

Lab 3

CST8912_011

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January 31, 2025

Submitted to :

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1. Introduction

This lab focuses on exploring Azure storage accounts, creating storage containers, generating Shared Access Signatures (SAS), and configuring lifecycle management policies. The objective is to understand cloud storage management, security, and cost efficiency.

2. Findings & Analysis

Security Considerations: The private container ensures data confidentiality.

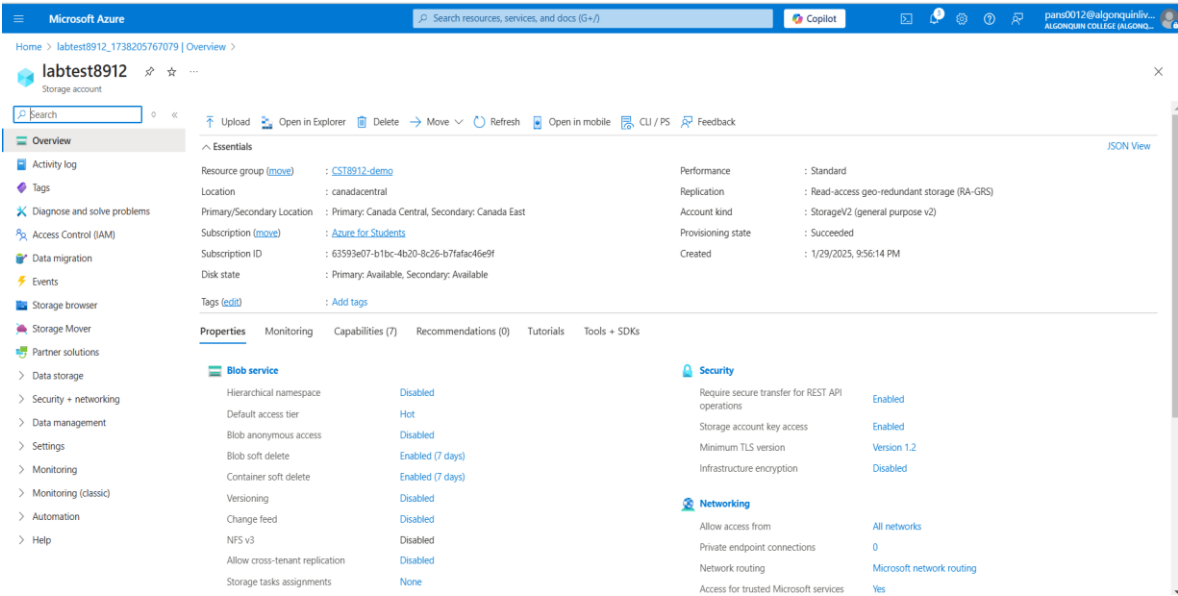
SAS Benefits: SAS tokens provide controlled, time-limited access to objects.

Cost Optimization: Lifecycle management automatically moves data to cost-efficient storage.

Real-World Applications: Cloud storage is ideal for backup, disaster recovery, and web hosting.

3. Steps:

1. Create a storage account “labtest8912” under student subscription and resource group “CST8912-demo” for region Canada central and select geo redundant storage (geo redundant storage GRS), keep networking and data protection options default



2. Go to your storage account resource blade, in data management section, go to redundancy tab and change redundancy to “local redundant storage” from dropdown, and under settings choose configuration and set blob access tier to cool and save the change

The screenshot shows the 'labtest8912 | Redundancy' page in the Microsoft Azure portal. The left sidebar contains a navigation menu with options like 'Diagnose and solve problems', 'Access Control (IAM)', 'Data migration', 'Events', 'Storage browser', 'Storage Mover', 'Partner solutions', 'Data storage', 'Security + networking', 'Data management', 'Storage tasks (preview)', 'Redundancy', 'Data protection', 'Object replication', 'Blob inventory', 'Static website', 'Lifecycle management', 'Azure AI Search', and 'Settings'. The 'Redundancy' tab is selected. The main content area shows the 'Locally-redundant storage (LRS)' dropdown menu. Below this, there is a table for 'Storage endpoints' with columns for 'Location', 'Data center type', 'Status', and 'Failover'. The table shows two endpoints: 'Canada Central' (Primary, Available) and 'Canada East' (Secondary, Available). A world map is displayed below the table.

