



St. JOSEPH'S
GROUP OF INSTITUTIONS
OMR, CHENNAI - 119

PLACEMENT EMPOWERMENT PROGRAM

Cloud Computing & DevOps Centre

Creating a “Storage Account” in Azure and uploading files in it.
Also configuring access permissions [Access levels, Network access restrictions, Access Keys, and SAS]

Name: S.AVINASH

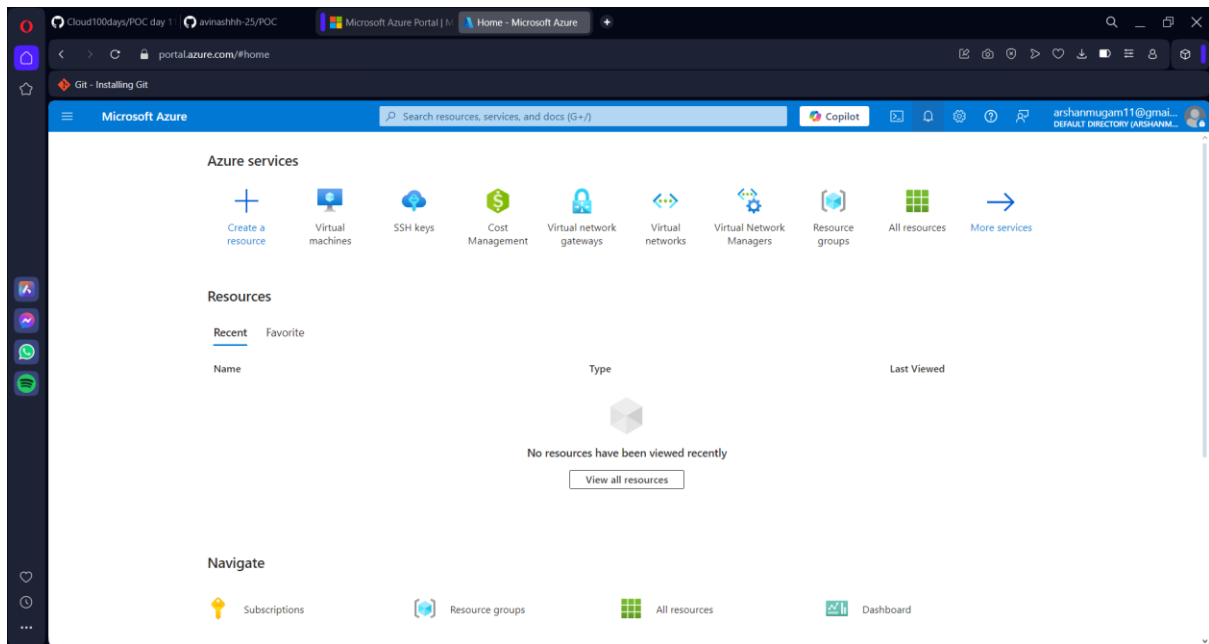
Dept: CSE

INTRODUCTION

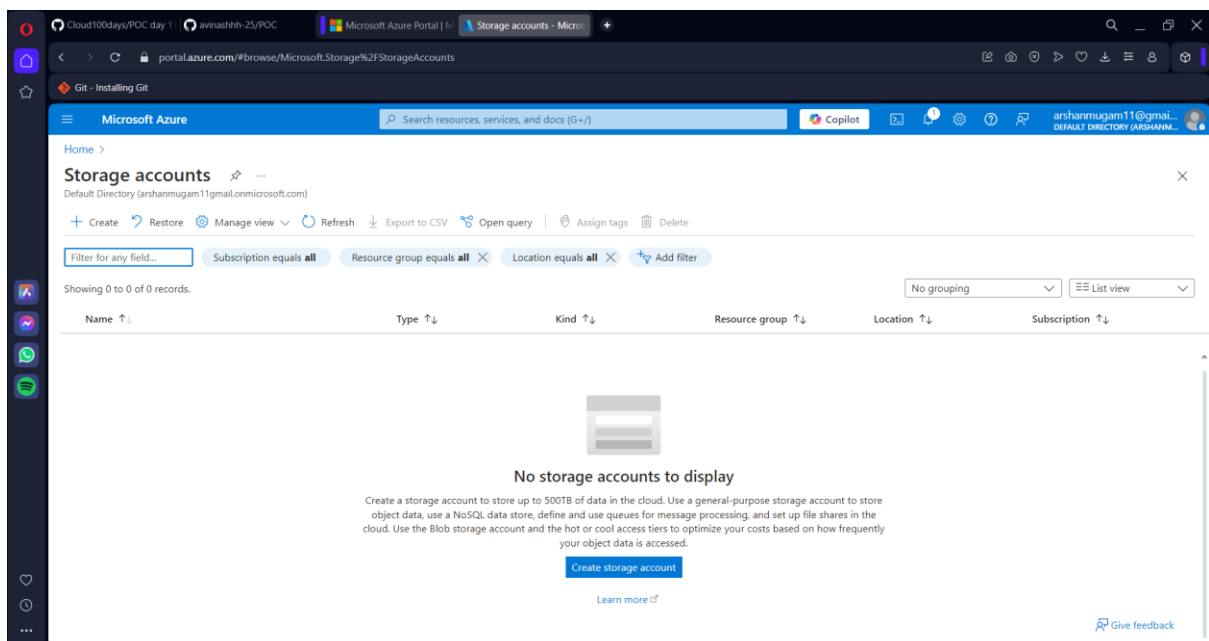
- Creating a Storage Account in Azure involves setting up a secure and scalable storage solution for file management. Begin by navigating to the Azure Portal, selecting Storage Accounts, and clicking Create. Provide details like subscription, resource group, region, and redundancy options, then finalize by clicking Review + Create. Once the storage account is ready, create a Blob Container to organize your files and upload them directly through the portal or programmatically using the Azure SDK.
- To configure access permissions, consider multiple layers of security. Set Access Levels through role-based access control (RBAC) by assigning roles such as Storage Blob Data Owner or Data Reader under the Access Control (IAM) section. Manage Network Access Restrictions by enabling firewalls or virtual network rules to limit access. Access Keys provide full control and should be used cautiously with regular key rotation for enhanced security. For more granular and time-bound permissions, generate Shared Access Signatures (SAS) to grant temporary access without sharing sensitive keys. By combining these configurations, you ensure secure and efficient file management within Azure.

