

Lab 3

CST8912\_011

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February 01, 2025

Submitted to :

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# Lab Report Format

## Title

Managing Azure Storage Account and Blob Lifecycle

## Introduction or Purpose

This lab is intended to teach how to configure a Storage account. After all the configuration, the uploaded file can be access through Blob SAS URL.

## Steps covered in the lab

Create a Storage Account

- Create a storage account named labtest8912 under the **student subscription** and resource group CST8912-demo.
- Set the region to **Canada Central** and choose **Geo Redundant Storage (GRS)**.
- Keep the **networking** and **data protection** options as default.

Change Redundancy and Blob Access Tier

- In the storage account, go to **Data Management > Redundancy** and change redundancy to **Local Redundant Storage (LRS)**.
- Under **Settings > Configuration**, set the **Blob Access Tier** to **Cool** and save changes.

Create a Container and Upload a Blob

- Navigate to **Data Storage > Containers**, create a new container named labtestcontainer8912.
- Upload a blob into a folder named sampletest8912 using files from the shared lab sample links.
- While uploading, change the **Access Tier** to **Hot** in advanced settings.

Test Blob URL Access

- Click the uploaded file in the container and copy its **Blob URL**.
- Open the Blob URL in a private browser window. The URL should not work as the container's public access is set to private.

Generate SAS Token for Access

- In the file's blade, click **Generate SAS**, copy the **SAS Token**, and paste the **Blob SAS URL** into a private browser window.
- You should now be able to view the file.

## Create a Lifecycle Management Rule

- In the container blade, go to **Data Management > Lifecycle Management**.
- Create a new rule named myrule8912.
- Set the **rule scope** to "limit blobs with filters," and use the default blob type and subtype.
- Add a condition: If base blobs were last modified **more than 15 days ago**, move them to **Cool Storage**.

## Cleanup and Report

- Delete all resources created during the lab.

## Results

### 1 - Create a Storage Account

The screenshot displays the Microsoft Azure portal interface for a storage account named 'labtest8912'. The top navigation bar includes the Microsoft Azure logo, a search bar, and user information. The left sidebar shows the 'Overview' tab selected, with a list of navigation options including Activity log, Tags, Diagnose and solve problems, Access Control (IAM), Data migration, Events, Storage browser, Storage Mover, Partner solutions, Data storage, Security + networking, Data management, Settings, Monitoring, Monitoring (classic), Automation, and Help. The main content area is divided into two sections: 'Essentials' and 'Properties'. The 'Essentials' section provides key information about the storage account, including its resource group (CST8912-demo), location (Canada Central), primary/secondary locations (Canada Central and Canada East), subscription (Azure for Students), subscription ID, and disk state. The 'Properties' section is further divided into 'Blob service' and 'Security' tabs. The 'Blob service' tab shows various settings such as Hierarchical namespace (Disabled), Default access tier (Hot), Blob anonymous access (Disabled), Blob soft delete (Enabled (7 days)), Container soft delete (Enabled (7 days)), Versioning (Disabled), Change feed (Disabled), NFS v3 (Disabled), and Allow cross-tenant replication (Disabled). The 'Security' tab shows settings for Require secure transfer for REST API operations (Enabled), Storage account key access (Enabled), Minimum TLS version (Version 1.2), and Infrastructure encryption (Disabled). The 'Networking' tab shows settings for Allow access from (All networks) and Private endpoint connections (0).

## 2 - Local Redundant Storage

Microsoft Azure

Search resources, services, and docs (G+)

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Home > labtest8912

labtest8912 | Redundancy

Storage account

Search

Save Discard Prepare for failover Refresh Give feedback

Falover cannot yet be initiated because initial data synchronization from the primary to secondary region is in progress. Falover will be available when synchronization is complete. Click here for more information. →

Azure Storage redundancy copies your data so that it is protected from transient hardware failures, network or power outages, and natural disasters. If an outage renders the primary endpoint unavailable, then you can initiate a failover to the secondary endpoint to rapidly restore write access to your data.  
[Learn more about storage account failover](#)

Redundancy Locally-redundant storage (LRS)

Last failover time -

Storage endpoints [View all](#)

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

Show portal menu

<https://portal.azure.com/#>

## 3 - Blob Access Tier

Microsoft Azure

Search resources, services, and docs (G+)

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Home > labtest8912

labtest8912 | Configuration

Storage account

Search

Save Discard Refresh Give feedback

Secure transfer required   
☐ Disabled ☒ Enabled

Allow Blob anonymous access   
☒ Disabled ☐ Enabled

Allow storage account key access   
☐ Disabled ☒ Enabled

Allow recommended upper limit for shared access signature (SAS) expiry interval   
☒ Disabled ☐ Enabled