Location	Data center type	Status	Failover
Canada Central	Primary	Available	-
Canada East	Secondary	Available	-

The screenshot shows the 'labtest8912 | Configuration' page in the Microsoft Azure portal. The left sidebar is the same as the previous screenshot, but the 'Configuration' tab is selected. The main content area shows various settings for the storage account. The 'Secure transfer required' setting is set to 'Enabled'. The 'Allow Blob anonymous access' setting is set to 'Disabled'. The 'Allow storage account key access' setting is set to 'Enabled'. The 'Allow recommended upper limit for shared access signature (SAS) expiry interval' setting is set to 'Disabled'. The 'Default to Microsoft Entra authorization in the Azure portal' setting is set to 'Enabled'. The 'Minimum TLS version' is set to 'Version 1.2'. The 'Permitted scope for copy operations (preview)' is set to 'From any storage account'. The 'Blob access tier (default)' is set to 'Cool'. The 'Large file shares' setting is set to 'Enabled'.

3. under data storage in left, click containers and add new container named “labtestcontainer8912” and select upload a blob and change the advance settings and change the access tier to “hot” and upload to folder named “sampletest8912”, browse the files from the sample files links shared in this lab

Microsoft Azure

Home > labtest8912 | Containers >

labtestcontainer8912

Authentication method: Access key (Switch to Microsoft Entra user account)
Location: labtestcontainer8912 / sampletest8912

Search blobs by prefix (case-sensitive)

Show deleted blobs

Name	Modified	Access tier	Archive status	Blob type	Size	Lease state
[...]						...
addresses.csv	29/1/2025, 10:09:55 pm	Cool (Inferred)		Block blob	328 B	Available
CSV Files.html	29/1/2025, 10:12:59 pm	Hot		Block blob	19.9 KB	Available

4. click the file uploaded in the container to see the configuration options and copy the blob url and open a new private window from the browser to paste the copied url

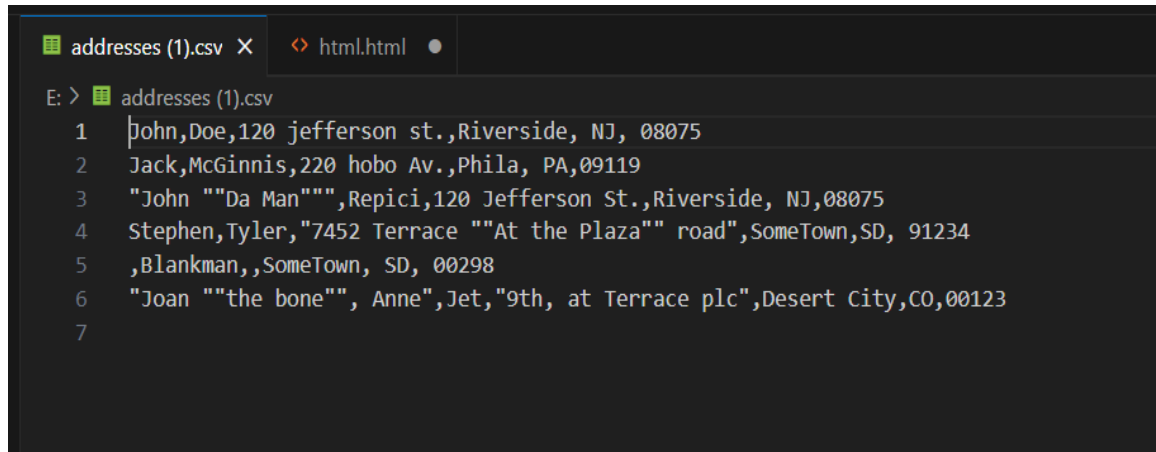
labtest8912.blob.core.windows.net

labtest8912.blob.core.windows.net/labtestcontainer8912/sampletest8912/CSV%20Files.html

This XML file does not appear to have any style information associated with it. The document tree is shown below.

