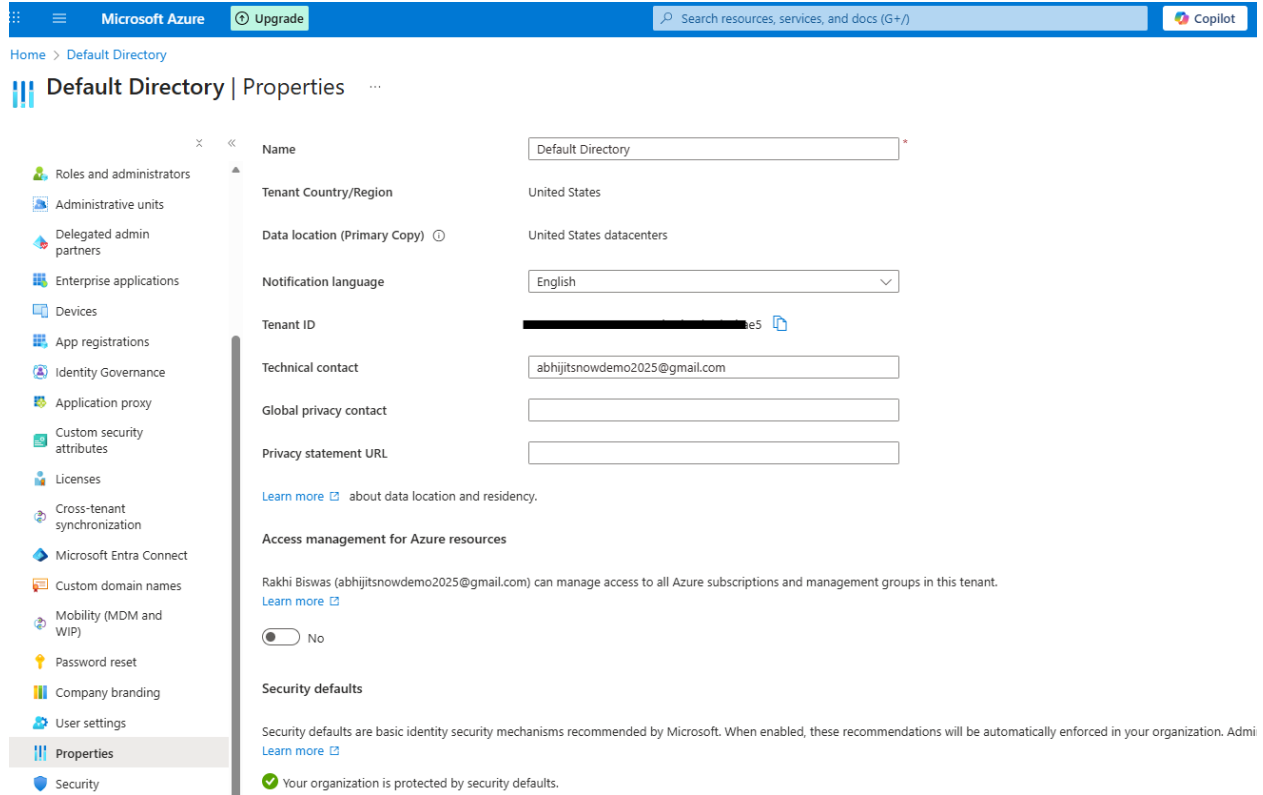


Snowflake Demo Azure Snowpipe Integration

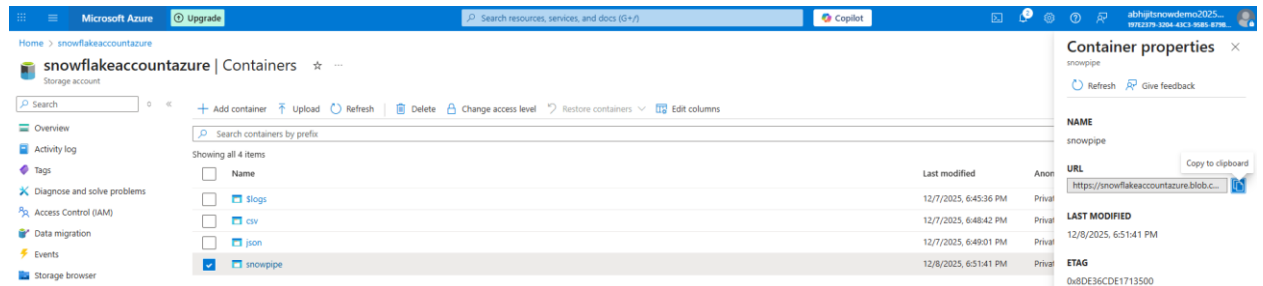
Create Azure Container -> get the tenant id from Entra-ID -> property



