

Challenge #2

Moving Data / Azure Data Factory

IN THIS CHALLENGE:

1. Data Factory
2. Data Pipeline
3. Query Editor
4. Azure Data Studio

Go to Kaggle and download the dataset:

<https://www.kaggle.com/saurabhshahane/twitter-sentiment-dataset>

Load your file in your Azure Storage Account.



Twitter Sentiment Dataset

Twitter Sentiment Analysis



Saurabh Shahane • updated 7 days ago (Version 1)

^

7

Home - Microsoft Azure x + ▼ - □ X

portal.azure.com/#home ★

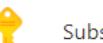
Microsoft Azure Upgrade Search resources, services, and docs (G+/-) ? ? ? ?

Azure services

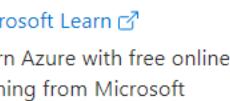
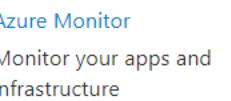
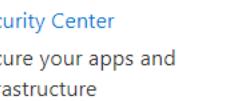
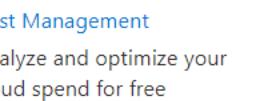
Create a resource  

 SQL databases  Subscriptions  Quickstart Center  Virtual machines  App Services  Storage accounts  Azure Cosmos DB  Kubernetes services  More services

Navigate

 Subscriptions  Resource groups  All resources  Dashboard

Tools

 Microsoft Learn  Learn Azure with free online training from Microsoft  Azure Monitor  Monitor your apps and infrastructure  Security Center  Secure your apps and infrastructure  Cost Management 

Useful links

[Technical Documentation](#)  [Azure Services](#)  [Recent Azure Updates](#) 
[Azure Migration Tools](#) [Find an Azure expert](#) [Quickstart Center](#)

Azure mobile app

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

Home > Create a resource > Marketplace >

Data Factory ⚡ ...

Microsoft

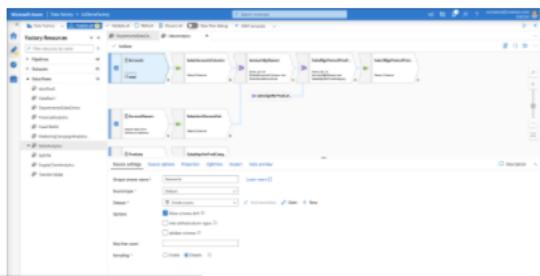


[Overview](#) [Plans](#) [Usage Information + Support](#) [Review](#)

Integrate data silos with Azure Data Factory, a service built for all data integration needs and skill levels. Easily construct ETL and ELT processes code-free within the intuitive visual environment, or write your own code. Visually integrate data sources using more than 90+ natively built and maintenance-free connectors at no added cost. Focus on your data - the serverless integration service does the rest.

- No code or maintenance required to build hybrid ETL and ELT pipelines within the Data Factory visual environment
 - Cost-efficient and fully managed serverless cloud data integration tool that scales on demand
 - Azure security measures to connect to on-premises, cloud-based, and software-as-a-service apps with peace of mind
 - SSIS integration runtime to easily rehost on-premises SSIS packages in the cloud using familiar SSIS tools

Media



Create Data Factory - Microsoft A X +

portal.azure.com/#create/Microsoft.DataFactory

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

Home > Create a resource > Marketplace > Data Factory >

Create Data Factory

Basics Git configuration Networking Advanced Tags Review + create

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription * ⓘ Free Trial

Resource group * ⓘ rg-caio-ai

Create new

Instance details

Region * ⓘ Brazil South

Name * ⓘ df-caio-001

Version * ⓘ V2

Review + create < Previous Next : Git configuration >

Define the name of your instance Azure Data Factory

The screenshot shows the 'Create Data Factory' wizard on the Microsoft Azure portal. The 'Project details' section is active, displaying the 'Subscription' (Free Trial) and 'Resource group' (rg-caio-ai). The 'Instance details' section includes fields for 'Region' (Brazil South), 'Name' (df-caio-001), and 'Version' (V2). A red box highlights the 'Resource group' dropdown, and an orange arrow points from the 'Name' input field towards it, likely indicating a dependency or a common configuration step.