Step-by-step process:

Step 1: Go to Azure portal.



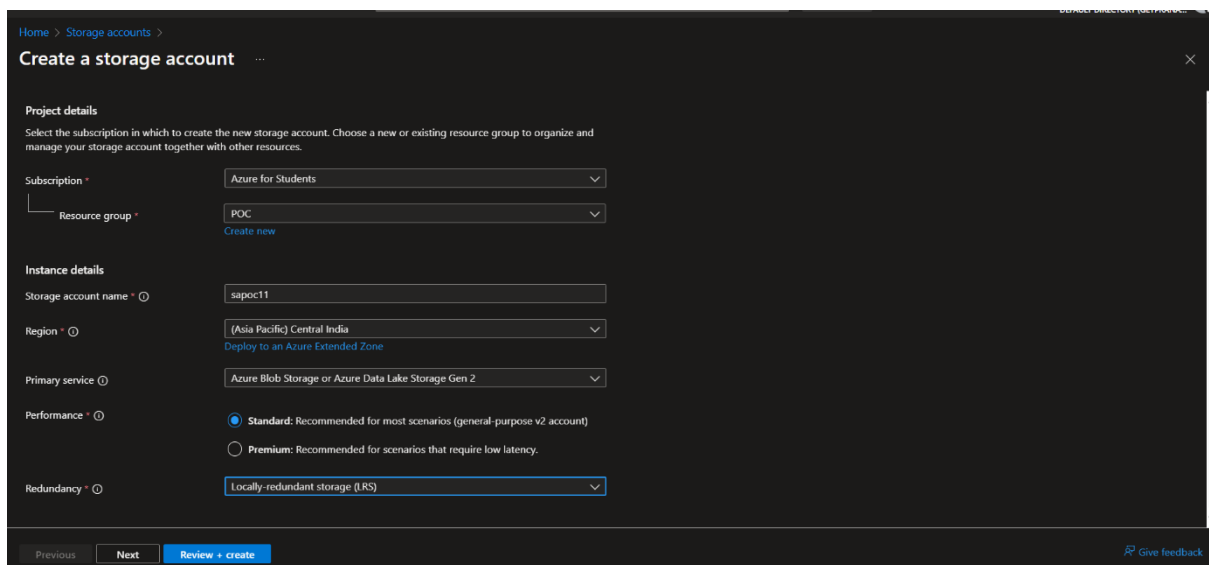
Step 2: Navigate to “Storage Accounts”.



Step 3: Enter the following details: □

1. **Subscription:** Choose your subscription.
2. **Resource group:** Create a new one or select an existing resource group.

3. **Storage account name:** Enter a unique name.
4. **Region:** Select the nearest region.
5. **Performance:** Standard or Premium (choose based on requirements).
6. **Redundancy:** Select redundancy option (e.g., Locally-redundant storage).



The screenshot shows the 'Create a storage account' form in the Azure portal. The form is divided into two main sections: 'Project details' and 'Instance details'. In the 'Project details' section, the 'Subscription' is set to 'Azure for Students' and the 'Resource group' is 'POC'. In the 'Instance details' section, the 'Storage account name' is 'sapoc11', the 'Region' is '(Asia Pacific) Central India', and the 'Primary service' is 'Azure Blob Storage or Azure Data Lake Storage Gen 2'. The 'Performance' section has two radio buttons: 'Standard' (selected) and 'Premium'. The 'Redundancy' section has a dropdown menu set to 'Locally-redundant storage (LRS)'. At the bottom, there are buttons for 'Previous', 'Next', and 'Review + create', along with a 'Give feedback' link.