The screenshot shows the 'Default Directory' properties page in the Microsoft Azure portal. The page is divided into a left sidebar with navigation options and a main content area. The main content area displays the following properties:

- Name: Default Directory
- Tenant Country/Region: United States
- Data location (Primary Copy): United States datacenters
- Notification language: English
- Tenant ID: [Redacted]
- Technical contact: abhijitsnowdemo2025@gmail.com
- Global privacy contact: [Redacted]
- Privacy statement URL: [Redacted]
- Access management for Azure resources: Rakhi Biswas (abhijitsnowdemo2025@gmail.com) can manage access to all Azure subscriptions and management groups in this tenant.
- Security defaults: Your organization is protected by security defaults.

Copy url and replace https with azure



The screenshot shows the 'snowflakeaccountazure' storage account containers page in the Microsoft Azure portal. The 'snowpipe' container is selected, and its properties are displayed on the right. The URL is highlighted and copied to the clipboard.

NAME	URL	LAST MODIFIED	ETAG
snowpipe	https://snowflakeaccountazure.blob.c...	12/7/2025, 6:45:36 PM	0x0DE36CDE1713500

Update the query and test it

Home Load_ADLS_Data Azure_Integration GCP_Integration.sql GCS_Load_Data.sql Snowpipe.sql +

My Workspace > Snowpipe.sql

1 CREATE OR REPLACE DATABASE SNOWPIPE;
2
3 -- create integration object that contains the access information
4 CREATE OR REPLACE STORAGE INTEGRATION azure_snowpipe_integration
5 TYPE = EXTERNAL_STAGE
6 STORAGE_PROVIDER = AZURE
7 ENABLED = TRUE
8 AZURE_TENANT_ID =
9 STORAGE_ALLOWED_LOCATIONS = ('azure://snowflakeaccountazure.blob.core.windows.net/snowpipe');
10
11
12
13 -- Describe integration object to provide access
14 DESC STORAGE integration azure_snowpipe_integration;
15
16 ---- Create file format & stage objects ----
17
18 -- create file format
19
20 create or replace file format snowpipe.public.fileformat_azure

Results (2 minutes ago)

Table Chart 9 rows 52ms

	property	property_type	property_value	property_default
1	ENABLED	Boolean	true	false
2	STORAGE_PROVIDER	String	AZURE	
3	STORAGE_ALLOWED_LOCATIONS	List	azure://snowflakeaccountazure.blob.core.windows.net/snowpi	[]
4	STORAGE_BLOCKED_LOCATIONS	List		[]
5	USE_PRIVATELINK_ENDPOINT	Boolean	false	false
6	AZURE_TENANT_ID	String		
7	AZURE_CONSENT_URL	String	https://login.microsoftonline.co	
8	AZURE_MULTITENANT_APP_NAME	String		
9	COMMENT	String		

Add read role to Snowflake on Azure Storage -> IAM

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

Home > snowflakeaccountazure

snowflakeaccountazure | Access Control (IAM) ☆

Storage account

Search + Add Download role assignments Edit columns Refresh Delete Feedback

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

Check access Role assignments Roles Deny assignments Classic administrators

My access
View my level of access to this resource.
[View my access](#)

Check access
Review the level of access a user, group, service principal, or managed identity has to this resource. [Learn more](#)

[Check access](#)

Grant access to this resource
Grant access to resources by assigning a role. [Learn more](#)
[Add role assignment](#)

View access to this resource
View the role assignments that grant access to this and other resources. [Learn more](#)
[View](#)

View deny assignments
View the role assignments that have been denied access to specific actions at this scope. [Learn more](#)
[View](#)

Microsoft Azure Upgrade

Search resources, services, and docs (G+)

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ahhstnnowdemo2025...

