

Azure Blob Storage: Guide to Downloading Files

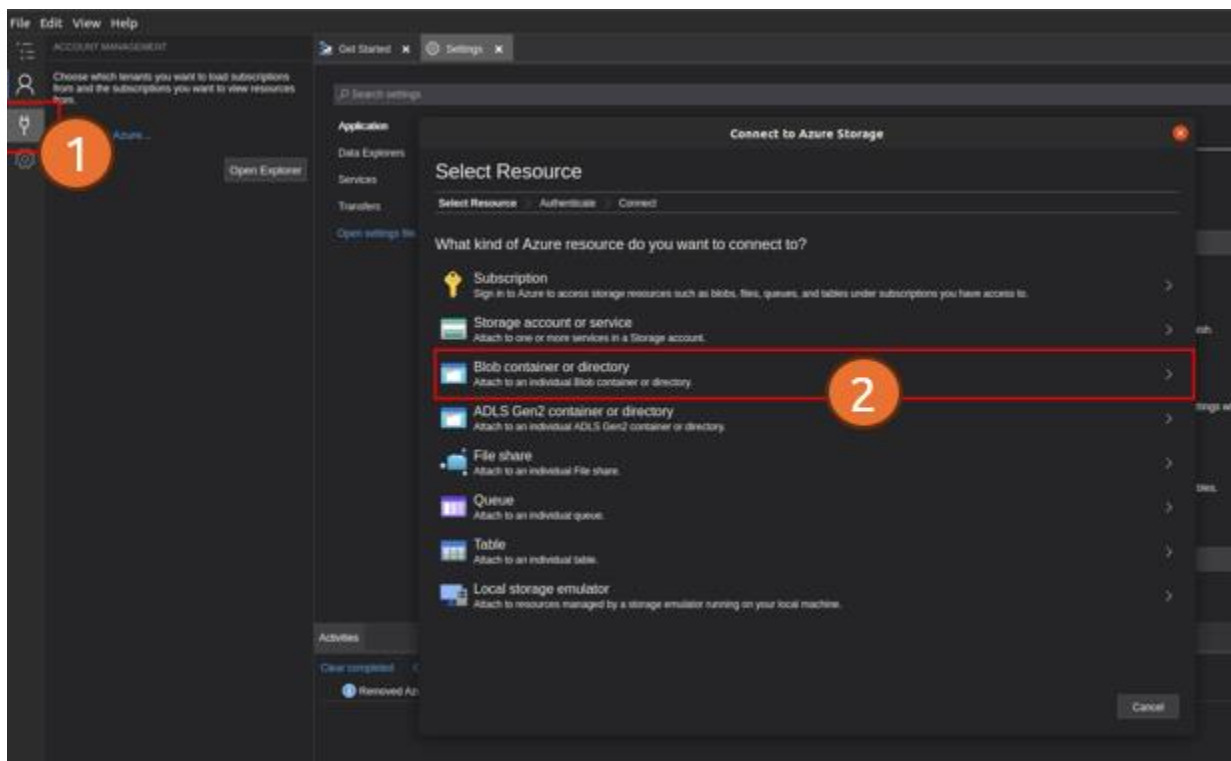
This guideline is intended to show how to download files from an Azure blob container using two different methods. You can download files using the *azcopy* utility (available on all macOS/Windows/Linux platforms) and Azure Storage Explorer (also available for all platforms). The Azure Storage Explorer method is the easiest, as it does not require any experience with command line.