Home > Storage accounts >

Create a storage account

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 * POC

[Create new](#)

Instance details

Storage account name * sapoc11

Region * (Asia Pacific) Central India

[Deploy to an Azure Extended Zone](#)

Primary service * Azure Blob Storage or Azure Data Lake Storage Gen 2

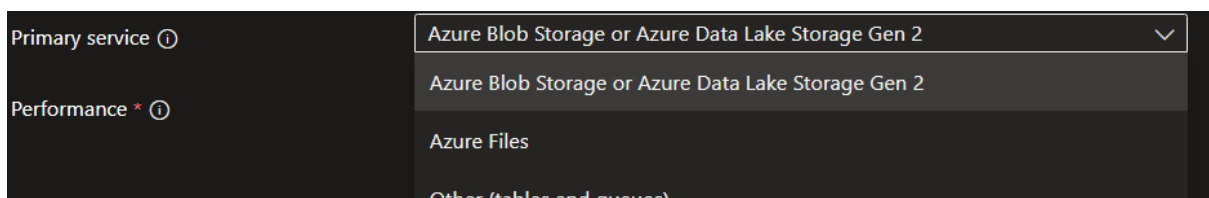
Performance * ☒ Standard: Recommended for most scenarios (general-purpose v2 account)

☐ Premium: Recommended for scenarios that require low latency.

Redundancy * Locally-redundant storage (LRS)

[Previous](#) [Next](#) [Review + create](#) [Give feedback](#)

Note: You can choose the service you want while creating the storage account in azure.



The screenshot shows a close-up of the 'Primary service' dropdown menu. The dropdown is open, showing the following options: 'Azure Blob Storage or Azure Data Lake Storage Gen 2', 'Azure Blob Storage or Azure Data Lake Storage Gen 2', 'Azure Files', and 'Other (tables and queues)'. The 'Performance' section is also visible, showing a red asterisk and an information icon.

Primary service *

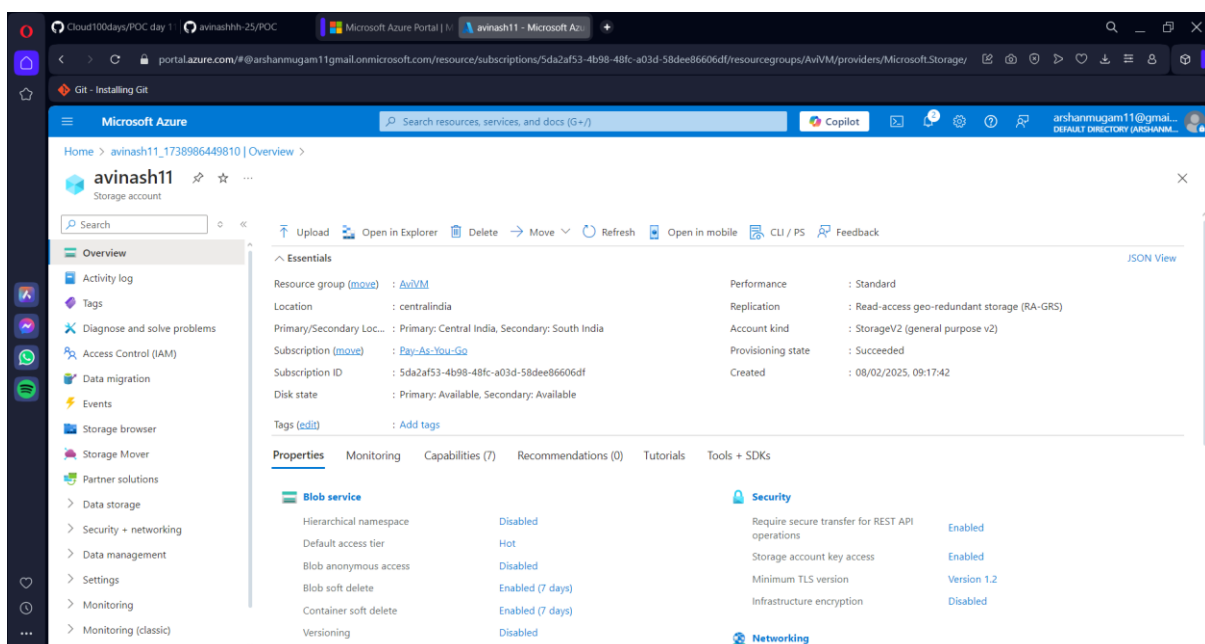
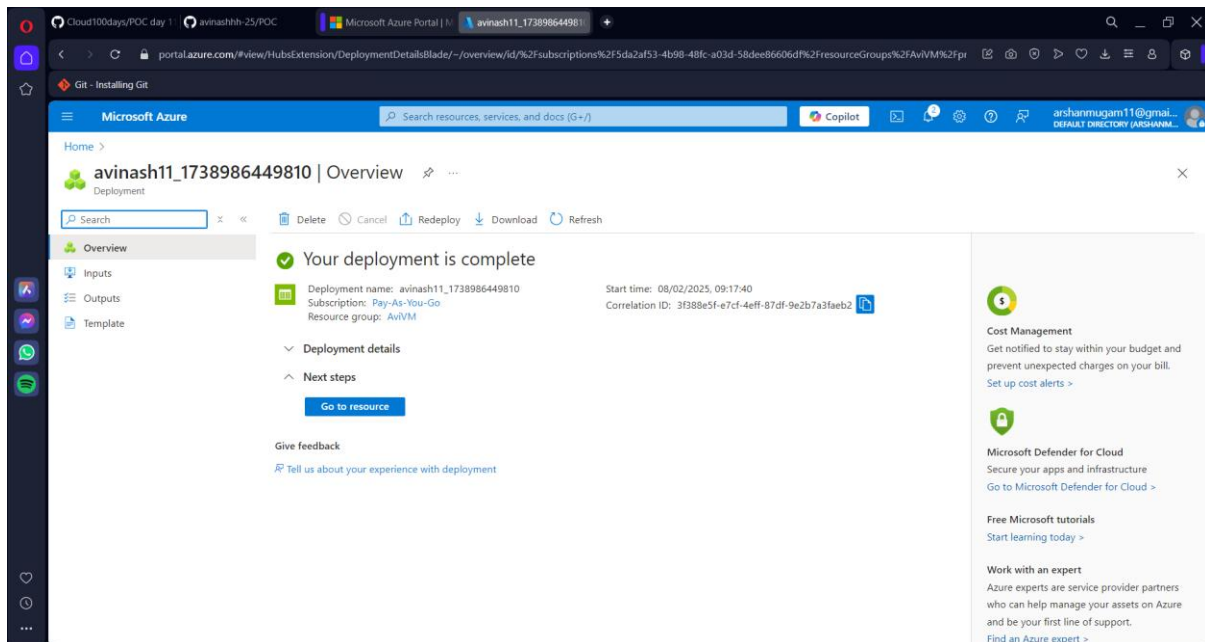
Performance *