Home > snowflakeaccountazure | Access Control (IAM) >

Add role assignment

Log Analytics Contributor	Log Analytics Contributor can read all monitoring data and edit monitoring settings. Editing monitoring settings includes adding the VM extension to VMs; ...	BuiltInRole	Analytics	View
Log Analytics Reader	Log Analytics Reader can view and search all monitoring data as well as view monitoring settings, including viewing the configuration of Azure diagnos...	BuiltInRole	Analytics	View
Managed Application Operator Role	Lets you read and perform actions on Managed Application resources	BuiltInRole	Management + Governance	View
Managed Application Publisher Operator	Allows the publisher to read resources in the managed resource group for Managed Application and request JIT access for additional operations. This role L...	BuiltInRole	Management + Governance	View
Monitoring Contributor	Can read all monitoring data and update monitoring settings.	BuiltInRole	Monitor	View
Monitoring Policy Contributor	Allows read access to all monitoring data, update permissions for monitoring settings and permissions to deploy and remediate Azure Monitor alert policies.	BuiltInRole	None	View
Monitoring Reader	Can read all monitoring data.	BuiltInRole	Monitor	View
Reader and Data Access	Lets you view everything but will not let you delete or create a storage account or contained resource. It will also allow read/write access to all data contain...	BuiltInRole	Storage	View
Resource Policy Contributor	Users with rights to create/modify resource policy, create support ticket and read resources/hierarchy.	BuiltInRole	Management + Governance	View
Storage Blob Data Contributor	Allows for read, write and delete access to Azure Storage blob containers and data	BuiltInRole	Storage	View
Storage Blob Data Reader	Allows for read access to Azure Storage blob containers and data	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 Contributor	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
Storage Queue Data Contributor	Allows for read, write, and delete access to Azure Storage queues and queue messages	BuiltInRole	Storage	View
Storage Queue Data Reader	Allows for read access to Azure Storage queues and queue messages	BuiltInRole	Storage	View
Storage Table Data Contributor	Allows for read, write and delete access to Azure Storage tables and entities	BuiltInRole	Storage	View
Storage Table Data Reader	Allows for read access to Azure Storage tables and entities	BuiltInRole	Storage	View

Microsoft Azure Upgrade

Search resources, services, and docs (G+)

Copilot

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Home > snowflakeaccountazure | Access Control (IAM) >

Add role assignment

Role

Members

Conditions

Review + assign

Selected role

Storage Blob Data Reader

Assign access to

☒ User, group, or service principal

☐ Managed identity

Members

+ Select members

Name	Object ID	Type
No members selected		

Description

Optional

Review + assign

Previous

Next

Select members

Application

Selected members:

Application

Select

Close

Home Load_ADLS_Data Azure_Integration GCP_Integration.sql GCS_Load_Data.sql Snowpipe.sql

My Workspace > Snowpipe.sql

ACCOUNTADMIN COMPUTE_WH (X-Small)

```
15
16 ---- Create file format & stage objects ----
17
18 -- create file format
19 create database snowpipe
20
21 create or replace file format snowpipe.public.fileformat_azure
22     TYPE = CSV
23     FIELD_DELIMITER = ','
24     SKIP_HEADER = 1;
25
26 -- create stage object
27 create or replace stage snowpipe.public.stage_azure
28     STORAGE_INTEGRATION = azure_snowpipe_integration
29     URL = 'azure://snowflakeaccountazure.blob.core.windows.net/snowpipe'
30     FILE_FORMAT = fileformat_azure;
31
32
33 -- list files
34 LIST @snowpipe.public.stage_azure;
```