1. Azure Storage Explorer

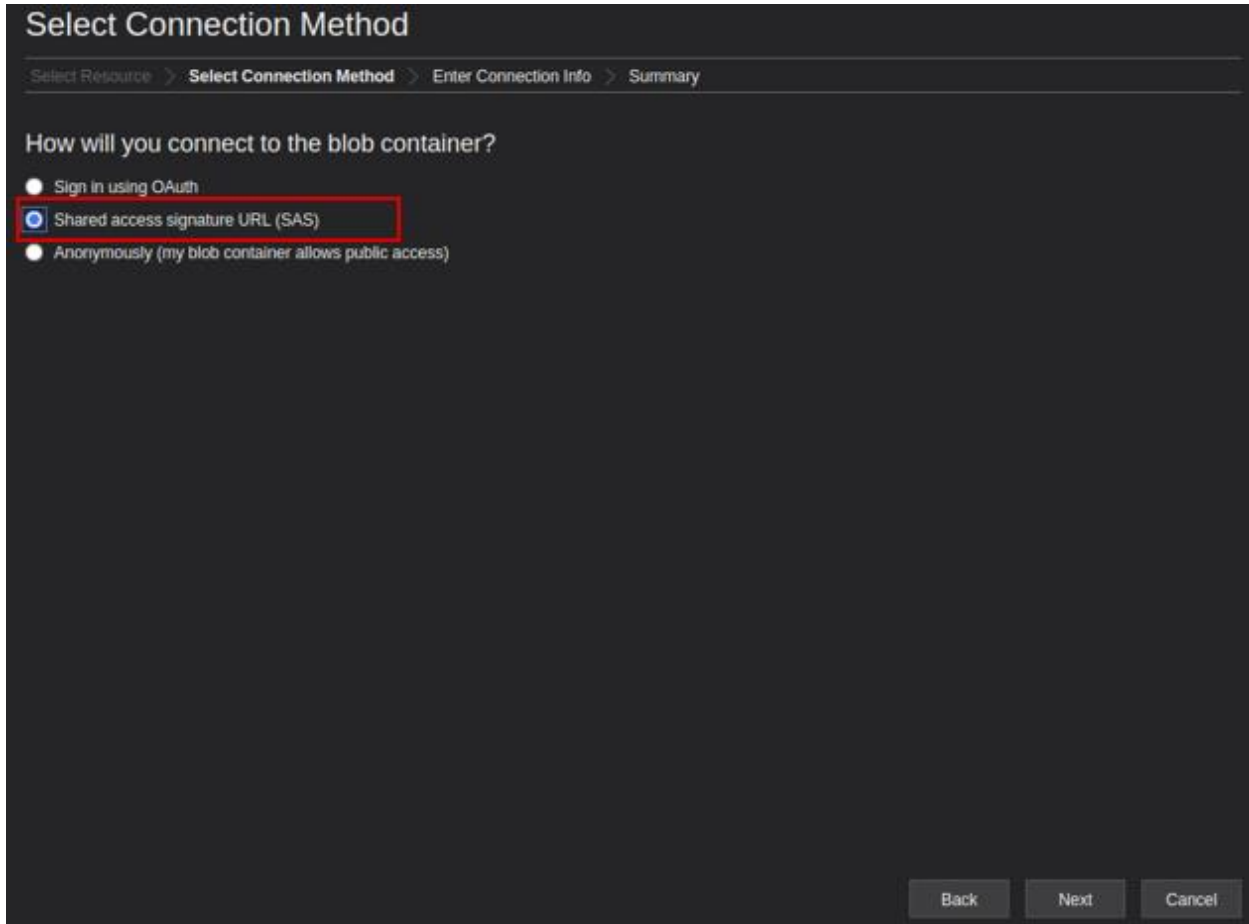
Azure Storage Explorer provides a GUI to manage Azure Storage. [Download it from the official website and install it on your system.](#)

This tool simplifies managing and downloading files without using command-line tools. Use the following steps to download blob files using Azure Storage Explorer:

1. Open Azure Storage explorer and click on **Open Connect Dialog** on the upper right corner of the screen. Select **Blob Container or directory** as shown on the screenshot below:



2. Select **Shared access signature URL (SAS)** and click 'Next':



Select Connection Method

Select Resource > Select Connection Method > Enter Connection Info > Summary

How will you connect to the blob container?

- ☐ Sign in using OAuth
- ☒ Shared access signature URL (SAS)
- ☐ Anonymously (my blob container allows public access)

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3. Fill **Display name** (any name can be specified) and **Blob container or directory SAS URL** fields. Use the following values:

- For **Display Name**: sample-data
- For **Blob container or directory SAS URL**:
<https://euaswhackaton2024data.blob.core.windows.net/sample-data?si=hackaton-students-r&spr=https&sv=2022-11-02&sr=c&sig=7hzGTI807njGmdJ%2B6jWcD5BNs4IMDEyKzw1gIIDPhAs%3D>

Connect to Azure Storage

Enter Connection Info

Select Resource > Select Connection Method > Enter Connection Info > Summary

Display name:

sample-data

Blob container or directory SAS URL:

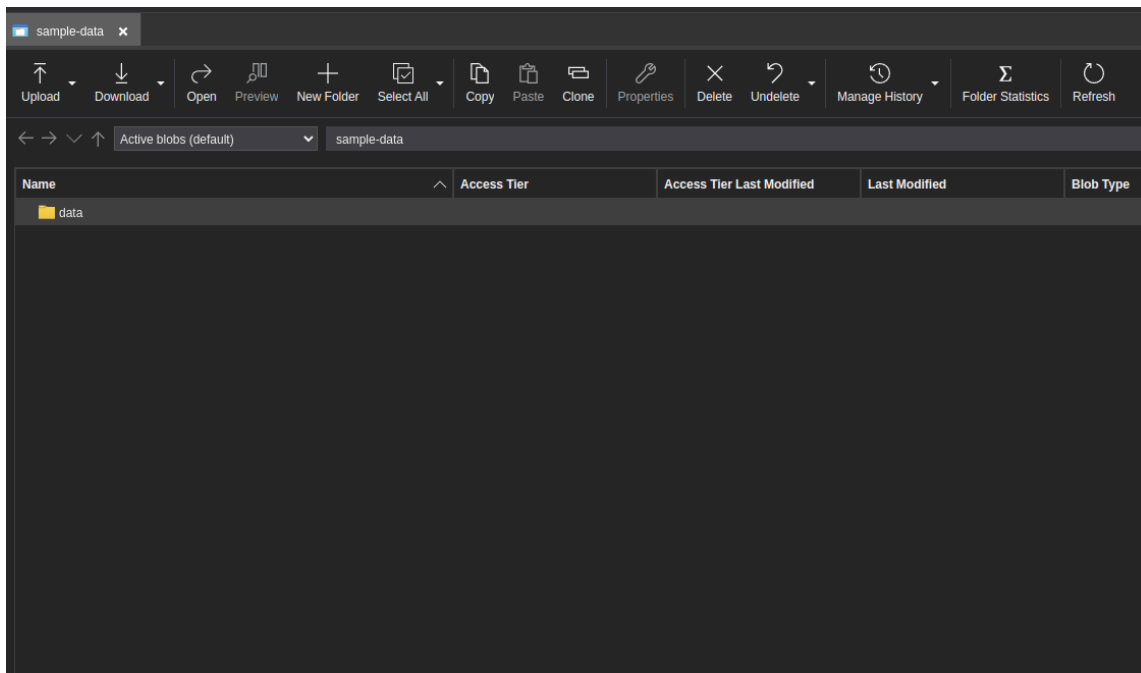
https://euaswhackaton2024data.blob.core.windows.net/sample-data?si=hackaton-students-r&spr=https&sv=2022-11-02&sr=c&sig=7hzGTi807njGmdJ%2B6jWcD5BNs4IMDEyKzw1gIIIDPhAs%3D