Default to Microsoft Entra authorization in the Azure portal   
☒ Disabled ☐ Enabled

Minimum TLS version   
Version 1.2

Permitted scope for copy operations (preview)   
From any storage account

Blob access tier (default)   
☐ Hot ☒ Cool ☐ Cold

Large file shares   
☐ Disabled ☒ Enabled

## 4 – Container

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

Home > labtest8912

labtest8912 | Containers

Storage account

Data Storage > Containers

Overview, Activity log, Tags, Diagnose and solve problems, Access Control (IAM), Data migration, Events, Storage browser, Storage Mover, Partner solutions, Data storage, Containers, File shares, Queues, Tables, Security + networking, Data management, Storage tasks (preview)

Search containers by prefix

Containers table:

Name	Last modified	Anonymous access level	Lease state
\$logs	1/27/2025, 6:25:14 PM	Private	Available
labtestcontainer8912	1/27/2025, 6:32:02 PM	Private	Available

Successfully created storage container 'labtestcontainer8912'.

https://portal.azure.com/#

## 5 - sampletest8912 folder

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

Home > labtest8912 | Containers >

labtestcontainer8912

Container

Search

Upload, Change access level, Refresh, Delete, Change tier, Acquire lease, Break lease, View snapshots, Create snapshot, Give feedback

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

Location: labtestcontainer8912

Search blobs by prefix (case-sensitive)

Add filter

Overview, Diagnose and solve problems, Access Control (IAM), Settings, Shared access tokens, Access policy, Properties, Metadata

Blobs table:

Name	Modified	Access tier	Archive status	Blob type	Size	Lease state
sampletest8912						

## 6 – Blob

Microsoft Azure

Search resources, services, and docs (G+/)

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Home >

labtestcontainer8912  
Container

Search

Upload Change access level Refresh Delete Change tier Acquire lease

Overview

Diagnose and solve problems

Access Control (IAM)

Settings

Shared access tokens

Access policy

Properties

Metadata

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

Location: labtestcontainer8912

Search blobs by prefix (case-sensitive)

Add filter

Name	Modified	Access tier	Archive status	Blob type	Size	Lease state
No results						

Upload blob

1 file(s) selected: placeholder.json  
Drag and drop files here or [Browse for files](#)

☒ Overwrite if files already exist

Advanced

Blob type

Block blob

☒ Upload .vhd files as page blobs (recommended)

Block size

4 MiB

Access tier

Hot

Upload to folder

Blob index tags

Key	Value

Microsoft Azure

Search resources, services, and docs (G+/)

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Home >

labtestcontainer8912  
Container

Search

Upload Change access level Refresh Delete Change tier Acquire lease Break lease View snapshots Create snapshot Give feedback

Overview

Diagnose and solve problems

Access Control (IAM)

Settings

Shared access tokens

Access policy

Properties

Metadata

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

Location: labtestcontainer8912

Search blobs by prefix (case-sensitive)

Show deleted blobs

Add filter

Name	Modified	Access tier	Archive status	Blob type	Size	Lease state
<input type="checkbox"/> sampletest8912						-

## 7 - Blob link

The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes the Microsoft Azure logo, a search bar, and the user profile 'degu0055@algonquinli...'. The breadcrumb trail indicates the location: Home > labtest8912 | Containers > labtestcontainer8912 > sampletest8912/placeholder.json. The left sidebar shows the 'labtestcontainer8912' container with options like 'Overview', 'Diagnose and solve problems', 'Access Control (IAM)', 'Settings', 'Shared access tokens', 'Access policy', 'Properties', and 'Metadata'. The main content area displays the 'sampletest8912/placeholder.json' blob. The 'Overview' tab is active, showing a list of properties: URL, LAST MODIFIED, CREATION TIME, VERSION ID, TYPE, SIZE, ACCESS TIER, ACCESS TIER LAST MODIFIED, ARCHIVE STATUS, REHYDRATE PRIORITY, SERVER ENCRYPTED, ETAG, VERSION-LEVEL IMMUTABILITY POLICY, CACHE-CONTROL, CONTENT-TYPE, CONTENT-MD5, CONTENT-ENCODING, and CONTENT-LANGUAGE. A 'Copy' button is visible next to the URL field.