Azure Blob Storage or Azure Data Lake Storage Gen 2

Azure Files

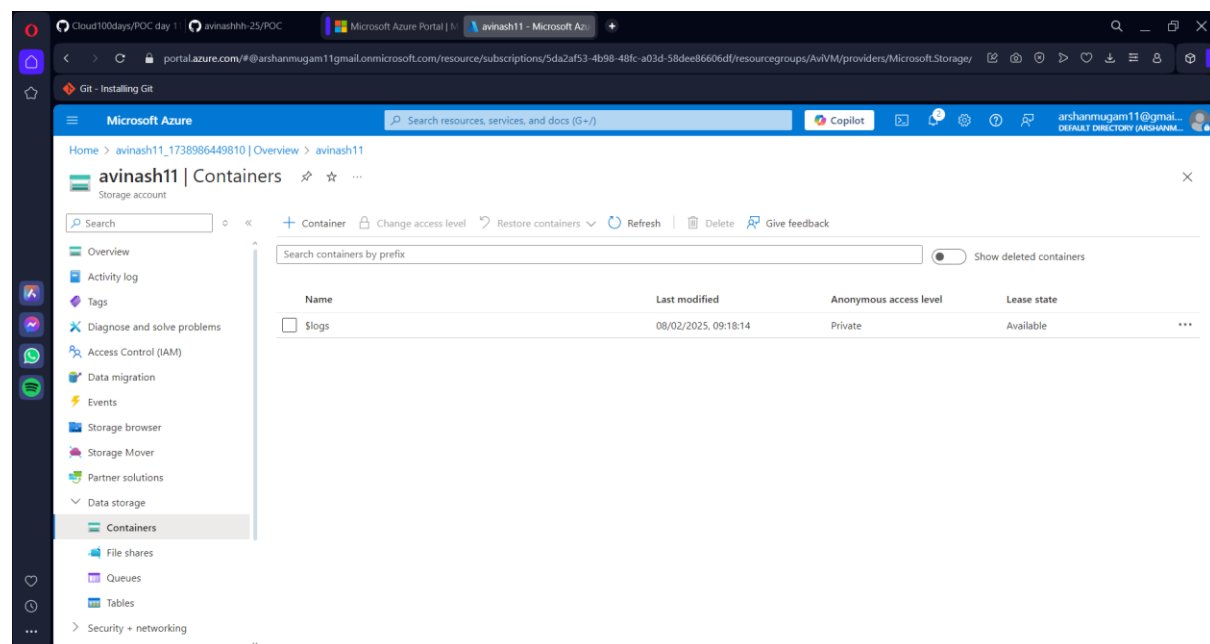
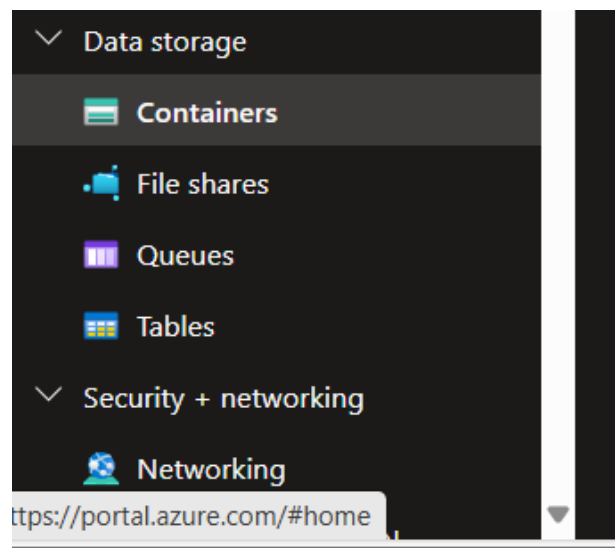
Other (tables and queues)

Step 4: Once deployment is done go to the Resource Group to view your Storage account.

