

# Azure Blob Storage - how to provision, access and development guide

Azure Blob Storage, a key component of Microsoft Azure's cloud services, is a robust and scalable object storage solution designed for managing vast amounts of unstructured data efficiently. This storage service plays a pivotal role in enabling organisations to store and access diverse types of data securely in the cloud.

## Key Features and Uses:

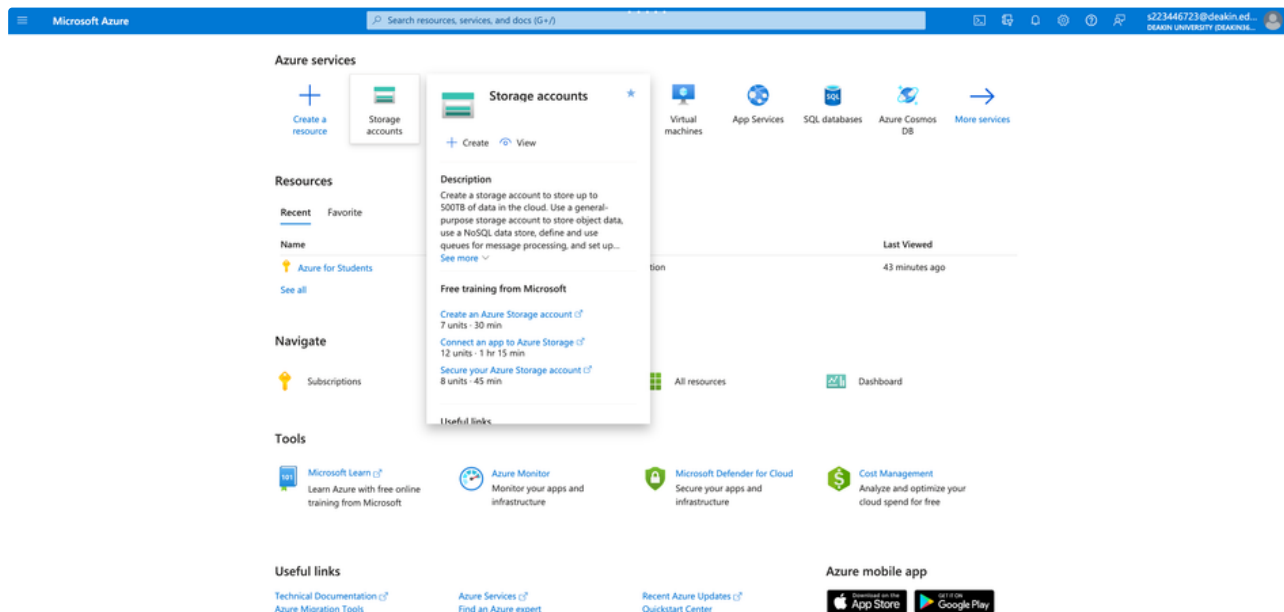
- **Scalability:** Azure Blob Storage provides seamless scalability, allowing organizations to handle massive amounts of data without worrying about infrastructure limitations.
- **Storage Tiers:** With the flexibility of three storage tiers—hot, cool, and archive—users can optimize costs based on the access frequency of their data, ensuring a cost-effective storage solution.
- **Global Accessibility:** The service supports global accessibility, making it ideal for applications with distributed user bases, ensuring reliable and fast data access worldwide.
- **Integration with Azure Services:** Azure Blob Storage integrates seamlessly with various Azure services, including Azure Data Factory, Azure Databricks, and Azure Functions, facilitating the development of comprehensive, data-driven applications.
- **Data Security:** Robust security features, including encryption at rest and in transit, contribute to ensuring the confidentiality and integrity of stored data.

## Benefits for Microsoft Azure:

- **Versatility:** Azure Blob Storage enhances the versatility of Microsoft Azure by providing a dedicated solution for managing diverse types of unstructured data, supporting a wide range of applications and workloads.
- **Cost-Effective:** The storage tiers and pay-as-you-go pricing model contribute to cost-effectiveness, allowing organizations to optimize expenses based on their specific data storage and access patterns.
- **Reliability and Durability:** The durability and availability features of Azure Blob Storage enhance the overall reliability of Microsoft Azure, ensuring data persistence and accessibility.

In order to create your own Azure Blob Storage, please follow the steps as mentioned below -

1. Search for "Storage accounts" in the menu bar as shown below -



2. Once you click on "Storage Accounts", you will land in a page similar to this. First, you will need to select the Subscription and then create a Resource Group, if not created already.