Back

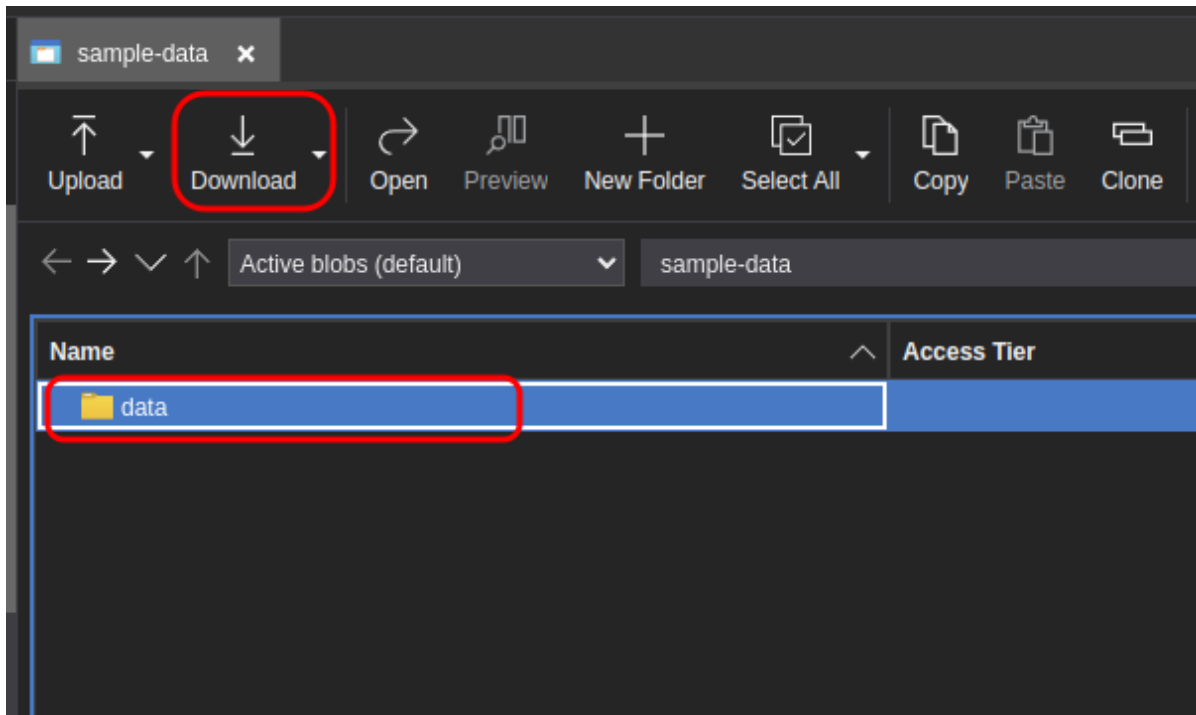
Next

Cancel

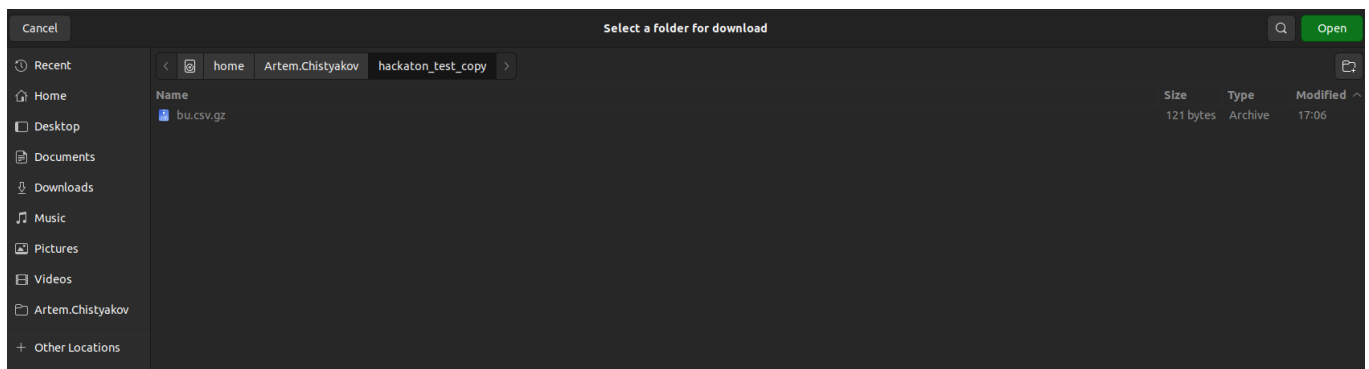
- Click 'Next' and then click on 'Connect'
- Make sure you now can access files in container:



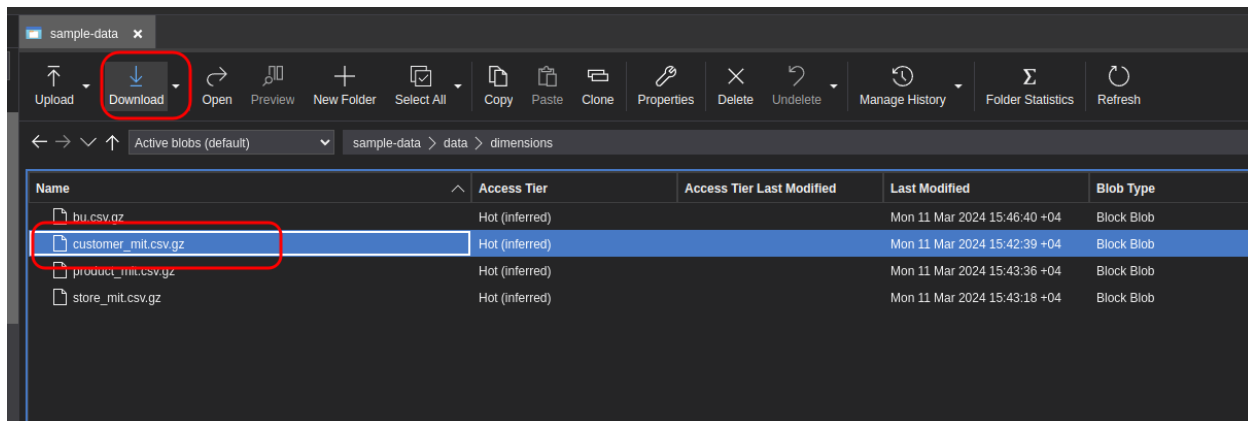
6. To download the entire folder: Select the folder -> Click **Download** button on the top bar -> Select a local folder for downloading:



7. Click on 'Show in folder'



8. To Download a single file: Navigate to the folder containing a file -> Select the file -> Click **Download** button on the top bar -> Select a local folder for downloading:



2. AZCopy

AZCopy is a command-line utility for copying data to/from Azure Storage.