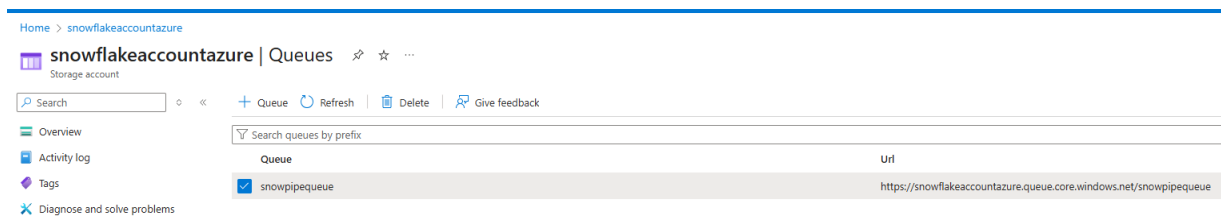
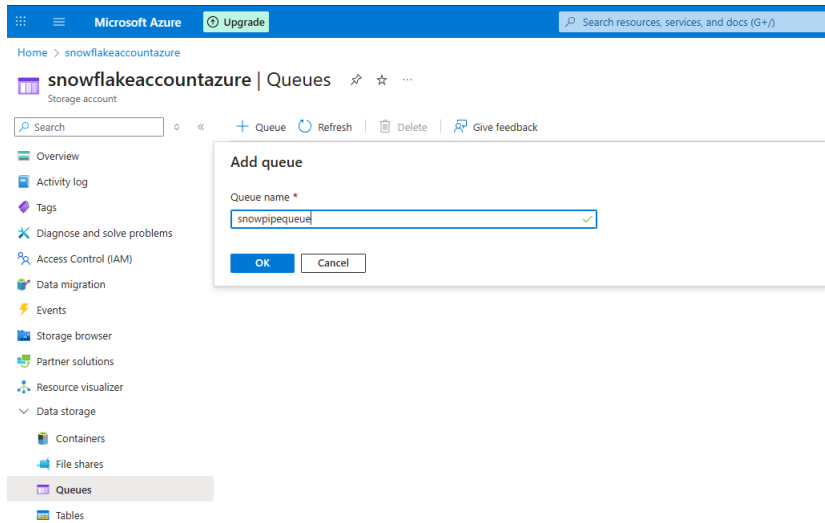
Results (just now)

Table Chart

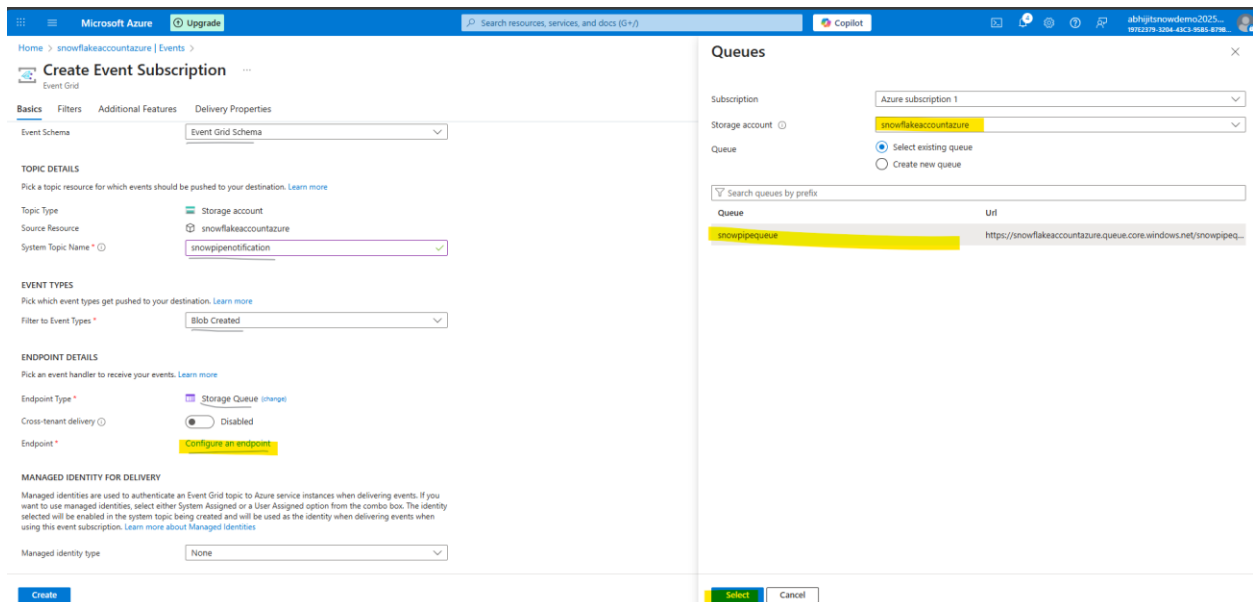
name	size	md5	last_modified
------	------	-----	---------------

Query produced no results

Setup a queue on Azure Storage



Create an Event



Next we need to register Event Grid

Microsoft Azure

Upgrade

Search resources, services, and docs (G+)

Copilot

Home > Subscriptions > Azure subscription 1

Subscriptions

Default Directory (abhyjtsnowdemo2025@gmail.on...

