



## Practical Task 2: Lifecycle Management for Blob Storage

Implement lifecycle management policies to optimize storage costs.

### Requirements:

1. Create a storage account and a Blob container named "lifecycle-container."
2. Upload multiple files of varying sizes to the container.
3. Create a lifecycle management policy to move blobs to the Cool tier after 30 days and delete blobs older than 90 days.
4. Simulate policy execution by manually testing with different file creation timestamps.
5. Verify that blobs are moved or deleted according to the policy.

```
Overview - Microsoft Azure x +
portal.azure.com/#@ukrsiteukr.onmicrosoft.com/resource/subscriptions/bf75502e-bab2-4709-9623-046fbddb39b7/resourceGroups/rg...
Microsoft Azure Search resources, services, and docs (G+/) Copilot
Switch to PowerShell Restart Manage files New session Editor Web preview Settings Help

--account-key SsNawoiEUKI3CT0BMGdj9ahq/2LG2WeefBgEzE9/y5z2V9R0NbB6hYi5o1/0VzwiTyWaRQJb60E+AStHIg+xw== \
--container-name lifecycle-container \
--name map.jpeg \
--metadata creation_time="20231001"
{
  "client_request_id": "f2ce1c7c-d723-11ef-88f2-00155dc5ef5a",
  "date": "2025-01-20T11:44:46+00:00",
  "encryption_key_sha256": null,
  "encryption_scope": null,
  "etag": "\"0x8DD3947D731CD7F\"",
  "last_modified": "2025-01-20T11:44:47+00:00",
  "request_id": "1a22194d-c01e-0049-3830-6bb4ab000000",
  "request_server_encrypted": true,
  "version": "2022-11-02",
  "version_id": null
}
ukrsite [ ~ ]$ az storage blob metadata update --account-name devaccount2025011921 --account-key SsNawoiEUKI3CT0BMGdj9ahq/2LG2WeefBgEzE9/y5z
2V9R0NbB6hYi5o1/0VzwiTyWaRQJb60E+AStHIg+xw== --container-name lifecycle-container --name map.jpeg --metadata last_modified="20231001"
{
  "client_request_id": "3d4e2f6c-d724-11ef-99f8-00155dc5ef5a",
  "date": "2025-01-20T11:46:51+00:00",
  "encryption_key_sha256": null,
  "encryption_scope": null,
  "etag": "\"0x8DD394821B22058\"",
  "last_modified": "2025-01-20T11:46:52+00:00",
  "request_id": "1a221eed-c01e-0049-6930-6bb4ab000000",
  "request_server_encrypted": true,
  "version": "2022-11-02",
  "version_id": null
}
ukrsite [ ~ ]$
```

```
devaccount2025011921 - Mic x +
portal.azure.com/#@ukrsiteukr.onmicrosoft.com/resource/subscriptions/bf75502e-bab2-4709-9623-046fbddb39b7/resourceGroups/rg...
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Switch to PowerShell Restart Manage files New session Editor Web preview Settings Help
ukrsite [ ~ ]$ az storage blob metadata update \
  --account-name devaccount2025011921 \
  --account-key SsNawoiEUkI3CT0BMGdj9ahq/2LG2WeefBgEzE9/y5z2V9R0NbB6hYi5o1/0VzwiTyWaRQJb60E+ASTHIg+xw== \
  --container-name lifecycle-container \
  --name map.jpeg \
  --metadata creation_time="20231001"
{
  "client_request_id": "f2ce1c7c-d723-11ef-88f2-00155dc5ef5a",
  "date": "2025-01-20T11:44:46+00:00",
  "encryption_key_sha256": null,
  "encryption_scope": null,
  "etag": "\"0x8DD3947D731CD7F\"",
  "last_modified": "2025-01-20T11:44:47+00:00",
  "request_id": "1a22194d-c01e-0049-3830-6bb4ab000000",
  "request_server_encrypted": true,
  "version": "2022-11-02",
  "version_id": null
}
ukrsite [ ~ ]$
```

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portal.azure.com/#view/Microsoft\_Azure\_Storage/ContainerMenuBlade/~/overview/storageAccountId/%2Fsubscriptions%2Fbf75502...