Create Data Factory - Microsoft A X +

portal.azure.com/#create/Microsoft.DataFactory

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

Home > Create a resource > Marketplace > Data Factory >

Create Data Factory

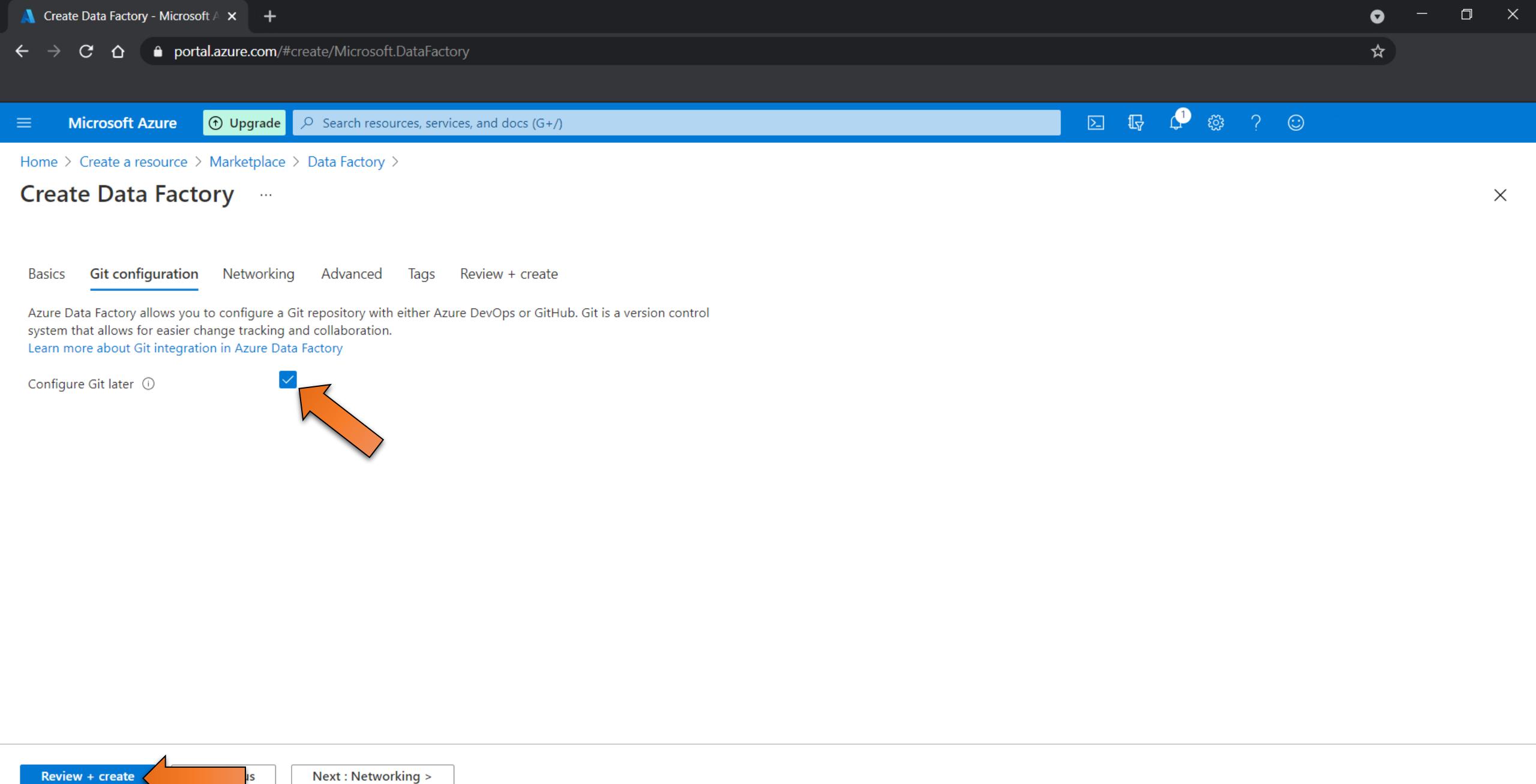
Basics Git configuration Networking Advanced Tags Review + create

Azure Data Factory allows you to configure a Git repository with either Azure DevOps or GitHub. Git is a version control system that allows for easier change tracking and collaboration.

Learn more about Git integration in Azure Data Factory

Configure Git later ⓘ

Review + create Next : Networking >



Select the option <Configure Git later>

Create Data Factory - Microsoft A X +

portal.azure.com/#create/Microsoft.DataFactory

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

Home > Create a resource > Marketplace > Data Factory >

Create Data Factory

Validation Passed

Basics Git configuration Networking Advanced Tags Review + create

TERMS

By clicking "Create", I (a) agree to the legal terms and privacy statement(s) associated with the Marketplace offering(s) listed above; (b) authorize Microsoft to bill my current payment method for the fees associated with the offering(s), with the same billing frequency as my Azure subscription; and (c) agree that Microsoft may share my contact, usage and transactional information with the provider(s) of the offering(s) for support, billing and other transactional activities. Microsoft does not provide rights for third-party offerings. See the [Azure Marketplace Terms](#) for additional details.

Basics

Subscription	Free Trial
Resource group	rg-caio-ai
Region	Brazil South
Name	df-caio-001
Version	V2

Create  **Next** Download a template for automation

Create your Azure Data Factory

Microsoft.DataFactory-20210521122408 x +

portal.azure.com/#blade/HubsExtension/DeploymentDetailsBlade/overview/id/%2Fsubscriptions%2Fbf350b48-f641-49a2-b7e4-598ce72df8ab%2FresourceGroups%2Frg-caio-ai%2Fproviders...

Microsoft Azure Upgrade Search resources, services, and docs (G+/-) ☰ ⓘ ? ☺

Home > Microsoft.DataFactory-20210521122408 | Overview Deployment

Search (Ctrl+ /) Delete Cancel Redeploy Refresh

We'd love your feedback! →

✓ Your deployment is complete

Deployment name: Microsoft.DataFactory-20210521122408
Subscription: Free Trial
Resource group: rg-caio-ai

Start time: 5/21/2021, 12:27:06 PM
Correlation ID: ba37d1d3-1f83-48c3-a9a3-6f3c969c0b04

Deployment details (Download)

Next steps

Go to resource

Security Center

Secure your apps and infrastructure
[Go to Azure security center >](#)

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Start learning today >

Work with an expert

Azure experts are service provider partners who can help manage your assets on Azure and be your first line of support.
[Find an Azure expert >](#)

Azure Data Factory created!

df-caio-001 - Microsoft Azure +    

portal.azure.com/#@caiogasparinegmail.onmicrosoft.com/resource/subscriptions/bf350b48-f641-49a2-b7e4-598ce72df8ab/resourceGroups/rg-caio-ai/providers/Microsoft.DataFactory/facto... 

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

Home > Microsoft.DataFactory-20210521122408 >

 df-caio-001  

   Delete

 Overview 

 Activity log

 Access control (IAM)

 Tags

 Diagnose and solve problems

Settings

 Networking

 Properties

 Locks

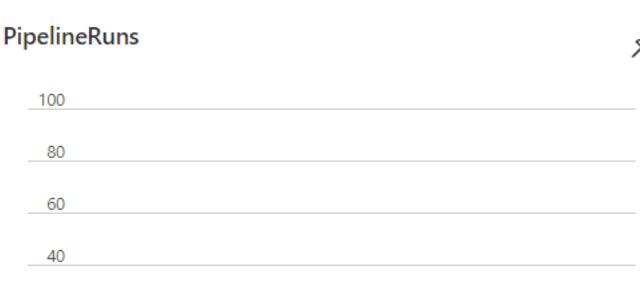
Getting started

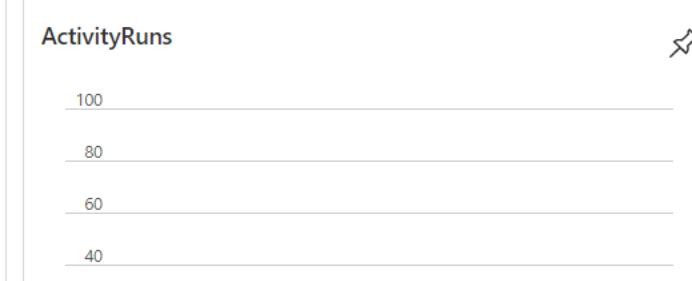
 Quick start

Monitoring

 Documentation  Author & Monitor

Monitoring

 PipelineRuns
100
80
60
40

 ActivityRuns
100
80
60
40

Azure Data Factory up and running...