+ Add

Manage Policies

...

Global administrators can manage all subscriptions in this list by updating their policy setting [here](#).

View list of subscriptions for which you have role-based access control (RBAC) permissions to manage Azure resources. To view subscriptions for which you have billing access, [click here](#).

Showing subscriptions in Default Directory directory. Don't see a subscription? [Switch directories](#)

Subscriptions : Filtered (1 of 1)

My role == all

Status == all

Add filter

Subscription name ↑↓

Azure subscription 1

Tags

Diagnose and solve problems

Security

Resource visualizer

Events

Resource groups

Resources

Cost Management

Billing

Settings

Programmatic deployment

Billing properties

Preview features

Usage + quotas

Policies

My permissions

Resource providers

Deployments

Deployment stacks

Resource locks

Azure subscription 1 | Resource providers

Subscription

Search

event

Register

Unregister

Refresh

Feedback

event

Status : All

Registration Policy : All

Provider ↑	Status	Registration Policy
<input checked="" type="checkbox"/> Microsoft.EventGrid	...	NotRegistered
<input type="checkbox"/> Microsoft.EventHub	...	NotRegistered

Register

Unregister

Refresh

Feedback

event

Status : All

Registration Policy : All

Provider ↑	Status	Registration Policy
<input type="radio"/> Microsoft.EventGrid	...	Registering ⓘ
<input type="radio"/> Microsoft.EventHub	...	NotRegistered

Microsoft Azure

Upgrade

Search resources, services, and docs (G+)

Copilot

Home > snowflakeaccountazure | Events >

Create Event Subscription

Event Grid

Basics

Filters

Additional Features

Delivery Properties

Event Schema

Event Grid Schema

TOPIC DETAILS

Pick a topic resource for which events should be pushed to your destination. [Learn more](#)

Topic Type

Storage account

Source Resource

snowflakeaccountazure

System Topic Name *

eventnewfile

EVENT TYPES

Pick which event types get pushed to your destination. [Learn more](#)

Filter to Event Types *

2 selected

ENDPOINT DETAILS

Pick an event handler to receive your events. [Learn more](#)

Endpoint Type *

Storage Queue [\(change\)](#)

Cross-tenant delivery

Disabled

Endpoint *

snowpipequeue [\(change\)](#)

MANAGED IDENTITY FOR DELIVERY

Managed identities are used to authenticate an Event Grid topic to Azure service instances when delivering events. If you want to use managed identities, select either System Assigned or a User Assigned option from the combo box. The identity selected will be enabled in the system topic being created and will be used as the identity when delivering events when using this event subscription. [Learn more about Managed Identities](#)

Managed identity type

None

Create

Give feedback

Deploying Event Subscription: eventnewfile

Deployment of your Event Subscription is proceeding.

Creating System Topic: eventnewfile

Successfully created System Topic eventnewfile

Home | Load_ADLS_Data | Azure_Integration | GCP_Integration.sql | GCS_Load_Data.sql | **Snowpipe.sql** | +

My Workspace > Snowpipe.sql

```

33  -- list files
34  LIST @snowpipe.public.stage_azure;
35
36
37  CREATE OR REPLACE NOTIFICATION INTEGRATION snowpipe_event
38    ENABLED = true
39    TYPE = QUEUE
40    NOTIFICATION_PROVIDER = AZURE_STORAGE_QUEUE
41    AZURE_STORAGE_QUEUE_PRIMARY_URI = 'https://snowflakeaccountazure.queue.core.windows.net/snowpipequeue'
42    AZURE_TENANT_ID = ' ';
43
44
45  -- Register Integration
46
47  DESC notification integration snowpipe_event;
48
49
50
51
52

```

Results (just now)

Table | Chart

	status
1	Integration SNOWPIPE_EVENT successfully created.