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Create the data policy rules associated with the specified storage account. (autogenerated)

[https://aka.ms/cli\\_ref](https://aka.ms/cli_ref)  
Read more about the command in reference docs  
ukrsite [ ~ ]\$ az storage account management-policy create --account-name devaccount2025011921 --policy @lifecycle-policy.json --resource-group rg-dev-storage  
Failed to parse string as JSON:  
{  
 "rules": [  
 {  
 "enabled": true,  
 "name": "MoveToCoolAndDelete",  
 "type": "Lifecycle",  
 "definition": {  
 "actions": {  
 "baseBlob": {  
 "tierToCool": { "daysAfterModificationGreaterThan": 1 },  
 "delete": { "daysAfterModificationGreaterThan": 2: }  
 }  
 },  
 "filters": {  
 "blobTypes": ["blockBlob"]  
 }  
 }  
 }  
 ]  
}  
Error detail: Expecting ',' delimiter: line 11 column 62 (char 305)  
The provided JSON string may have been parsed by the shell. See <https://docs.microsoft.com/cli/azure/use-cli-effectively#use-quotation-marks-in-arguments>  
ukrsite [ ~ ]\$

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Requesting a Cloud Shell.Succeeded.  
Connecting terminal...

Your Cloud Shell session will be ephemeral so no files or system changes will persist beyond your current session.

```
ukrsite [ ~ ]$ az storage blob upload --account-name devaccount2025011921 --container-name lifecycle-container --name map.jpeg --file map.jpeg --overwrite
```

There are no credentials provided in your command and environment, we will query for account key for your storage account. It is recommended to provide --connection-string, --account-key or --sas-token in your command as credentials.

You also can add --auth-mode login in your command to use Azure Active Directory (Azure AD) for authorization if your login account is assigned required RBAC roles.

For more information about RBAC roles in storage, visit <https://docs.microsoft.com/azure/storage/common/storage-auth-aad-rbac-cli>.

In addition, setting the corresponding environment variables can avoid inputting credentials in your command. Please use --help to get more information about environment variable usage.

Finished[#####] 100.0000%

```
{
  "client_request_id": "61b1e214-d69c-11ef-bbb1-00155d943b86",
  "content_md5": "VHwmW4PU6MHLHwS8Vuuqg==",
  "date": "2025-01-19T19:34:21+00:00",
  "encryption_key_sha256": null,
  "encryption_scope": null,
  "etag": "\"0x8DD38C0465F7460\"",
  "lastModified": "2025-01-19T19:34:22+00:00",
  "request_id": "727b35ff-a01e-00e6-59a9-6a4666000000",
  "request_server_encrypted": true,
  "version": "2022-11-02",
  "version_id": null
}
```

```
ukrsite [ ~ ]$
```

Successfully uploaded a file

Destination: /home/ukrsite  
File: map.jpeg

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HomeStorage accountsdevaccount2025011921Containers

lifecycle-container

Container

Search

UploadChange access levelRefreshDeleteChange tierAcquire leaseBreak leaseView snapshotsCreate snapshot

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: lifecycle-container

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"/>	big.dmg	1/19/2025, 9:21:17 PM	Hot (Inferred)		Block blob	113.42 MiB	Available	...
<input type="checkbox"/>	map.jpeg	1/19/2025, 9:32:54 PM	Hot (Inferred)		Block blob	887.69 KiB	Available	...
<input type="checkbox"/>	StanislavKostenich_J...	1/19/2025, 9:21:52 PM	Hot (Inferred)		Block blob	216.84 KiB	Available	...

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Home > Resource groups > rg-dev-storage > devaccount2025011921 | Containers >

lifecycle-containerContainer

Search

OverviewDiagnose and solve problemsAccess Control (IAM)Settings

UploadChange access levelRefreshDeleteChange tierAcquire leaseBreak leaseView snapshotsCreate snapshot

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Name	Modified	Access tier	Archive status	Blob type	Size	Lease state
<input type="checkbox"/> big.dmg	1/19/2025, 9:21:17 PM	Hot (Inferred)		Block blob	113.42 MiB	Available ***
<input type="checkbox"/> StanislavKostenich_J...	1/19/2025, 9:21:52 PM	Hot (Inferred)		Block blob	216.84 KiB	Available ***

Successfully uploaded blob(s)  
Successfully uploaded 1 blob(s).