storageaccountcaio - Microsoft A X +

portal.azure.com/#@caiogasparinegmail.onmicrosoft.com/resource/subscriptions/bf350b48-f641-49a2-b7e4-598ce72df8ab/resourcegroups/rg-caio-ai/providers/Microsoft.Storage/storageA... ☆

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

Home > storageaccountcaio Storage account

Search (Ctrl+ /) Open in Explorer Delete Move Refresh Feedback

Microsoft recommends upgrading to the new alerts platform to ensure no interruptions in your alerts. Classic alerts will be retired starting in 2021. Upgrade to the new alerts platform. [Learn more](#)

JSON View

Essentials

Resource group (change) : rg-caio-ai	Performance/Access tier : Standard/Hot
Location : East US	Replication : Locally-redundant storage (LRS)
Subscription (change) : Free Trial	Account kind : StorageV2 (general purpose v2)
Subscription ID : bf350b48-f641-49a2-b7e4-598ce72df8ab	Provisioning state : Succeeded
Disk state : Available	Created : 5/20/2021, 11:20:33 AM

Tags (change) :

Properties Monitoring Capabilities (7) Recommendations Tutorials Developer Tools

Storage Explorer (preview)

Properties

Blob service	Security		
Hierarchical namespace	Disabled	Secure transfer required	Enabled
Default access tier	Hot	Storage account key access	Enabled
Blob public access	Enabled	Minimum TLS version	Version 1.2
Blob soft delete	Enabled (7 days)	Infrastructure encryption	Enabled
Container soft delete	Disabled		
Versioning	Disabled		
Change feed	Disabled		

Networking	
Allow access from	All networks

https://portal.azure.com/#@caiogasparinegmail.onmicrosoft.com/resource/subscriptions/bf3...

Select Storage Explorer (preview)...

A storageaccountcaio - Microsoft A X +

portal.azure.com/#@caigasparinegmail.onmicrosoft.com/resource/subscriptions/bf350b48-f641-49a2-b7e4-598ce72df8ab/resourcegroups/rg-caio-ai/providers/Microsoft.Storage/storageA... ☆

Microsoft Azure Upgrade Search resources, services, and docs (G+/-) ☰ 5 ⓘ ? ☺

Home > storageaccountcaio

storageaccountcaio | Storage Explorer (preview)

Storage account

Search (Ctrl+/) Search

BLOB CONTAINERS my-container

FILE SHARES QUEUES TABLES

Upload Download Open New Folder Copy URL Select All Copy Paste More

Use the UPLOAD option to load your file from your local computer to your BLOB STORAGE

← → Active blobs (default) my-container Search by prefix (case-sensitive) ↗

NAME	ACCESS TIER	ACCESS TIER LAST MODIFIED	LAST MODIFIED	BLOB TYPE	CONTENT TYPE	SIZE	STATUS	REMAINING DAYS	DELETED TIL
NOTICE.txt	Cool	5/21/2021, 12:33:48 PM	5/20/2021, 1:16:25 PM	Block Blob	text/plain	358.9 KB	Active		
Twitter_Data.csv	Cool	5/21/2021, 12:33:58 PM	5/21/2021, 12:33:01 PM	Block Blob	application/vnd.ms-excel	19.9 MB	Active		

← → Active blobs (default) my-container Search by prefix (case-sensitive) ↗

Showing 1 to 2 of 2 cached items

Select your Blob Storage and load your file

A storageaccountcaio - Microsoft A X +

portal.azure.com/#@caigasparinegmail.onmicrosoft.com/resource/subscriptions/bf350b48-f641-49a2-b7e4-598ce72df8ab/resourcegroups/rg-caio-ai/providers/Microsoft.Storage/storageA... ☆

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

Home > storageaccountcaio

storageaccountcaio | Storage Explorer (preview)

Storage account

Search (Ctrl+ /) Search

Upload Download Open New Folder Copy URL Select All Copy Paste More

BLOB CONTAINERS my-container

FILE SHARES QUEUES TABLES

NAME ACCESS TIER ACCESS TIER LAST MODIFIED LAST MODIFIED BLOB TYPE CONTENT TYPE SIZE STATUS REMAINING DAYS DELETED TIER

NAME	ACCESS TIER	ACCESS TIER LAST MODIFIED	LAST MODIFIED	BLOB TYPE	CONTENT TYPE	SIZE	STATUS	REMAINING DAYS	DELETED TIER
NOTICE.txt	Cool	5/21/2021, 12:33:48 PM	5/20/2021, 1:16:25 PM	Block Blob	text/plain	358.9 KB	Active		
Twitter_Data.csv	Cool	5/21/2021, 12:33:58 PM	5/21/2021, 12:33:01 PM	Block Blob	application/vnd.ms-excel	19.9 MB	Active		

Search by prefix (case-sensitive)

Change your **ACCESS TIER** to save money.
We are not concerned about performance.