Select the consent url

```

46
47  DESC notification integration snowpipe_event;
48
49
50
51
52

```

results (2 minutes ago)

Table | Chart

	property	property_type	property_value	property_default
1	ENABLED	Boolean	true	false
2	USE_PRIVATELINK_ENDPOINT	Boolean	false	false
3	AZURE_STORAGE_QUEUE_PRIMARY_URI	String	https://snowflakeaccountazure.queue.core.windows.net/snowp	
4	AZURE_CONSENT_URL	String	https://login.microsoftonline.com/	
5	AZURE_MULTITENANT_APP_NAME	String		
6	DIRECTION	String	INBOUND	
7	COMMENT	String		

Copy & Save App Name, check the consent box



abhijitsnowdemo2025@gmail.com

Permissions requested

[Redacted]

unverified

This application is not published by Microsoft or your organization.

This app would like to:

✓ Sign in and read user profile

☒ Consent on behalf of your organization

If you accept, this app will get access to the specified resources for all users in your organization. No one else will be prompted to review these permissions.


Accepting these permissions means that you allow this app to use your data as specified in their terms of service and privacy statement. **The publisher has not provided links to their terms for you to review.** You can change these permissions at <https://myapps.microsoft.com>. [Show details](#)

Does this app look suspicious? [Report it here](#)

Cancel

Accept

Snowflake Intelligence is here | Bring enterprise insights to every employee's fingertips. Explore The Solution

ProductSolutionsWhy SnowflakeResourcesDevelopersPricing

Sign inCONTACT SALESSTART FOR FREE



THE AI DATA CLOUD

ALL YOUR KNOWLEDGE.
ONE TRUSTED ENTERPRISE AGENT.

Turn enterprise data into instant insights with Snowflake Intelligence.

Show my hottest leads from the recent conference.

Store InsightsSources: Auto



LEARN MORE ABOUT SNOWFLAKE INTELLIGENCE

READ THE ANNOUNCEMENT BLOG

Add Storage Queue Data Contributor role

Microsoft AzureUpgrade

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

Copilot

Home > snowflakeaccountazure | Access Control (IAM) >

Add role assignment

RoleMembersConditionsReview + assign

A role definition is a collection of permissions. You can use the built-in roles or you can create your own custom roles. Learn more

Copilot can help pick a role

Job function rolesPrivileged administrator roles

Grant access to Azure resources based on job function, such as the ability to create virtual machines.

storage queueType: AllCategory: All

Name ↑↓	Description ↑↓	Type ↑↓	Category ↑↓
Storage Queue Data Contributor	Allows for read, write, and delete access to Azure Storage queues and queue messages	BuiltInRole	Storage
Storage Queue Data Message Processor	Allows for peek, receive, and delete access to Azure Storage queue messages	BuiltInRole	Storage
Storage Queue Data Message Sender	Allows for sending of Azure Storage queue messages	BuiltInRole	Storage
Storage Queue Data Reader	Allows for read access to Azure Storage queues and queue messages	BuiltInRole	Storage
Storage Queue Delegator	Allows for generation of a user delegation key, which can then be used to create a shared access signature for an Azure Storage queue that is signed with En...	BuiltInRole	None

Microsoft Azure Upgrade Search resources, services, and docs (G+/) Copilot

Home > snowflakeaccountazure | Access Control (IAM) >

Add role assignment

Role **Members** Conditions Review + assign

Selected role Storage Queue Data Contributor

Assign access to ☒ User, group, or service principal ☐ Managed identity

Members + Select members

Name	Object ID	Type
No members selected		

Description Optional

Review + assign Previous Next

Select members

Application

Selected members:

Application

Select Close

Microsoft Azure Upgrade Search resources, services, and docs (G+/) Copilot

Home > snowflakeaccountazure | Containers >

snowpipe

Container

Search Add Directory Upload Refresh Delete Copy Paste Rename Acquire lease Break lease Edit columns

Overview Diagnose and solve problems Access Control (IAM) Settings

snowpipe

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

Search blobs by prefix (case-sensitive)