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[Home](#) > [Storage accounts](#) >

## Create a storage account

Basics

Advanced

Networking

Data protection

Encryption

Tags

Review

Azure Storage is a Microsoft-managed service providing cloud storage that is highly available, secure, durable, scalable, and redundant. Azure Storage includes Azure Blobs (objects), Azure Data Lake Storage Gen2, Azure Files, Azure Queues, and Azure Tables. The cost of your storage account depends on the usage and the options you choose below. [Learn more about Azure storage accounts](#)

### 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 \*

Azure for Students

Resource group \*

Select existing item...

[Create new](#)

Instance details

Storage account name ⓘ \*

rg\_Capstone\_SIT782

Region ⓘ \*

Performance ⓘ \*

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

☐ Premium: Recommended for scenarios that require low latency.

Redundancy ⓘ \*

Geo-redundant storage (GRS)

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

OK

Cancel

Review

< Previous

Next : Advanced >

3. After specifying a new Resource Group(if required), choose the region as “Australia East”, since that is the closest available region.

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[Home](#) > [Storage accounts](#) >

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### Project details

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Subscription \*

Azure for Students

Resource group \*

(New) rg\_Capstone\_SIT782

[Create new](#)

### Instance details

Storage account name ⓘ \*

sacapstonesit782

Region ⓘ \*

Select existing item...

[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)

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

Australia

**Recommended** ⓘ

(Asia Pacific) Australia East

**Other** ⓘ

(Asia Pacific) Australia Central

(Asia Pacific) Australia Southeast

Review

< Previous

Next : Advanced >

4. We will not need GRS (Geo-redundant storage) since we are not dealing with critical data here. Choose Locally-redundant storage(LRS) to reduce cost of running this resource.

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Search resources, services, and docs (G+)

[Home](#) > [Storage accounts](#) >

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Resource group \*

(New) rg\_Capstone\_SIT782

Create new

Instance details

Storage account name ⓘ \*

Region ⓘ \*

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Redundancy ⓘ \*

Locally-redundant storage (LRS):

Lowest-cost option with basic protection against server rack and drive failures. Recommended for non-critical scenarios.

Geo-redundant storage (GRS):

Intermediate option with failover capabilities in a secondary region. Recommended for backup scenarios.

Zone-redundant storage (ZRS):

Intermediate option with protection against datacenter-level failures. Recommended for high availability scenarios.

Geo-zone-redundant storage (GZRS):

Optimal data protection solution that includes the offerings of both GRS and ZRS. Recommended for critical data scenarios.

Geo-redundant storage (GRS)

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

Review

< Previous

Next : Advanced >

5. The final page for Storage account creation will look like this -



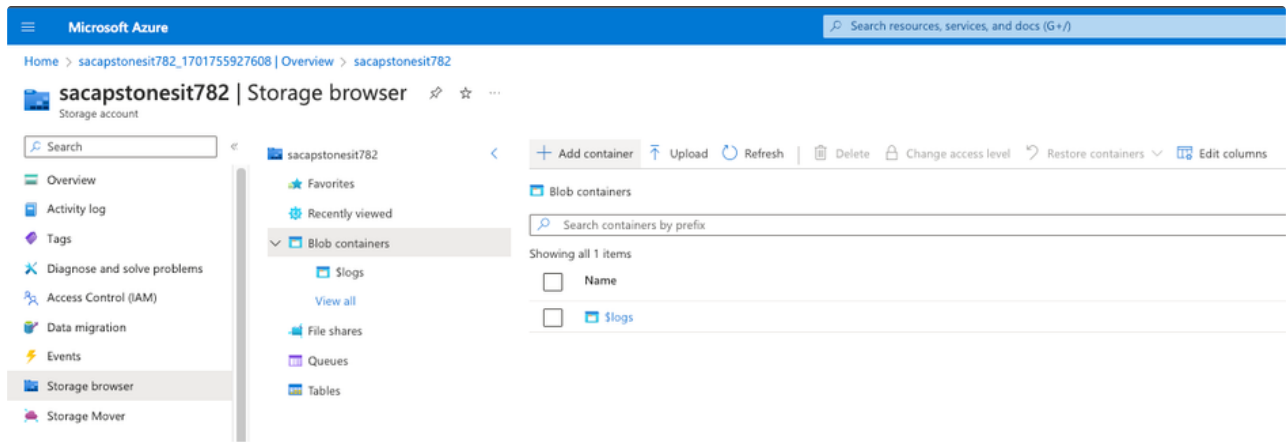
The screenshot shows the Azure portal interface for a storage account named 'sacapistonesit782'. The left-hand navigation pane is expanded, showing the 'Storage browser' option under the 'Data storage' category. The main content area displays the account's overview, including its location (australiaeast), subscription (Azure for Students), and various service settings. The 'Properties' tab is active, showing details for Blob, File, Queue, and Table services. The 'Security' and 'Networking' sections are also visible on the right side of the page.