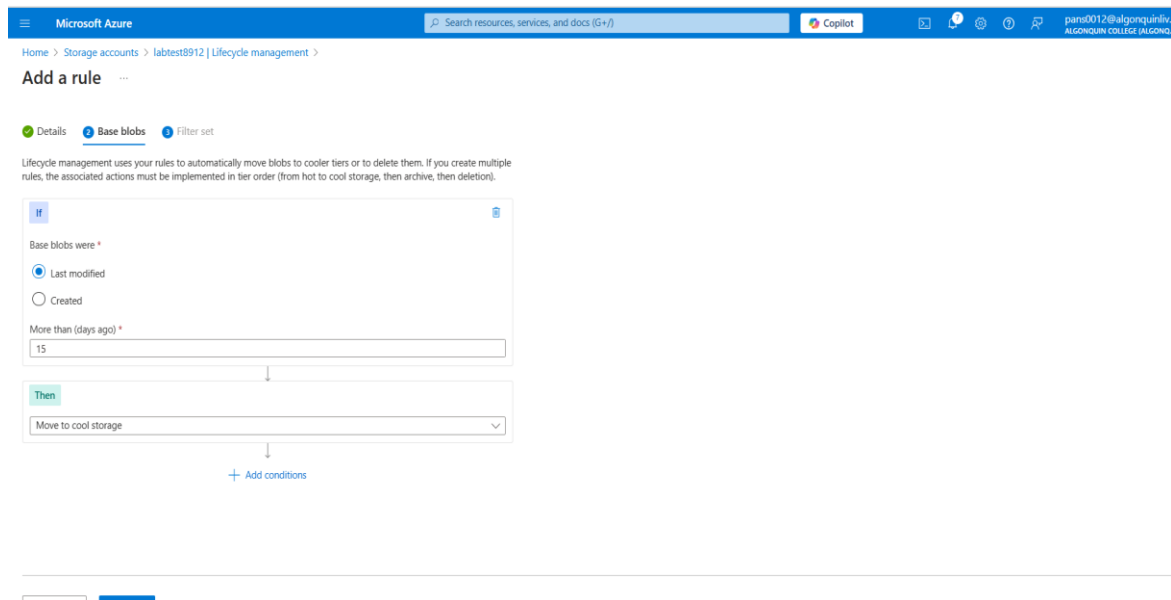
```
<?xml version="1.0" encoding="utf-8"><Error><Code>PublicAccessNotPermitted</Code><Message>Public access is not permitted on this storage account. RequestId:7a463218-d01e-0012-46c5-72ea52000000 Time:2025-01-30T03:16:17.3963901Z</Message></Error></pre>
```

5. On the file blade, click generate SAS and copy the SAS token generated and paste the blob SAS URL on the private window of the browser, you must be able to see the file



```
addresses (1).csv
1 John,Doe,120 jefferson st.,Riverside, NJ, 08075
2 Jack,McGinnis,220 hobo Av.,Phila, PA,09119
3 "John ""Da Man""",Repici,120 Jefferson St.,Riverside, NJ,08075
4 Stephen,Tyler,"7452 Terrace ""At the Plaza"" road",SomeTown,SD, 91234
5 ,Blankman,,SomeTown, SD, 00298
6 "Joan ""the bone""", Anne",Jet,"9th, at Terrace plc",Desert City,CO,00123
7
```

6. On the container blade under data management tab go to “Lifecycle Management” and create a new rule name “myrule8912”, rule scope should be “limit blobs with filters” and blob type and blob subtype should be default, add condition if base blobs were last modified more than “ 15 days” ago then “move to cool storage”



Microsoft Azure

Home > Storage accounts > labtest8912 | Lifecycle management >

Add a rule ...

Details Base blobs Filter set

Lifecycle management uses your rules to automatically move blobs to cooler tiers or to delete them. If you create multiple rules, the associated actions must be implemented in tier order (from hot to cool storage, then archive, then deletion).