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portal.azure.com/#view/Microsoft\_Azure\_Storage/ContainerMenuBlade/~/overview/storageAccountId/%2Fsubscriptions%2Fbf75502...

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Home > Resource groups > rg-dev-storage > devaccount2025011921 | Containers >

lifecycle-containerContainer

Search

UploadChange access levelRefreshDeleteChange t

OverviewDiagnose and solve problemsAccess Control (IAM)Settings

Authentication method: Access key (Switch to Microsoft Entra user account)  
Location: lifecycle-container

Search blobs by prefix (case-sensitive)

Add filter

	Name	Modified	Access tier	Arch
<input type="checkbox"/>	big.dmg	1/19/2025, 9:08:37 PM	Hot (Inferred)	
<input type="checkbox"/>	StanislavKostenich_J...	1/19/2025, 9:09:16 PM	Hot (Inferred)	

Upload blob

\*\*\* Uploading on blob(s)...  
Attempting to upload 1 blobs(s)

Drag and drop files here  
or  
Browse for files

☒ Overwrite if files already exist

Advanced

UploadGive feedback

Current uploadsDismiss: Completed All

big.dmg8 MiB / 113.42 MiB



~/Downloads — mc [sk@sk-MacBook-Air.local]:~/Documents/AzureDevOps — -bash

~/Documents/AzureDevOps/04 Compute tasks — azureuser@dev-web-cus-01: ~ — -bash ...

```
sk-MacBook-Air:Downloads sk$ touch -t $(date -v-100d "+%Y%m%d%H%M") big.dmg
sk-MacBook-Air:Downloads sk$ ls -la big.dmg
-rw-r--r--@ 1 sk  staff  118928978 Oct 11 21:17 big.dmg
sk-MacBook-Air:Downloads sk$ touch -t $(date -v-30d "+%Y%m%d%H%M") StanislavKostenich_JavaEngineer.pdf
sk-MacBook-Air:Downloads sk$ █
```

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Switch to PowerShellRestartManage filesNew sessionEditorWeb previewSettingsHelp

```
"tierToArchive": null,
"tierToCold": null,
"tierToCool": {
  "daysAfterCreationGreaterThan": null,
  "daysAfterLastAccessTimeGreaterThan": null,
  "daysAfterLastTierChangeGreaterThan": null,
  "daysAfterModificationGreaterThan": 30.0
},
"tierToHot": null
},
"snapshot": null,
"version": null
},
"filters": {
  "blobIndexMatch": null,
  "blobTypes": [
    "blockBlob"
  ],
  "prefixMatch": null
}
},
"enabled": true,
"name": "MoveToCoolAndDelete",
"type": "Lifecycle"
}
]
},
"resourceGroup": "rg-dev-storage",
"type": "Microsoft.Storage/storageAccounts/managementPolicies"
}
ukrsite [ ~ ]$
```

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Switch to PowerShell Restart Manage files New session Editor Web preview Settings Help

```
ukrsite [ ~ ]$ nano lifecycle-policy.json
ukrsite [ ~ ]$ az storage account management-policy create --account-name devaccount2025011921 --policy @lifecycle-policy.json
```

Модуль 5 xAdd - Anki xapp.landin xВход на с x05 Azure xAzure Con xlifecycle-c xAzure VM xcity.png ( x+ x

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Switch to PowerShellRestartManage filesNew sessionEditorWeb previewSettingsHelp

GNU nano 6.0lifecycle-policy.jsonModified

```
{
  "rules": [
    {
      "enabled": true,
      "name": "MoveToCoolAndDelete",
      "type": "Lifecycle",
      "definition": {
        "actions": {
          "baseBlob": {
            "tierToCool": { "daysAfterModificationGreaterThan": 30 },
            "delete": { "daysAfterModificationGreaterThan": 90 }
          }
        },
        "filters": {
          "blobTypes": ["blockBlob"]
        }
      }
    }
  ]
}
```

HelpExit

Write OutRead File

Where IsReplace

CutPaste

ExecuteJustify

LocationGo To Line

UndoRedo

Set MarkCopy

To BracketWhere Was

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portal.azure.com/#view/Microsoft\_Azure\_Storage/ContainerMenuBlade/~/overview/storageAccountId/%2Fsubscriptions%2Fbf7...