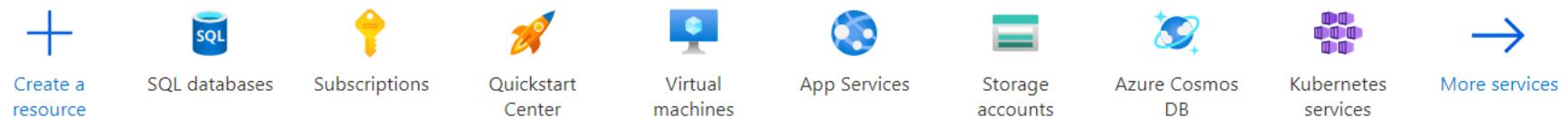
Containers File shares Queues Tables

Networking Azure CDN

Showing 1 to 2 of 2 cached items

Change your ACCESS TIER and select HOME

Azure services



Recent resources

Name	Type	Last Viewed
storageaccountcaio	Storage account	7 minutes ago
df-caio-001	Data factory (V2)	11 minutes ago
rg-caio-ai	Resource group	15 minutes ago
sql-caio-ai1	SQL database	a day ago

Navigate



Subscriptions



Resource groups



All resources



Dashboard

Tools



Microsoft Learn



Azure Monitor



Security Center



Cost Management

df-caio-002 - Microsoft Azure

portal.azure.com/#@caiogasparinegmail.onmicrosoft.com/resource/subscriptions/5342ccb2-6e74-4d46-ab21-889285fad578/resourceGroups/resource-group-ai1006/providers/Mic...

Microsoft Azure

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

Home > df-caio-002 Data factory (V2)

Create a resource

Home

Dashboard

All services

FAVORITES

All resources

Resource groups

App Services

Function App

SQL databases

Azure Cosmos DB

Virtual machines

Load balancers

Storage accounts

Virtual networks

Azure Active Directory

Monitor

Advisor

Microsoft Defender for Cloud

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Tags

Diagnose and solve problems

Settings

Networking

Managed identities

Properties

Locks

Getting started

Quick start

Monitoring

Alerts

Metrics

Delete

Essentials

Resource group (move) : [resource-group-ai1006](#) Type : Data factory (V2)
Status : Succeeded Getting started : [Quick start](#)
Location : East US
Subscription (move) : [MSDN Platforms Subscription](#)
Subscription ID : 5342ccb2-6e74-4d46-ab21-889285fad578

Getting started

[Open Azure Data Factory Studio](#)
[Start authoring and monitoring your data pipelines and data flows.](#)
[Open](#)

Read documentation
Learn how to be productive quickly. Explore concepts, tutorials, and samples.
[Learn more](#)

Monitoring

PipelineRuns

ActivityRuns

JSON View

Select < Open Azure Data Factory Studio >

<https://adf.azure.com/en/home?factory=%2Fsubscriptions%2F5342ccb2-6e74-4d46-ab21-889285fad578%2FresourceGroups%2Fresource-group-ai1006%2Fproviders%2FMicrosoft.DataFactory%2Ffactories%2Fdf-caio-002#loginHint=caiogasparine@gmail.com>

df-caio-002 - Microsoft Azure df-caio-002 - Azure Data Factory + adf.azure.com/en/home?factory=%2Fsubscriptions%2F5342ccb2-6e74-4d46-ab21-889285fad578%2FresourceGroups%2Fresource-group-ai1006%2Fproviders%2FMicrosoft.DataFa...   

Microsoft Azure | Data Factory ▶ df-caio-002     ? 

»  Azure Data Factory allows you to configure a Git repository with either Azure DevOps or GitHub. Git is a version control system that allows for easier change tracking and collaboration. [Learn more](#)

 Set up code repository

Data factory
df-caio-002

New 

 **Ingest**
Copy data at scale once or on a schedule.

 **Orchestrate**
Code-free data pipelines.

 **Transform data**
Transform your data using data flows.

 **Configure SSIS**
Manage & run your SSIS packages in the cloud.

Discover more

 [Browse partners \(preview\)](#)

 [Pipeline templates](#)

 [SAP pipeline templates](#)

Select < Ingest >

df-caio-002 - Microsoft Azure df-caio-002 - Azure Data Factory +

Microsoft Azure | Data Factory ▶ df-caio-002

Copy Data tool

Properties

Source

Target

Settings

Review and finish

Use Copy Data Tool to perform a one-time or scheduled data load from 90+ data sources. Follow the wizard experience to specify your data loading settings, and let the Copy Data Tool generate the artifacts for you, including pipelines, datasets, and linked services. [Learn more](#)

Properties

Select copy data task type and configure task schedule

Task type

Built-in copy task
You will get single pipeline to copy data from 90+ data source easily.

Metadata-driven copy task
You will get parameterized pipelines which can read metadata from an external store to load data at a large scale.

You will get single pipeline to quickly copy objects from data source to destination in a very intuitive manner.

Task cadence or task schedule *

Run once now Schedule Tumbling window

< Previous Next > Cancel

Select < Built-in copy task > and < Next >

df-caio-002 - Microsoft Azure df-caio-002 - Azure Data Factory +

adf.azure.com/en/home/copywizard?factory=%2Fsubscriptions%2F5342ccb2-6e74-4d46-ab21-889285fad578%2FresourceGroups%2Fresource-group-ai1006%2Fproviders%2F...

Microsoft Azure | Data Factory ▶ df-caio-002

Copy Data tool

Properties

Source

Dataset

Configuration

Target

Settings

Review and finish

Source data store

Specify the source data store for the copy task. You can use an existing data store connection or specify a new data store.

Source type: Azure Blob Storage

Connection *: Select... New connection

< Previous Next > Cancel

Select < Source Type > and < + New Connection >

df-caio-002 - Microsoft Azure df-caio-002 - Azure Data Factory +  adf.azure.com/en/home/copywizard?factory=%2Fsubscriptions%2F5342ccb2-6e74-4d46-ab21-889285fad578%2FresourceGroups%2Fresource-group-ai1006%2Fproviders%2F...

Microsoft Azure | Data Factory > df-caio-002

Copy Data tool

Properties (1) **Source** (2) Dataset (3) Configuration (4) Target (5) Settings (6) Review and finish

Source data store

Specify the source data store for the copy task. You can use an existing data store connection or specify a new one.

Source type: Azure Blob Storage

Connection *: Select... New connection

New linked service

Azure Blob Storage [Learn more](#)

Name *: AzureBlobStorage1

Description:

Connect via integration runtime *: AutoResolveIntegrationRuntime

Authentication type: Account key

Connection string **Azure Key Vault**

Account selection method:

From Azure subscription Enter manually

Azure subscription: MSDN Platforms Subscription (5342ccb2-6e74-4d46-ab21-889285fad578)

Storage account name *: saai1006

Additional connection properties: [New](#)

Create Cancel  Test connection

Select < Create >

df-caio-002 - Microsoft Azure df-caio-002 - Azure Data Factory +  adf.azure.com/en/home/copywizard?factory=%2Fsubscriptions%2F5342ccb2-6e74-4d46-ab21-889285fad578%2FresourceGroups%2Fresource-group-ai1006%2Fproviders%2F...