8. Click on “Storage browser” on the left-hand pane. This will open up Blob containers, File shares, Tables and Queues.

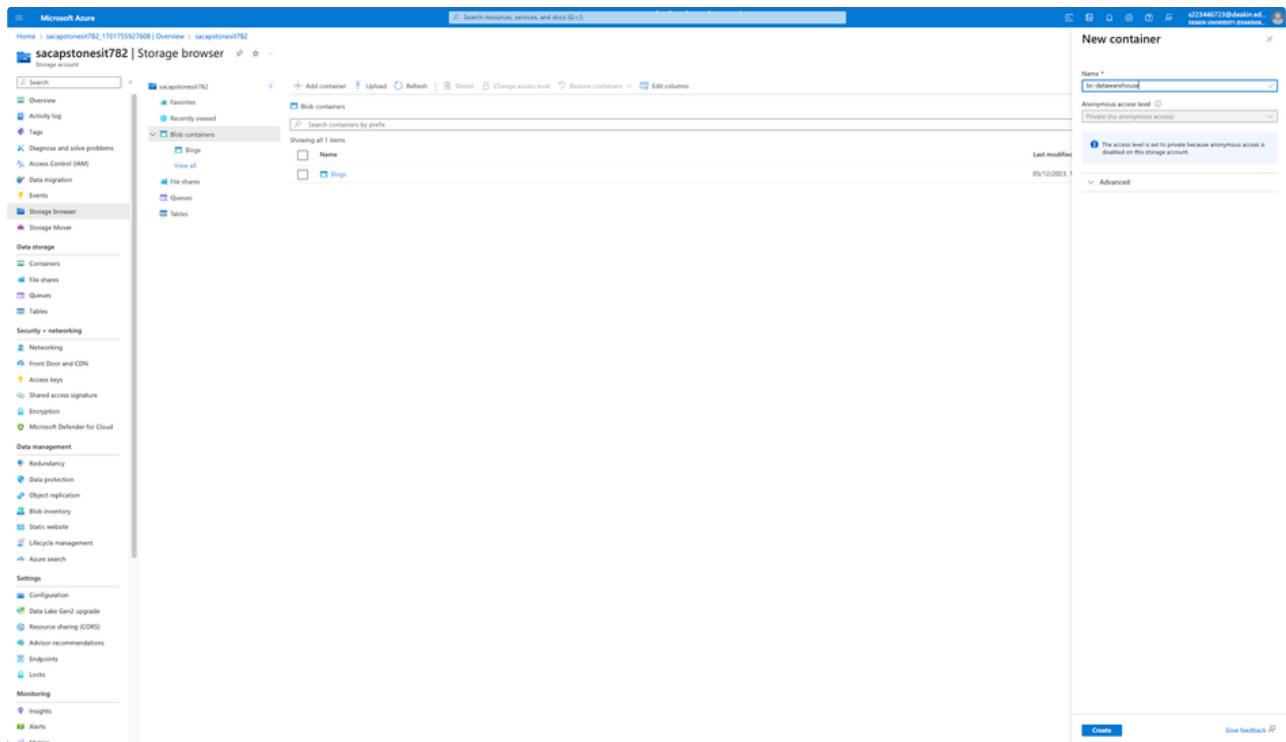
The screenshot shows the Azure portal interface for the 'Storage browser' view of the storage account 'sacapistonesit782'. The left-hand navigation pane is expanded, showing the 'Storage browser' option under the 'Data storage' category. The main content area displays the 'Storage account metrics' section, which includes a table showing the number of containers, blobs, files, tables, queues, and messages, along with the total data stored. The 'Recently viewed' section is also visible, showing a list of recently viewed resources.

