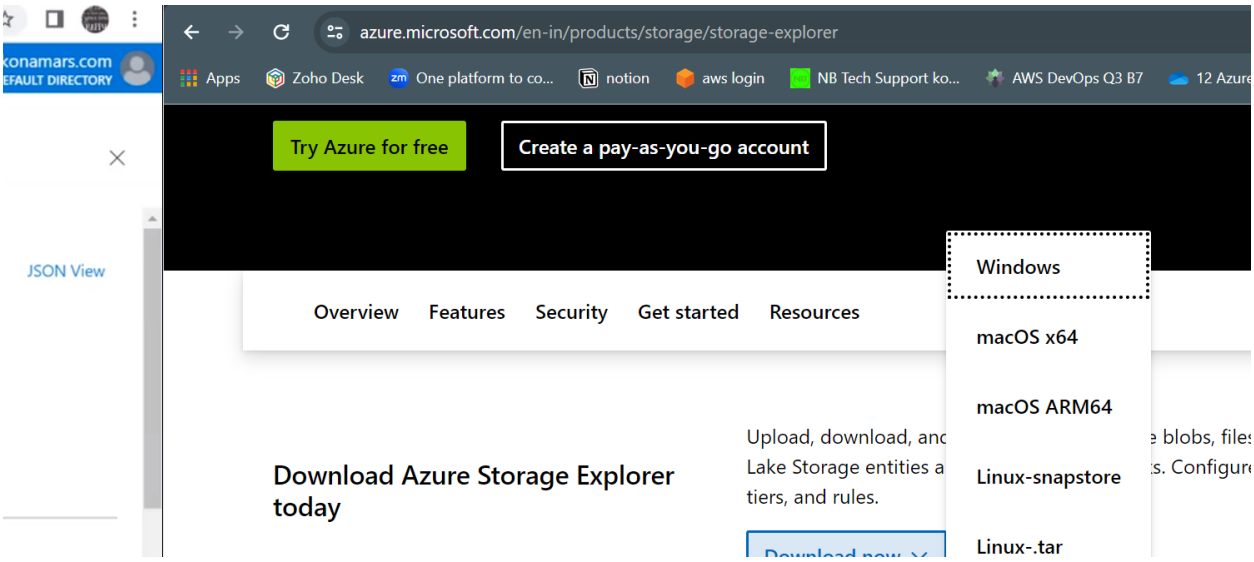
Lab:

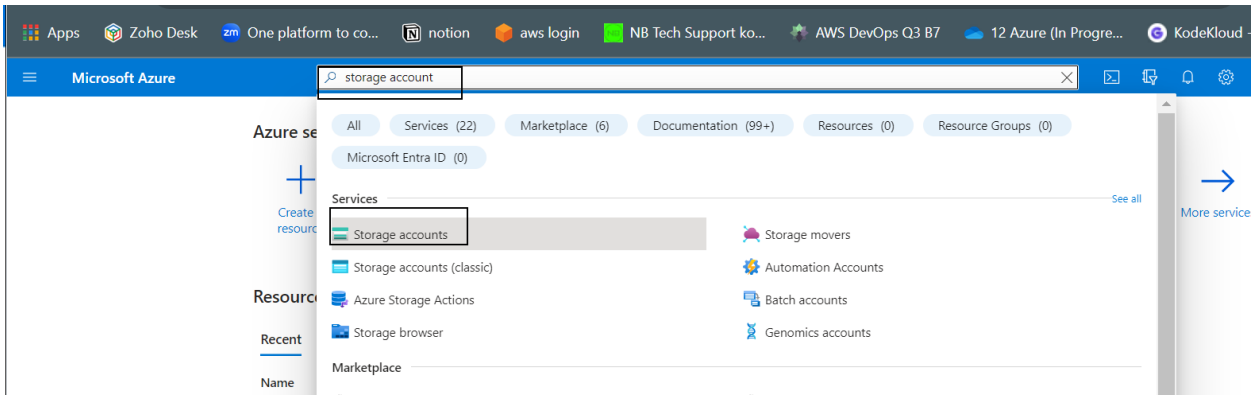
Create a container and add and image to it access it with browser set the proper permission to access the image .