Microsoft Azure | Data Factory ▶ df-caio-002

Copy Data tool

Properties

Source

Dataset

Configuration

Target

Settings

Review and finish

Source data store

Specify the source data store for the copy task. You can use an existing data store connection or specify a new data store.

Source type: Azure Blob Storage

Connection *: AzureBlobStorage1

File or folder *: my-container/Twitter_Data.csv

Options:

- Binary copy
- Recursively
- Enable partition discovery

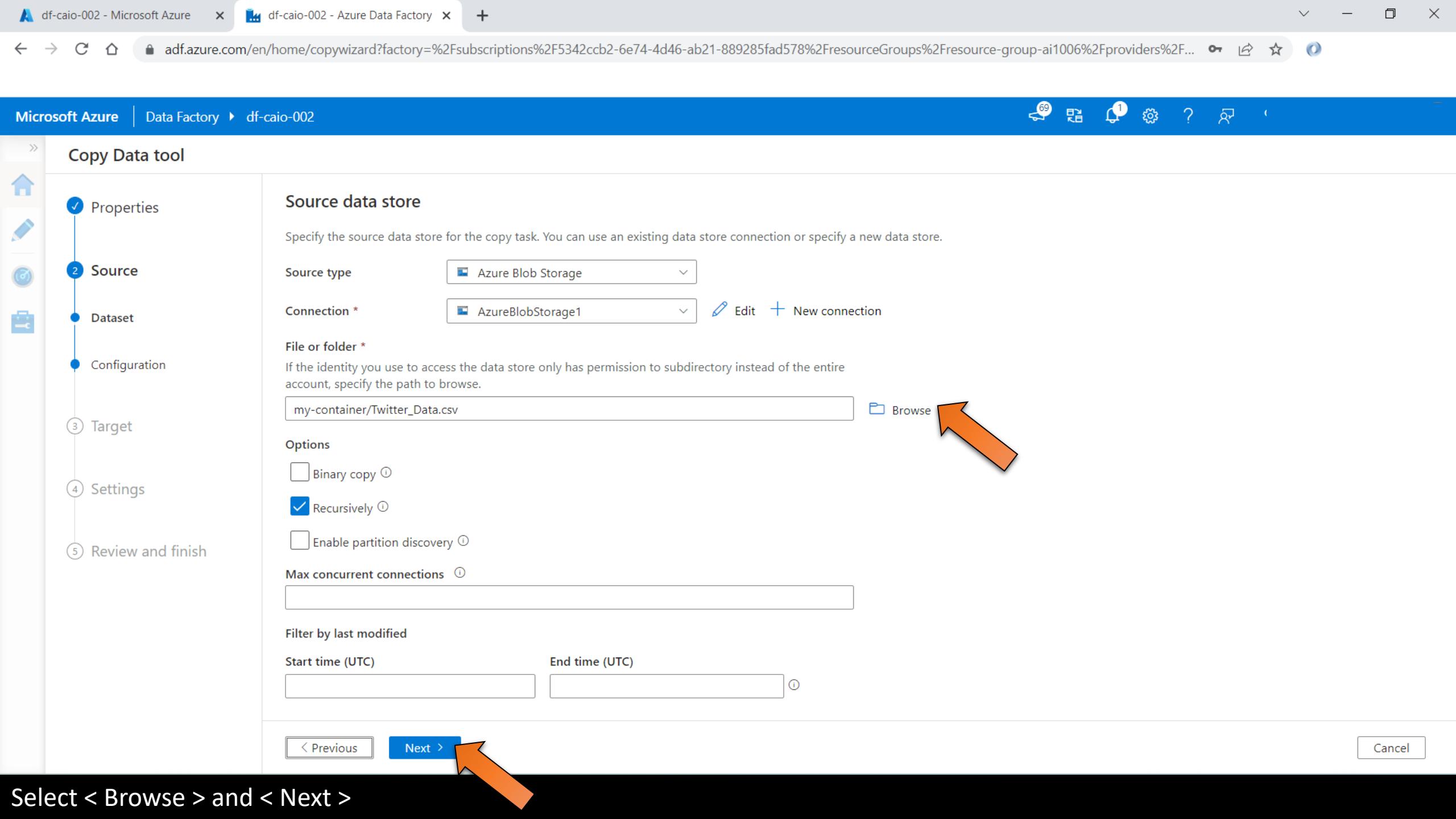
Max concurrent connections:

Filter by last modified

Start time (UTC):

End time (UTC):

< Previous Next > Cancel



Select < Browse > and < Next >

df-caio-002 - Microsoft Azure df-caio-002 - Azure Data Factory +

adf.azure.com/en/home/copywizard?factory=%2Fsubscriptions%2F5342ccb2-6e74-4d46-ab21-889285fad578%2FresourceGroups%2Fresource-group-ai1006%2Fproviders%2F...

Microsoft Azure | Data Factory ▶ df-caio-002

Copy Data tool

Properties

Source

Dataset

Configuration

Target

Settings

Review and finish

File format settings

File format ⓘ

DelimitedText

Detect text format

Preview data

Column delimiter

Comma (,)

Edit

Row delimiter

Line feed (\n)

Edit

First row as header ⓘ

Advanced

Compression type

None

Additional columns ⓘ

New

< Previous

Next >

Cancel

Select < Next >



df-caio-002 - Microsoft Azure df-caio-002 - Azure Data Factory +

adf.azure.com/en/home/copywizard?factory=%2Fsubscriptions%2F5342ccb2-6e74-4d46-ab21-889285fad578%2FresourceGroups%2Fresource-group-ai1006%2Fproviders%2F...

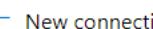
Microsoft Azure | Data Factory ▶ df-caio-002

Copy Data tool

Properties ✓
Source ✓
Target 3
Dataset
Configuration
Settings
Review and finish

Destination data store

Specify the destination data store for the copy task. You can use an existing data store connection or specify a new data store.