Storage account metrics	Value
Blob containers	-
Number of containers	-
Number of blobs	-
Total data stored	-
File shares	-
Number of file shares	-
Number of files	-
Total data stored	-
Tables	-
Number of tables	-
Number of entities	-
Total data stored	-
Queues	-
Number of queues	-
Number of messages	-
Total data stored	-

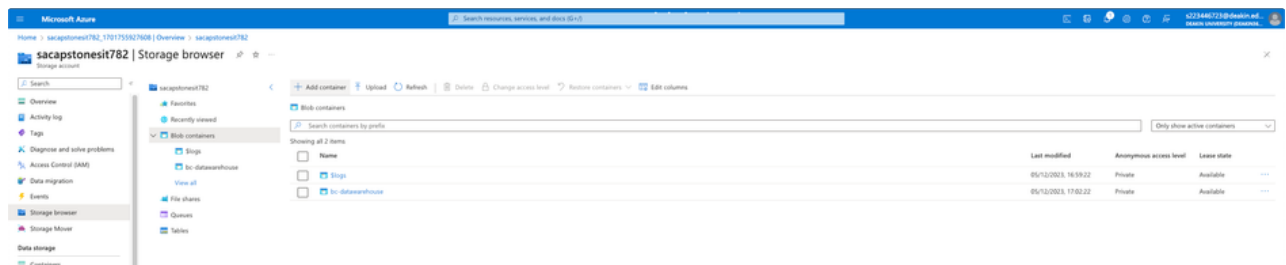
9. Click on “Blob containers”, since we will be adding sample files to the storage as an example of how to use this.



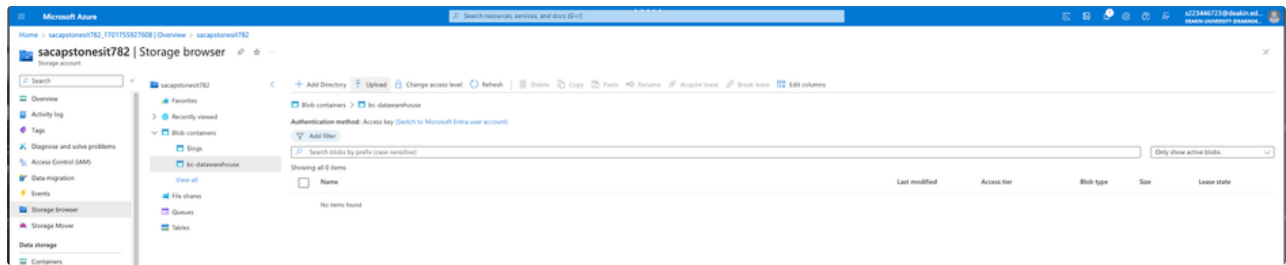
10. Create a new container by clicking on “Add container” and then filling in the details as below -



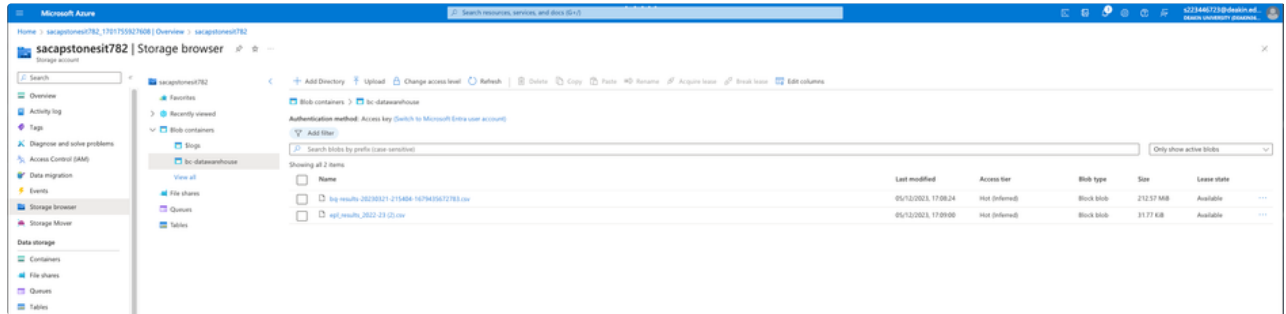
11. Once you click “Create”, you will get a page similar to this. Since this is not a separate resource, you will not get notification.



12. Navigate to the newly created container and we will next upload sample files in it.



13. Once you click on "Upload" and upload sample files, you will get a page similar to this -



Following these steps will help a student to create a new Blob Storage resource and also upload sample files in it.