1. **Private:**
    - **Definition:** Think of your Azure Storage as a secured room. Making something private means only authorized people with the right key can enter that room.
    - **In Azure Storage:** Making storage "private" means you restrict access to only authorized users or applications. Without the correct credentials (like keys or tokens), nobody can get in.

2. **Blob-Level Access:**
    - **Definition:** Imagine your storage room has many drawers, and each drawer has something different. Blob-level access means you can control who gets to open a specific drawer and see what's inside.
    - **In Azure Storage:** Blob-level access allows you to control who can access individual files (blobs). You use things like Shared Access Signatures (SAS) to give limited access to specific blobs.
3. **Container-Level Access:**
    - **Definition:** Picture your storage room having different sections, each holding specific items. Container-level access means you control who can enter a particular section of the room.
    - **In Azure Storage:** Container-level access lets you control who can access all the blobs within a specific container. You might use Azure RBAC (Role-Based Access Control) or SAS tokens at the container level.

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AWS DevOps Q3 B7
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KodeKloud
Microsoft Azure
storage account
All
Services (22)
Marketplace (6)
Documentation (99+)
Resources (0)
Resource Groups (0)
Microsoft Entra ID (0)
Services
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Storage accounts
Storage accounts (classic)
Azure Storage Actions
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Automation Accounts
Batch accounts
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Home > Storage accounts >

Create a storage account ...

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

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 * : Pay-As-You-Go

Resource group * : (New) mystorageRG

Create new

Instance details

Storage account name * : mystorageacc507

Region * : (US) East US

Deploy to an edge zone

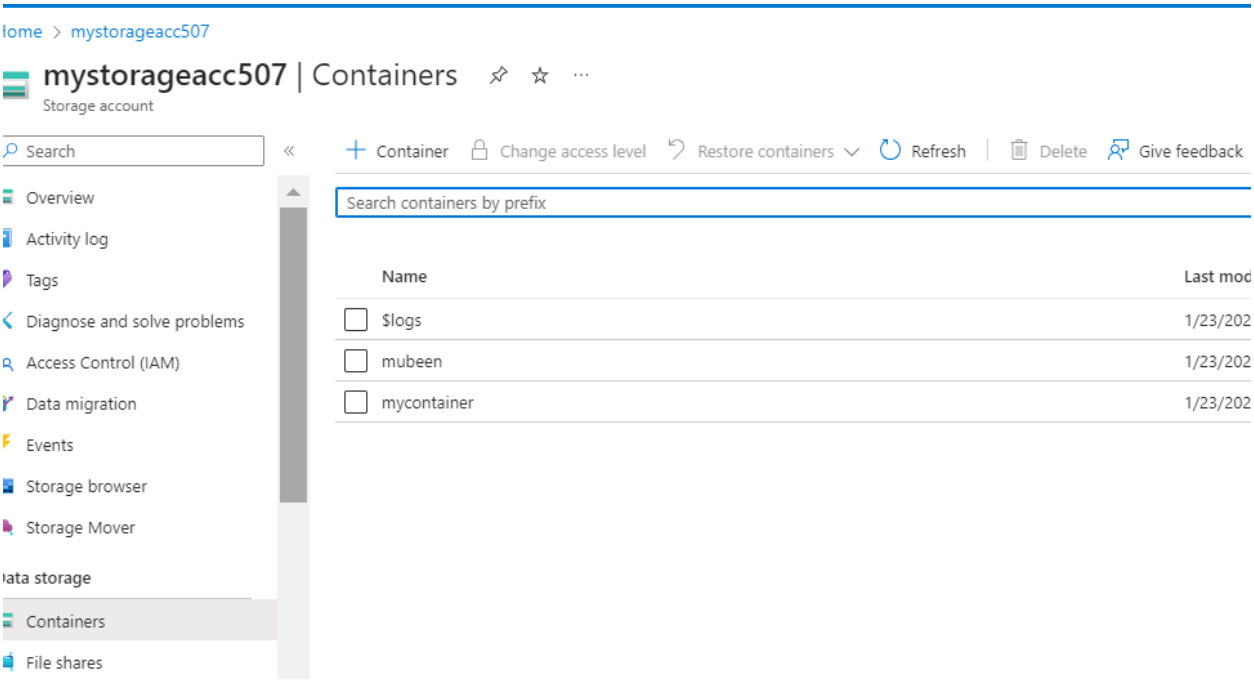
Performance * :

- (●) **Standard:** Recommended for most scenarios (general-purpose v2 account)
- ( ) **Premium:** Recommended for scenarios that require low latency.