Target type: All
Connection *: Select...  New connection

< Previous Next > Cancel



Select < + New Connection >

df-caio-002 - Microsoft Azure df-caio-002 - Azure Data Factory + adf.azure.com/en/home/copywizard?factory=%2Fsubscriptions%2F5342ccb2-6e74-4d46-ab21-889285fad578%2FresourceGroups%2Fresource-group-ai1006%2Fproviders%2F... 69 1 🔍 ⚙️ ? 🔍

Microsoft Azure | Data Factory ▶ df-caio-002

Copy Data tool

Destination data store

Specify the destination data store for the copy task. You can use an existing data store connection or specify a new one.

Target type: All

Connection *: Select... New connection

Properties ✓
Source ✓
Target 3
Dataset
Configuration
Settings
Review and finish

Next >

New linked service

Search

All Azure Database File Generic protocol NoSQL Services and apps

Azure Database for MySQL	Azure Database for PostgreSQL	Azure Databricks Delta Lake
Azure File Storage	Azure SQL Database	SQL Database Managed Instance
Azure Search	Azure Synapse Analytics	Azure Table Storage

Continue

Select < Azure SQL Database > and < Continue >

An orange arrow points from the text "Select < Azure SQL Database > and < Continue >" to the "Continue" button at the bottom of the "New linked service" pane.

Home - Microsoft Azure df-caio-002 - Azure Data Factory

adf.azure.com/en/home/copywizard?factory=%2Fsubscriptions%2F5342ccb2-6e74-4d46-ab21-889285fad578%2FresourceGroups%2Fresource-group-ai1006%2Fproviders%2F...

Microsoft Azure | Data Factory > df-caio-002

Copy Data tool

Destination data store

Specify the destination data store for the copy task. You can use an existing data store connection or specify new connection details.

Target type: All

Connection *: Select... New connection

Properties ✓
Source ✓
Target 3
Dataset
Configuration
Settings
Review and finish

< Previous Next >

New connection

Azure SQL Database Learn more

Name *: AzureSqlDatabase1

Description:

Connect via integration runtime * ⓘ: AutoResolveIntegrationRuntime

Connection string Azure Key Vault

Account selection method ⓘ

From Azure subscription Enter manually

Azure subscription: MSDN Platforms Subscription (5342ccb2-6e74-4d46-ab21-889285fad578)

Server name *: sql-db-server-ai1006

Database name *: master

Authentication type *: SQL authentication

Create Back Test connection Cancel

Select < Create >

Microsoft Azure | Data Factory ▶ df-caio-002

Copy Data tool

Properties  Source  Target  Dataset Configuration Settings Review and finish

Destination data store

Specify the destination data store for the copy task. You can use an existing data store connection or specify a new data store.

Target type: All

Connection *: AzureSqlDatabase1  

Source: Azure Blob Storage file

Target:  [] . Azure Blob Storage file (auto-create)

Use existing table

Skip column mapping for all tables

< Previous  Next > Cancel

Select < Next >

sql-db-server-ai1006 - Microsoft df-caio-002 - Azure Data Factory

adf.azure.com/en/home/copywizard?factory=%2Fsubscriptions%2F5342ccb2-6e74-4d46-ab21-889285fad578%2FresourceGroups%2Fresource-group-ai1006%2Fproviders%2F...

Microsoft Azure | Data Factory ▶ df-caio-002

Copy Data tool

Properties

Source

Target

Dataset

Configuration

Settings

Review and finish

Column mapping

Choose how source and destination columns are mapped

Table mappings (1)

Source
Azure Blob Storage file
Target
new-table.Azure Blob Storage file

Column mappings

Type conversion settings

New mapping Clear Reset Delete

Source	Type	Destination	Type
clean_text	String	clean_text	String
category	String	category	String

Azure SQL Database sink properties

Pre-copy script

Advanced

< Previous Next > Cancel

Select < Next >

sql-db-server-ai1006 - Microsoft  df-caio-002 - Azure Data Factory  +    

adf.azure.com/en/home/copywizard?factory=%2Fsubscriptions%2F5342ccb2-6e74-4d46-ab21-889285fad578%2FresourceGroups%2Fresource-group-ai1006%2Fproviders%2F...    

Microsoft Azure | Data Factory ▶ df-caio-002

Copy Data tool

Properties   ✓

Source   ✓

Target   ✓

Settings   4

Review and finish   5

Settings

Enter name and description for the copy data task, more options for data movement

Task name * 

Task description

Data consistency verification 

Fault tolerance 

Enable logging 

Enable staging 

> Advanced

< Previous  Next >  

Select < Next >

Copy Data tool

Properties

Summary

You are running pipeline to copy data from Azure Blob Storage to Azure SQL Database.



Azure Blob Storage



Azure SQL Database

Source

Target

Properties

Task name CopyPipeline_ai1006

Edit

Task description

Source

Edit

Connection name AzureBlobStorage1

Dataset name SourceDataset_u6y

Column delimiter ,

Row delimiter

Escape character \

Quote char "

< Previous

Next >

Cancel

Select < Next >

Microsoft Azure | Data Factory ▶ df-caio-002

Copy Data tool

Properties
Source
Target
Settings
Review and finish
Review
Deployment

Azure Blob Storage → Azure SQL Database

Deployment complete

Deployment step	Status
Validating copy runtime environment	Succeeded
Creating datasets	Succeeded
Creating pipelines	Succeeded
Running pipelines	Succeeded

Datasets and pipelines have been created. You can now monitor and edit the copy pipelines or click finish to close Copy Data Tool.

Finish Edit pipeline Monitor

Select < Finish >

adf.azure.com/en/home/copywizard?factory=%2Fsubscriptions%2F5342ccb2-6e74-4d46-ab21-889285fad578%2FresourceGroups%2Fresource-group-ai1006%2Fproviders%2F...