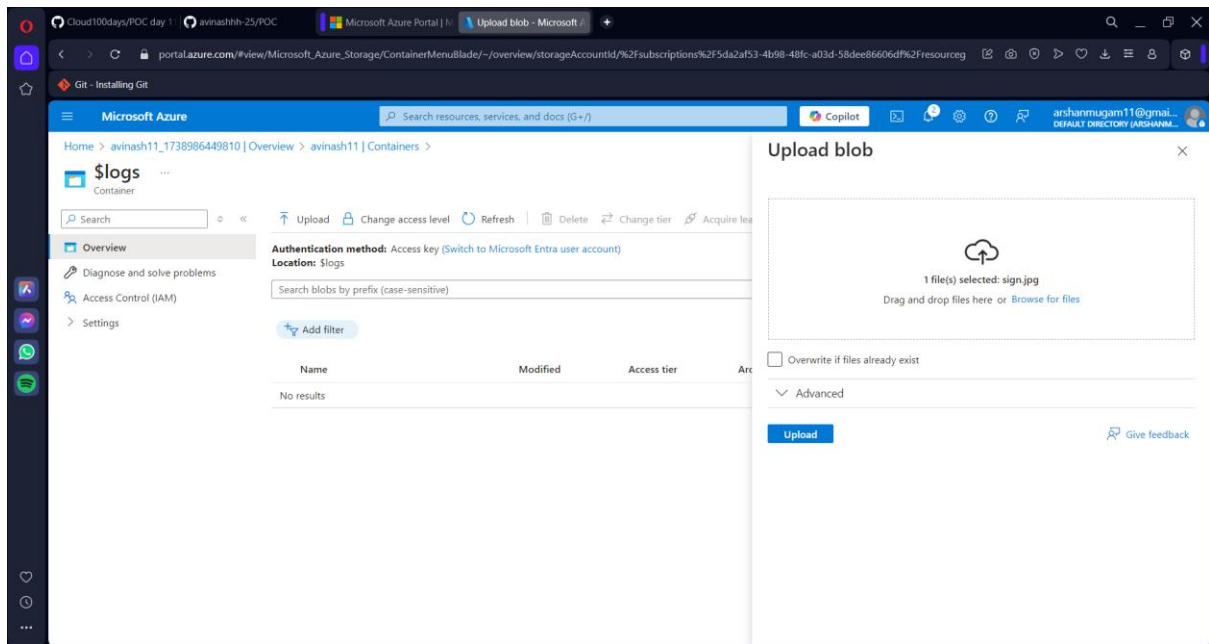


Step 5: Got to “Containers” which is located in data storage in your Storage account.

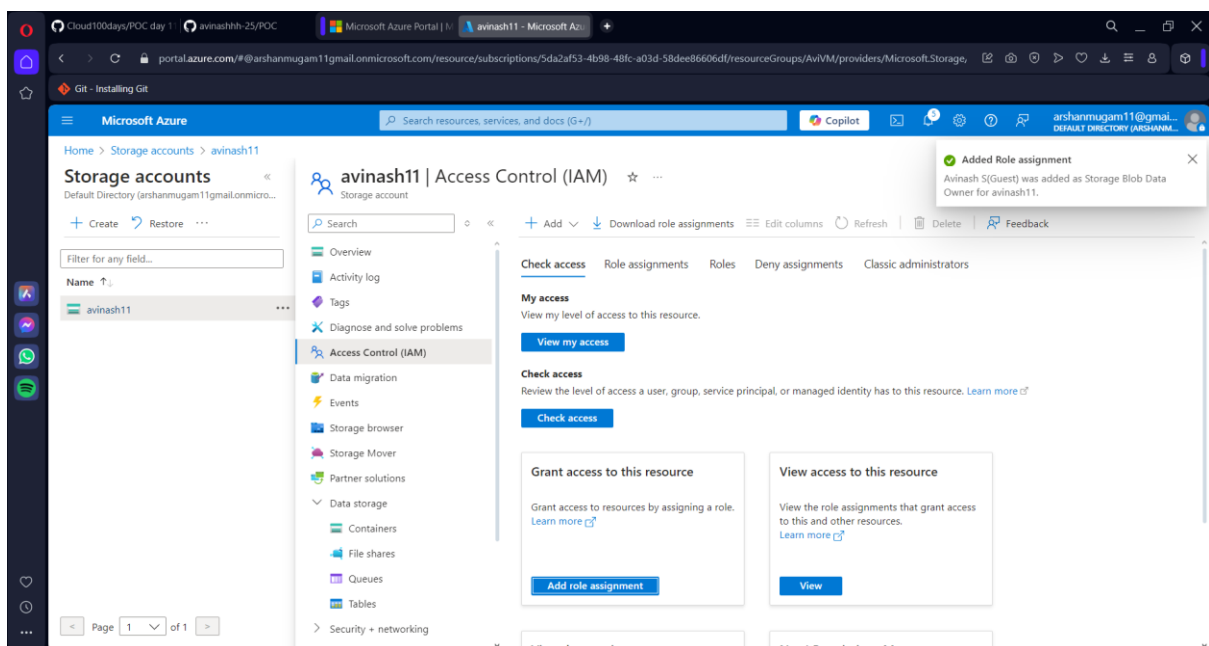
Then create a Blob Container:



Step 6: Now open the “Container” you created and there will be an option to “+upload”, click on that for uploading files. And then click on upload.