Showing all 1 items

Name	Last modified	Access tier
word-happiness-report-2021.csv	12/8/2025, 7:54:02 PM	Hot (inferred)

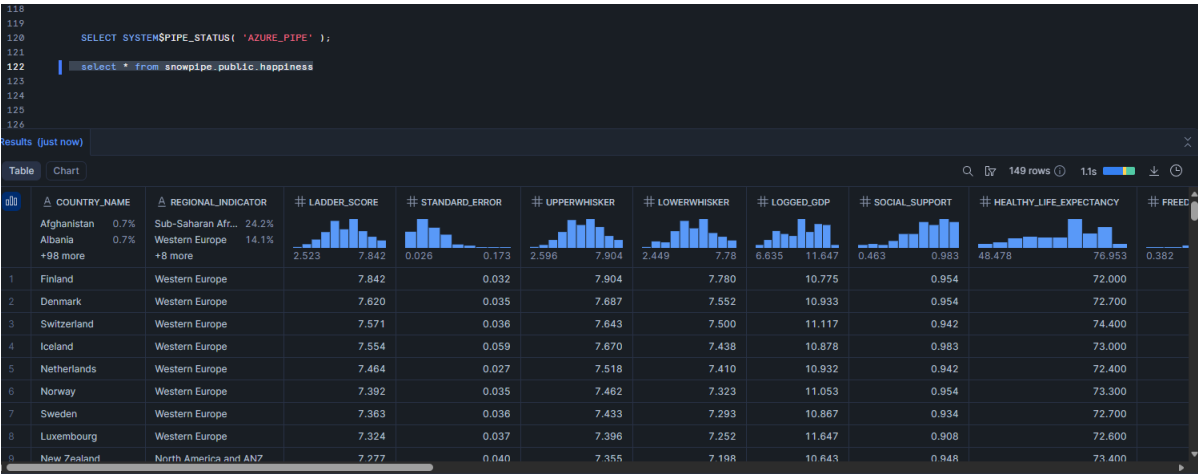
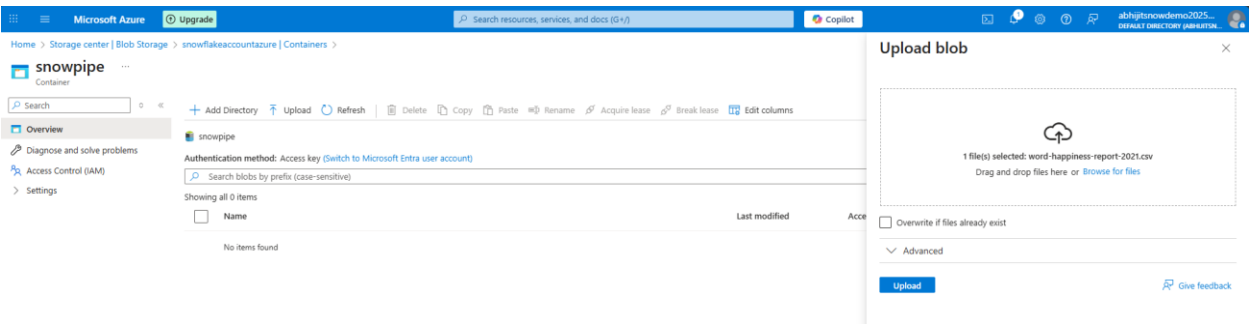
Upload to snowpipe folder while the table is empty

```
119
120 SELECT SYSTEM$PIPE_STATUS( 'AZURE_PIPE' );
121
122 select * from snowpipe_public.happiness
123
124
125
126
127
128
129
130
131
132
```

results (2 minutes ago)

Table Chart 0 rows 43ms

COUNTRY_NAME	REGIONAL_INDICATOR	LADDER_SCORE	STANDARD_ERROR	UPPERWHISKER	LOWERWHISKER	LOGGED_GDP	SOCIAL_SUPPORT	HEALTHY_LIFE_EXPECTA
Query produced no results								



Yes, Snowpipe can cost money, but only minimally when idle. Actual cost occurs mainly when it ingests files. Snowpipe Streaming costs continuously.