1. To use it for downloading files, first ensure it's installed. You can download [AZCopy from the official Microsoft website](#).
2. Navigate to the folder where azcopy archive has been downloaded.
3. Extract azcopy binary file from downloaded tar/zip archive:
 - For MacOS: unzip example.zip
 - For Windows users:
 - Navigate to the Download Folder: After downloading, navigate to the folder where the AZCopy archive has been saved.
 - Extract the Archive: Use 7zip or a similar utility to extract the files from the downloaded archive.
 - Open PowerShell in the Folder: In the folder where AZCopy is extracted, press on an empty space while holding Shift, then right-click and select "Open PowerShell window here."
 - Execute AZCopy Command: In the PowerShell terminal, execute the AZCopy command to begin copying data. For example:

```
azcopy copy "https://euaswhackaton2024data.blob.core.windows.net/sample-
data/<path-to-the-blob>?<SAS-token>" "<local-destination-path>" --recursive
```

```
PS C:\Users\YuriyShipitsyn\Downloads\azcopy_windows_amd64_10.23.0> .\azcopy copy "https://euaswhackaton2024data.blob.core.windows.
net/data/data?si=hackaton-students-r&spr=https&sv=2022-11-02&sr=c&sig=cfTQCihX%2Bksc%2BvPKyTyB%2BYf0Nc0Uc7y0x6RCBV48a0U%3D" "hacka
ton" --recursive
INFO: Scanning...
INFO: Any empty folders will not be processed, because source and/or destination doesn't have full folder support

Job 4617bf73-fc32-3842-4a70-35d137fbfd57 has started
Log file is located at: C:\Users\YuriyShipitsyn\azcopy\4617bf73-fc32-3842-4a70-35d137fbfd57.log

81.1 %, 54 Done, 0 Failed, 16 Pending, 0 Skipped, 70 Total,
```

- For Linux/MacOS Users:
 - Navigate to the Download Folder: Move to the directory where the AZCopy tar.gz archive has been downloaded.
 - Extract the Archive: Use the command below to extract the AZCopy binary from the downloaded archive: `tar -xvf <fileName>.tar.gz`
 - Check AZCopy Version: Verify the AZCopy version by navigating to the directory where it's extracted and running: `./azcopy --version`
 - Add AZCopy to PATH (Optional): To easily run AZCopy from any location, add the binary to your PATH environment variable using: `export PATH=$PATH:/path/to/azcopy`
 - Execute AZCopy Command: In the PowerShell terminal, execute the AZCopy command to begin copying data.

Common Steps for Copying Files:

- Download Files from a Blob Container: Use the following command format to download files. Replace <SAS-token>, <path-to-the-blob>, and specify the local destination path:
- `azcopy copy`
`"https://euaswhackaton2024data.blob.core.windows.net/data/<path-to-the-blob>?<SAS-token>" "<local-destination-path>" --recursive`

Example #1:

```
azcopy copy "https://euaswhackaton2024data.blob.core.windows.net/sample-
data/data?si=hackaton-students-r&spr=https&sv=2022-11-
02&sr=c&sig=7hzGTl807njGmdJ%2B6jWcd5BNs4IMDEyKzw1gIIDPhAs%3D"
"/home/User.Name/hackaton_dir" --recursive
```

In this example, the entire **data** folder will be downloaded at **/home/User.Name/hackaton_dir** local path.

Example #2:

```
azcopy copy "https://euaswhackaton2024data.blob.core.windows.net/sample-
data/data/dimensions/bu.csv.gz?si=hackaton-students-r&spr=https&sv=2022-11-
02&sr=c&sig=7hzGTl807njGmdJ%2B6jWcd5BNs4IMDEyKzw1gIIDPhAs%3D"
"/home/User.Name/hackaton_dir"
```

In this example, a single file **bu.csv.gz** located at **/data/dimensions** will be downloaded at **/home/User.Name/hackaton_dir** local path.

If you do not know the exact name and path to a particular blob, the following command can be used to view the contents of the container:

azcopy list

```
"https://euaswhackaton2024data.blob.core.windows.net/sample-data?si=hackaton-  
students-r&spr=https&sv=2022-11-  
02&sr=c&sig=7hzGTl807njGmdJ%2B6jWcD5BNs4IMDEyKzw1gIIDPhAs%3D"
```

Recieved output:

INFO: data/dimensions/bu.csv.gz; Content Length: 121.00 B

INFO: data/dimensions/customer_mit.csv.gz; Content Length: 11.26 MiB

INFO: data/dimensions/product_mit.csv.gz; Content Length: 469.98 KiB

INFO: data/dimensions/store_mit.csv.gz; Content Length: 7.63 KiB

INFO: data/transactions_mit/transaction_mit_30.csv.gz; Content Length: 1.00 MiB