Microsoft Azure | Data Factory > df-caio-002

Copy Data tool

Properties
Source
Target
Settings
Review and finish
Review
Deployment

Azure Blob Storage → Azure SQL Database

Deployment complete

Deployment step

- Validating copy runtime environment
- > Creating datasets
- > Creating pipelines
- > Running pipelines

Status

- Succeeded
- Succeeded
- Succeeded
- Succeeded

Datasets and pipelines have been created. You can now monitor and edit the copy pipelines or click finish to close Copy Data Tool.

Finish Edit pipeline Monitor

Select < Finish >

What is Azure Data Factory?

<https://youtu.be/EpDkxTHAhOs>

<https://docs.microsoft.com/en-us/azure/data-factory/concepts-data-flow-performance>

;-)

Challenge #2.2

Using Query Editor to visualize your data

Azure services



Recent resources

Name	Type	Last Viewed
Free Trial	Subscription	4 days ago
storageaccountcaio	Storage account	4 days ago
sa-caio-ai1	Synapse workspace	7 days ago
rg-caio-ai	Resource group	7 days ago
df-caio-001	Data factory (V2)	2 weeks ago
sql-caio-ai1	SQL database	2 weeks ago

Navigate



To

<https://portal.azure.com/#@caioquasarine@mail.onmicrosoft.com/asset/SolAzureExtension/Database/subscriptions/bf350b48-f641-49a2-b7e4-598ce72df8ab/resourceGroups/ra-caio-ai/providers/Microsoft.Sql/servers/srv-caio-001/databases/sql-caio-ai1>

Select your SQL instance

sql-caio-ai1 (srv-caio-001/sql-caio-ai1) + More

portal.azure.com/#@caiogasparinegmail.onmicrosoft.com/resource/subscriptions/bf350b48-f641-49a2-b7e4-598ce72df8ab/resourceGroups/rg-caio-ai/providers/Microsoft.Sql/servers/srv-caio-ai1/databases/sql-caio-ai1/queryEditor

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

Home > sql-caio-ai1 (srv-caio-001/sql-caio-ai1) ⚡ ...

SQL database

Search (Ctrl+ /) Copy Restore Export Set server firewall Delete Connect with... Feedback

Overview Activity log Tags Diagnose and solve problems Quick start Query editor (preview)

Resource group (change) : rg-caio-ai Status : Online Location : Brazil South Subscription (change) : Free Trial Subscription ID : bf350b48-f641-49a2-b7e4-598ce72df8ab Tags (change) : Click here to add tags Server name : srv-caio-001.database.windows.net Elastic pool : No elastic pool Connection strings : Show database connection strings Pricing tier : Basic Earliest restore point : 2021-05-25 00:00 UTC

JSON View

Show data for last: 1 hour 24 hours 7 days Aggregation type: Max

Compute utilization

Database data storage 3.22% USED SPACE

Power Platform Power BI (preview) Power Apps (preview) Power Automate (preview)

Settings Compute + storage Connection strings Properties Locks

Data management

Used space 66 MB Allocated space 99 MB

Select Query Editor (preview)

Microsoft Azure

① Upgrade

8 Search resources, services, and docs (G-



Home > sql-caio-ai1 (srv-caio-001/sql-caio-ai1)

sql-caio-ai1 (srv-caio-001/sql-caio-ai1)
SQL database

Search (Ctrl+ /)

Overview

Activ

Tags

Diagnose a

Quick start

 Query editor (prev)

Page 16

Report

► Power Apps (continued)

Power Automate (previous)

10 of 10

8

Enter your user and password to connect with your SQL database

sql-caio-ai1 (srv-caio-001/sql-caio-ai1) + More

portal.azure.com/#@caiogasparinegmail.onmicrosoft.com/resource/subscriptions/bf350b48-f641-49a2-b7e4-598ce72df8ab/resourceGroups/rg-caio-ai/providers/Microsoft.Sql/servers/... Key 

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

Home > sql-caio-ai1 (srv-caio-001/sql-caio-ai1)

sql-caio-ai1 (srv-caio-001/sql-caio-ai1) | Query editor (preview) ...

SQL database

Search (Ctrl+/) Login New Query Open query Feedback

Overview
Activity log
Tags
Diagnose and solve problems
Quick start
Query editor (preview)

Power Platform

Power BI (preview)
Power Apps (preview)
Power Automate (preview)

Settings

Compute + storage
Connection strings
Properties
Locks

Data management

Select your table to visualize the data...

sql-caio-ai1 (aaddmmiinn) ...

Showing limited object explorer here. For full capability please open SSDT.

Tables Views Stored Procedures

Query 1 ...