Property	Value
URL	https://labtest8912...
LAST MODIFIED	1/27/2025, 7:18:55 PM
CREATION TIME	1/27/2025, 7:18:55 PM
VERSION ID	-
TYPE	Block blob
SIZE	343 B
ACCESS TIER	Hot
ACCESS TIER LAST MODIFIED	1/27/2025, 7:18:55 PM
ARCHIVE STATUS	-
REHYDRATE PRIORITY	-
SERVER ENCRYPTED	true
ETAG	0x8DD3F315A1835CA
VERSION-LEVEL IMMUTABILITY POLICY	Disabled
CACHE-CONTROL	
CONTENT-TYPE	application/json
CONTENT-MD5	Oufjixme+pOmxfoOJaRo...
CONTENT-ENCODING	
CONTENT-LANGUAGE	

The screenshot shows a web browser window with the address bar displaying the URL: <https://labtest8912.blob.core.windows.net/labtestcontainer8912/sampletest8912/placeholder.json>. The browser shows an error message: "This XML file does not appear to have any style information associated with it. The document tree is shown below." The error message is displayed in a dark background with white text. The error details are as follows:

```
<?xml version="1.0" encoding="utf-8" standalone="no" ?>
<Error>
  <Code>PublicAccessNotPermitted</Code>
  <Message>Public access is not permitted on this storage account. RequestId: cea2aaa6-401e-002e-661a-71d3ca000000 Time: 2025-01-28T00:22:02.4192003Z</Message>
</Error>
```

## 8 - From SAS Token

```
https://labtest8912.blob.core.windows.net/labtestcontainer8912/sampletest8912/placeholder.json?sp=r&st=2025-01-28T00:37:51Z&se=2025-01-28T08:37:51...
Pretty-print
{
  "name": "Placeholder",
  "description": "This is a placeholder JSON file.",
  "version": "1.0.0",
  "data": {
    "id": null,
    "attributes": [],
    "settings": {
      "enabled": false,
      "theme": "default"
    },
    "metadata": {
      "created_at": "2025-01-27T00:00:00Z",
      "updated_at": "2025-01-27T00:00:00Z"
    }
  }
}
```

## 9 - Create a Lifecycle Management Rule

Microsoft Azure Search resources, services, and docs (G+/) Copilot degu0055@algonquinli... ALGONQUIN COLLEGE (ALGONQ...

Home > labtest8912 | Lifecycle management >

Add a rule

Details Base blobs Filter set

A rule is made up of one or more conditions and actions that apply to the entire storage account. Optionally, specify that rules will apply to particular blobs by limiting with filters.

Rule name \*

myrule8912

Rule scope \*

☐ Apply rule to all blobs in your storage account

☒ Limit blobs with filters

Blob type \*

☒ Block blobs

☐ Append blobs

Blob subtype \*

☒ Base blobs

☐ Snapshots

☐ Versions

Previous Next



Microsoft Azure

Search resources, services, and docs (G+/I)

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Home > labtest8912 | Lifecycle management >

Add a rule

DetailsBase blobsFilter 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 cold storage

+ Add conditions

Previous

Next

Microsoft Azure

Search resources, services, and docs (G+/I)

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Home > labtest8912

labtest8912 | Lifecycle management

Storage account

Data Management

+ Add a rule

Enable

Disable

Refresh

Delete

Give feedback

Data migration

Data management

Data protection

Lifecycle management

Settings

Data Lake Gen2 upgrade

Lifecycle management offers a rich, rule-based policy for general purpose v2 and blob storage accounts. Use the policy to transition your data to the appropriate access tiers or expire at the end of the data's lifecycle. A new or updated policy may take up to 48 hours to complete. [Learn more](#)

List View

Code View

Enable access tracking

Name	Status	Blob type
myrule8912	Enabled	Block

Successfully updated lifecycle management policy

Successfully updated lifecycle management policy for storage account 'labtest8912'.

https://portal.azure.com/#@AlgonquinLivecom.onmicrosoft.com/resource/subscriptions/cdb9bdf3-e7ee-43e9-8f6c-ba7327868df1/resourceGroups/CST8912-demo/providers/Microsoft.Storage/storageAccounts/labtest8912/managementPolicies

## 9 – Delete all resources

Microsoft Azure

Search resources, services, and docs (G+)

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Home >

All resources

Algonquin College (AlgonquinLivecom.onmicrosoft.com)

Create

Manage view

Refresh

Export to CSV

Open query

Assign tags

Delete

Filter for any field...

Subscription equals all

Resource group equals all

Type equals all

Location equals all

Add filter

Unsecure resources

Recommendations

Changed resources

No grouping

List view

Name

Type

Resource group

Location

Subscription

No resources match your filters

Try changing or clearing your filters.

Create resources

Clear filters

Learn more

Give feedback