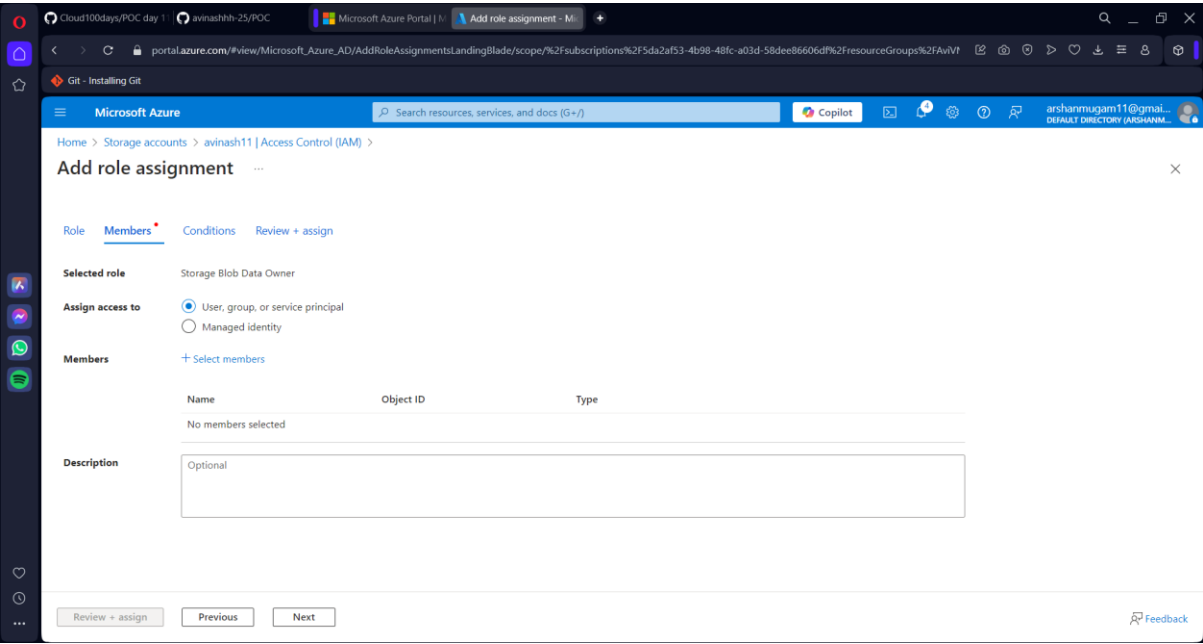


Step 7: Configuring access permissions. For that you need to go to “Storage Account > IAM > Roles

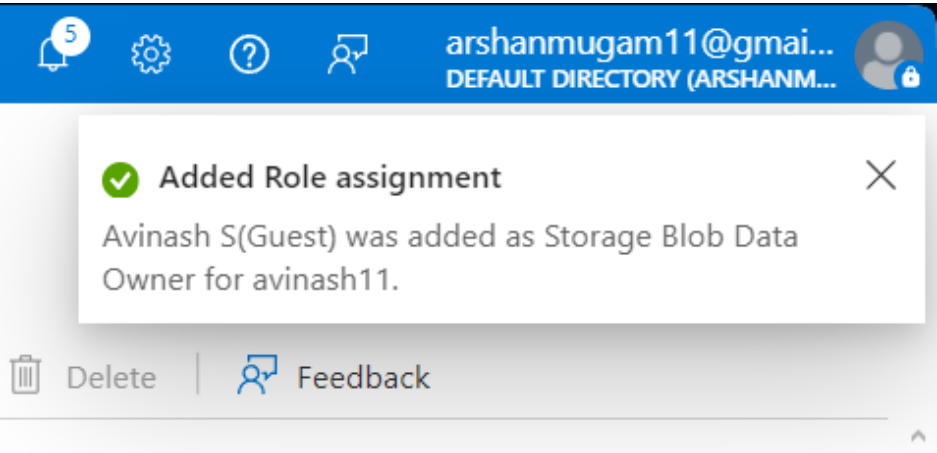


ROLES:

Storage Blob Data Contributor	Allows for read, write and delete access to Azure Storage blob containers and data	BuiltInRole	Storage	View
Storage Blob Data Owner	Allows for full access to Azure Storage blob containers and data, including assigning POSIX access control.	BuiltInRole	Storage	View
Storage Blob Data Reader	Allows for read access to Azure Storage blob containers and data	BuiltInRole	Storage	View
Storage Blob Delegator	Allows for generation of a user delegation key which can be used to sign SAS tokens	BuiltInRole	Storage	View
Storage File Data Privileged Contributor	Customer has read, write, delete and modify NTFS permission access on Azure Storage file shares.	BuiltInRole	None	View
Storage File Data Privileged Reader	Customer has read access on Azure Storage file shares.	BuiltInRole	None	View
Storage File Data SMB Share Contributor	Allows for read, write, and delete access in Azure Storage file shares over SMB	BuiltInRole	Storage	View
Storage File Data SMB Share Elevated Contribut...	Allows for read, write, delete and modify NTFS permission access in Azure Storage file shares over SMB	BuiltInRole	Storage	View
Storage File Data SMB Share Reader	Allows for read access to Azure File Share over SMB	BuiltInRole	Storage	View