If

Base blobs were *

☒ Last modified

☐ Created

More than (days ago) *

15

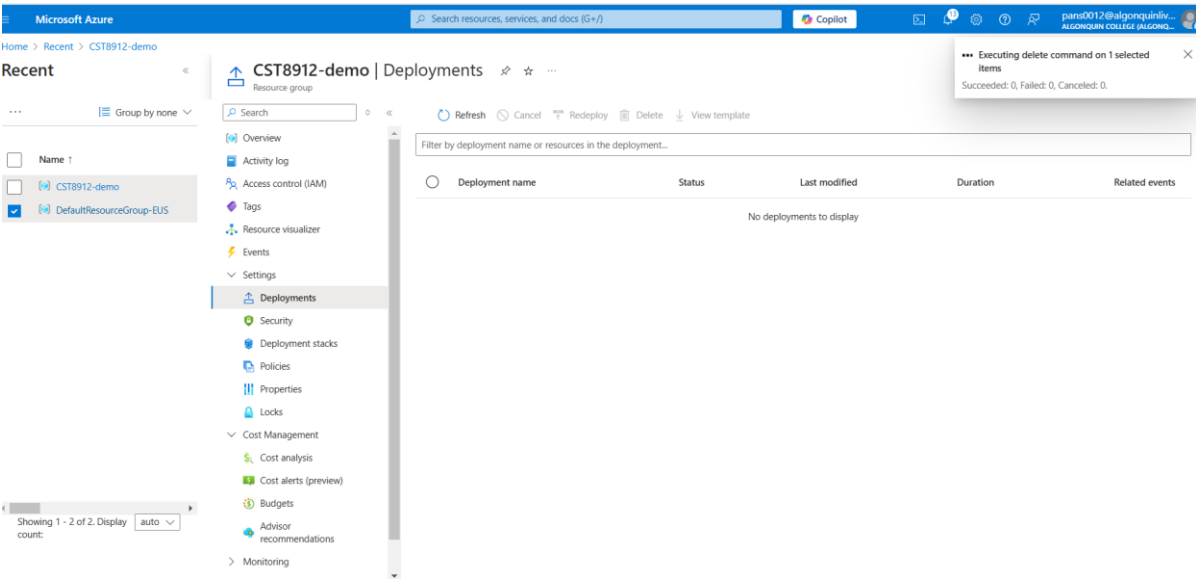
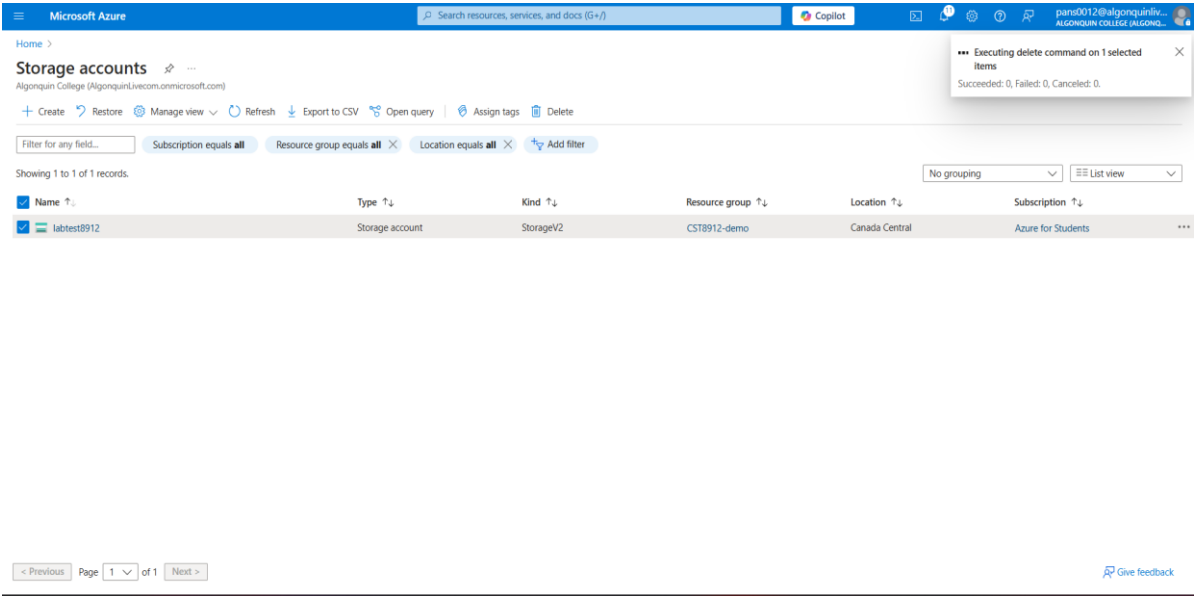
Then

Move to cool storage

+ Add conditions

Review Next

7. After demo delete all the resources created during lab and create a lab report documenting all the steps with screenshots



4. Conclusion

This lab provided hands-on experience with Azure storage services, emphasizing access control, scalability, and cost management. Understanding these concepts is crucial for cloud architects to design secure and efficient cloud storage solutions.