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Home > devaccount2025011921 | Containers >

lifecycle-containerContainer

Search

UploadChange access levelRefreshDeleteChange tierAcquire leaseBreak leaseView snapshotsCreate snapshot

Overview

Diagnose and solve problems

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Location: lifecycle-container

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Show deleted blobs

Add filter

	Name	Modified	Access tier	Archive status	Blob type	Size	Lease state	
<input type="checkbox"/>	big.dmg	1/19/2025, 9:08:37 PM	Hot (Inferred)		Block blob	113.42 MiB	Available	...
<input type="checkbox"/>	StanislavKostenich_J...	1/19/2025, 9:09:16 PM	Hot (Inferred)		Block blob	216.84 KiB	Available	...

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portal.azure.com/#@ukrsiteukr.onmicrosoft.com/resource/subscriptions/bf75502e-bab2-4709-9623-046fddb39b7/resource...

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Home > devaccount2025011921

devaccount2025011921 | ContainersStorage account

Search

ContainerChange access levelRestore containersRefreshDeleteGive

Search containers by prefix

Name	Last modified	
<input type="checkbox"/> \$logs	1/19/2025, 9:05:56 PM	P

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

New container

Name \*

lifecycle-container

Anonymous access level ⓘ

Private (no anonymous access)

Advanced

Encryption scope

Select from existing account scopes

☐ Use this encryption scope for all blobs in the container

☐ Enable version-level immutability support ⓘ

In order to enable version-level immutability support, your storage account must have versioning turned on.

Create

Give feedback

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portal.azure.com/#view/HubsExtension/DeploymentDetailsBlade/~/overview/id/%2Fsubscriptions%2Fbf75502e-bab2-4709-96...

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Home >devaccount2025011921\_1737313514885 | OverviewDeployment

Search

OverviewInputsOutputsTemplate

Deployment actions: Delete, Cancel, Redeploy, Download, Refresh

✓

Your deployment is complete

Deployment name: devaccount2025011921\_1737313514...

Subscription: Azure subscription 1

Resource group: rg-dev-storage

Start time: 1/19/2025, 9:05:31 PM

Correlation ID: fe40b358-c99a-4d6f-8600-ec460a8e0b98

Deployment details

Next steps

Go to resource

Give feedback

Tell us about your experience with deployment

Deployment succeeded

Deployment 'devaccount2025011921\_1737313514885' to resource group 'rg-dev-storage' was successful.

Go to resourcePin to dashboard

Go to resource

Cost Management

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portal.azure.com/#create/Microsoft.StorageAccount-ARM

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Home > Storage accounts >

Create a storage account

BasicsAdvancedNetworkingData protectionEncryptionTagsReview + create

Security

Configure security settings that impact your storage account.

Require secure transfer for REST API operations

Allow enabling anonymous access on individual containers

Enable storage account key access

Default to Microsoft Entra authorization in the Azure portal

Minimum TLS version

Permitted scope for copy operations (preview)

☒

☒

☒

☐

Version 1.2

From any storage account

Hierarchical Namespace

Hierarchical namespace, complemented by Data Lake Storage Gen2 endpoint, enables file and directory semantics, accelerates big data analytics workloads, and enables access control lists (ACLs) [Learn more](#)

PreviousNextReview + create

Give feedback



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HomeStorage accounts

Create a storage account

manage your storage account together with other resources.

Subscription \*

Azure subscription 1

Resource group \*

(New) rg-dev-storage

Create new

Instance details

Storage account name \*

devaccount2025011921

Region \*

(US) East US

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