Redundancy * : Geo-redundant storage (GRS)

- [x] Make read access to data available in the event of regional unavailability.

Review | < Previous | Next : Advanced >



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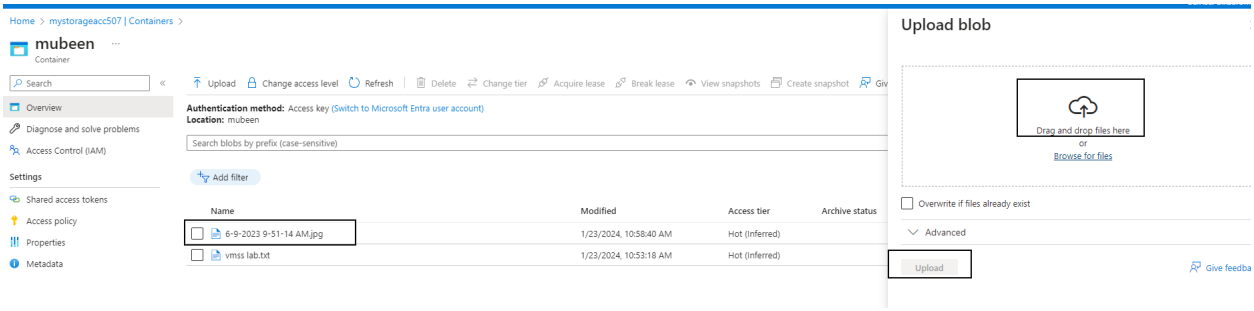

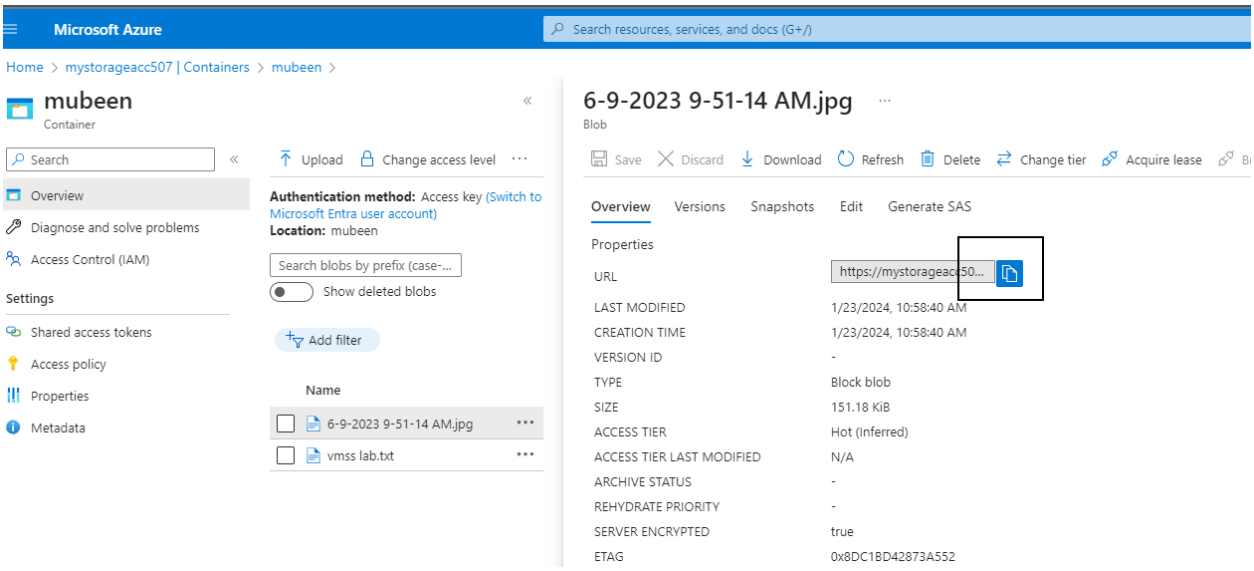

WE are able access it from browser