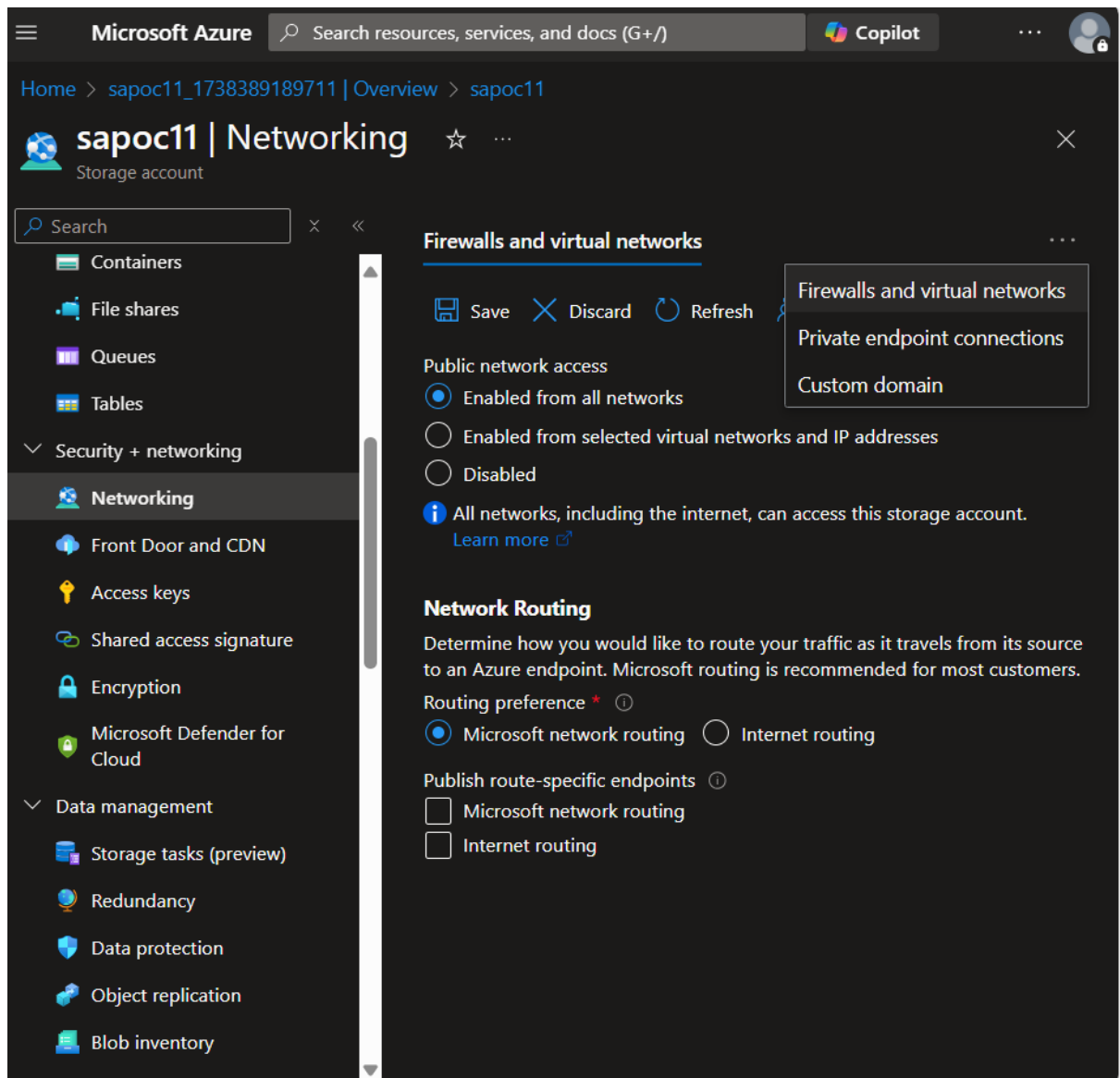
Step 8: Once done click on “Review+Assign”.



Step 9: Configuring Network access restrictions.

Go to Networking > Allow public (or) private access.

- **Enable public access.**
- **Set firewalls and virtual networks.** And then click on save.



Step 10: SAS: Shared access Signatures.

Storage Account > SAS

Cloud100days/POC day 1 · avinashhh-25/POC

Microsoft Azure Portal | avinash11 - Microsoft Azure

portal.azure.com/#@arshanmugam11gmail.onmicrosoft.com/resource/subscriptions/5da2af53-4b98-48fc-a03d-58dee86606df/resourceGroups/AviVM/providers/Microsoft.Storage/...

Git - Installing Git

Microsoft Azure

Search resources, services, and docs (G+)

Copilot

arshanmugam11@gmail...
DEFAULT DIRECTORY (ARSHANMUGAM11GMAIL.O...

Home > Storage accounts > avinash11

Storage accounts

Default Directory (arshanmugam11gmail.onmicro...

+ Create ↺ Restore ...

Filter for any field...

Name ↑

avinash11

Page 1 of 1

avinash11 | Shared access signature

Storage account

sas

Give feedback

Allowed blob index permissions

☒ Read/Write ☒ Filter

Start and expiry date/time

Start 08/02/2025 09:26:31

End 08/02/2025 17:26:31

(UTC+05:30) Chennai, Kolkata, Mumbai, New Delhi

Allowed IP addresses

For example, 168.1.5.65 or 168.1.5.65-168.1.5.70

Allowed protocols

☒ HTTPS only ☐ HTTPS and HTTP

Preferred routing tier

☒ Basic (default) ☐ Microsoft network routing ☐ Internet routing

Some routing options are disabled because the endpoints are not published.

Signing key

key1

Generate SAS and connection string

Cloud100days/POC day 1 · avinashhh-25/POC

Microsoft Azure Portal | avinash11 - Microsoft Azure

portal.azure.com/#@arshanmugam11gmail.onmicrosoft.com/resource/subscriptions/5da2af53-4b98-48fc-a03d-58dee86606df/resourceGroups/AviVM/providers/Microsoft.Storage/...

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Search resources, services, and docs (G+)

Copilot

arshanmugam11@gmail...
DEFAULT DIRECTORY (ARSHANMUGAM11GMAIL.O...

Home > Storage accounts > avinash11

Storage accounts

Default Directory (arshanmugam11gmail.onmicro...

+ Create ↺ Restore ...

Filter for any field...

Name ↑

avinash11

Page 1 of 1

avinash11 | Shared access signature

Storage account

sas

Give feedback

Signing key

key1

Generate SAS and connection string

Connection string

BlobEndpoint=https://avinash11.blob.core.windows.net/QueueEndpoint=https://avinash11.queue.core.windows.net/FileEndpoint=https://a...

SAS token

sv=2022-11-02&ss=bfqt&srt=c&sp=rwdlacuplytf&se=2025-02-08T11:56:31Z&st=2025-02-08T03:56:31Z&spr=https&sig=qhs99HDV9CaS...

Blob service SAS URL

https://avinash11.blob.core.windows.net/?sv=2022-11-02&ss=bfqt&srt=c&sp=rwdlacuplytf&se=2025-02-08T11:56:31Z&st=2025-02-08T0...

File service SAS URL

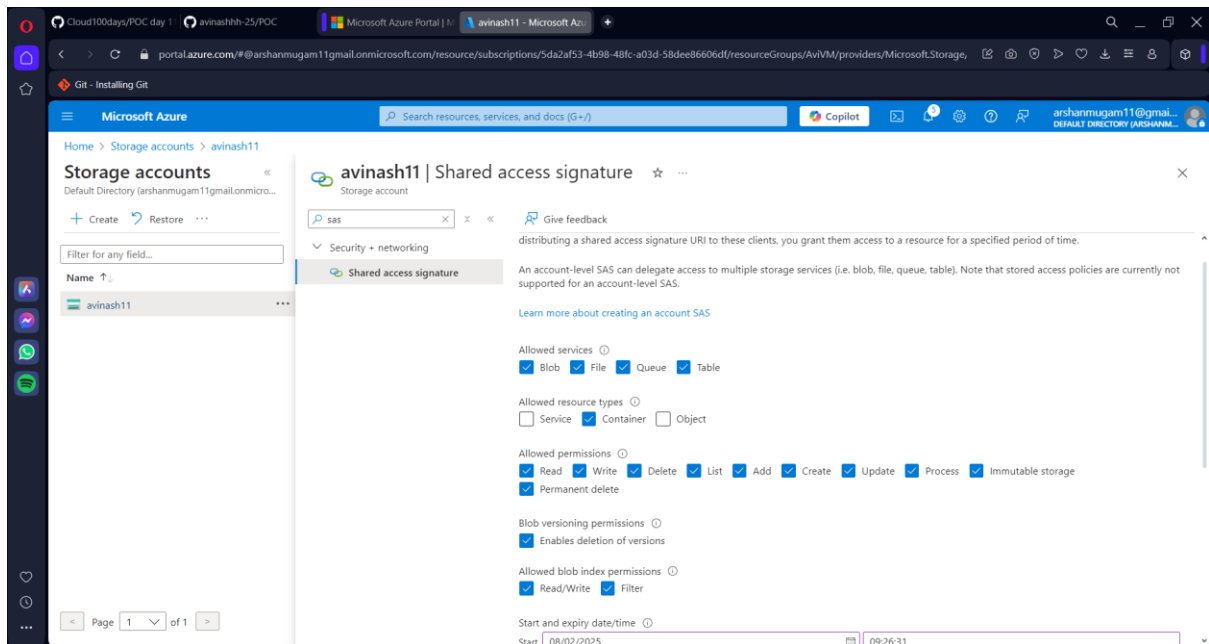
https://avinash11.file.core.windows.net/?sv=2022-11-02&ss=bfqt&srt=c&sp=rwdlacuplytf&se=2025-02-08T11:56:31Z&st=2025-02-08T03...

Queue service SAS URL

https://avinash11.queue.core.windows.net/?sv=2022-11-02&ss=bfqt&srt=c&sp=rwdlacuplytf&se=2025-02-08T11:56:31Z&st=2025-02-08T...

Table service SAS URL

https://avinash11.table.core.windows.net/?sv=2022-11-02&ss=bfqt&srt=c&sp=rwdlacuplytf&se=2025-02-08T11:56:31Z&st=2025-02-08T0...



Step 11: Access Keys.

Security > Networking > Access keys