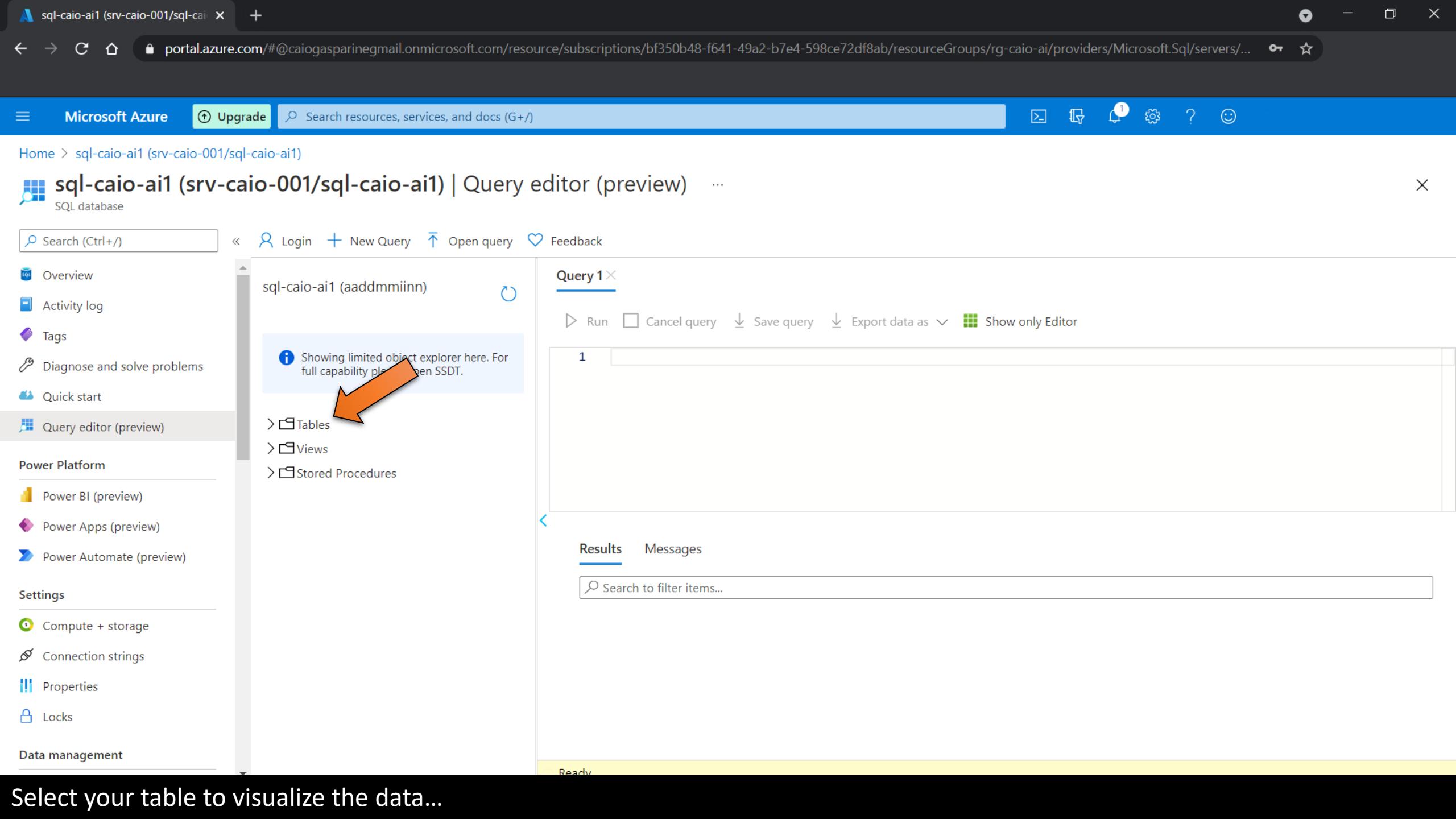
Run Cancel query Save query Export data as Show only Editor

1

Results Messages

Search to filter items...

Ready



sql-caio-ai1 (srv-caio-001/sql-caio-ai1) + More

portal.azure.com/#@caigasparinegmail.onmicrosoft.com/resource/subscriptions/bf350b48-f641-49a2-b7e4-598ce72df8ab/resourceGroups/rg-caio-ai/providers/Microsoft.Sql/servers/... Key 

Microsoft Azure Upgrade Search resources, services, and docs (G+) ... ? Smile

Home > sql-caio-ai1 (srv-caio-001/sql-caio-ai1)

sql-caio-ai1 (srv-caio-001/sql-caio-ai1) | Query editor (preview) X

Search (Ctrl+/) Login New Query Open query Feedback

Overview Activity log Tags Diagnose and solve problems Quick start Query editor (preview)

Power Platform Power BI (preview) Power Apps (preview) Power Automate (preview)

Settings Compute + storage Connection strings Properties Locks

Data management

sql-caio-ai1 (aaddmmiinn) ...

Showing limited object explorer here. For full capability please open SSDT.

Tables dbo.Azure Blob Storage file ...

Views sys.database_firewall_rules ...

Stored Procedures

Query 1 Query 2

Run Cancel query Save query Export data as Show only Editor

1 `SELECT TOP (1000) * FROM [dbo].[Azure Blob Storage file]`

Select Top 1000 Rows Edit Data (Preview) Rename

Results Messages

Search to filter items...

clean_text	category
when modi promised "minimum government maximum governance" expec...	-1
talk all the nonsense and continue all the drama will vote for modi	0
what did just say vote for modi welcome bjp told you rahul the main camp...	1
asking his supporters prefix chowkidar their names modi did great service ...	1

Query succeeded! 10s

Use the command `SELECT TOP 1000 ROWS` to visualize your data

sql-caio-ai1 (srv-caio-001/sql-caio-ai1) + More

portal.azure.com/#@caiogasparinegmail.onmicrosoft.com/resource/subscriptions/bf350b48-f641-49a2-b7e4-598ce72df8ab/resourceGroups/rg-caio-ai/providers/Microsoft.Sql/servers/...

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

Home > sql-caio-ai1 (srv-caio-001/sql-caio-ai1)

sql-caio-ai1 (srv-caio-001/sql-caio-ai1) | Query editor (preview) ...

SQL database

Search (Ctrl+/) Login New Query Open query Feedback

Overview Activity log Tags Diagnose and solve problems Quick start Query editor (preview)

sql-caio-ai1 (aaddmmiinn)

Showing limited object explorer here. For full capability please open SSDT.

Tables > dbo.Azure Blob Storage file ...

Views > sys.database_firewall_rules ...

Stored Procedures

Query 1 Query 2

Run Cancel query Save query Export data as Show only Editor

```
1 SELECT TOP (1000) * FROM [dbo].[blob Storage file]
2 WHERE clean_text LIKE '%high%'
3
4
```

Write a SQL statement and add a clause WHERE filtering the field **clean_text** with the word **high**

Results Messages

Search to filter items...

clean_text	category
yes good job highly insensitivearrogant incompetent ploar needs defeated ...	1
higher voting turnout directly proportional bjp victory wonder modi has la...	1
modi came power because five yrs ago the youth india were takenin his pr...	1
malnutrition india and constituencies among worst affected mallikarjun kha...	-1

Query succeeded | 7s

Improve your SQL statement...

Challenge #2.3

Using Azure Data Studio to visualize your data



CONNECTIONS

... SERVERS

srv-caio-001.database.windows.net, <default> (aaddmmiinn)
> Databases
> Security



Would you like to take a quick tour of Azure Data Studio?

Start Tour



Azure Data Studio

New ▾

Open file...

Open folder...



Create a connection

Connect to a database instance through the connection dialog.



Run a query

Interact with data through a query editor.



Create a notebook

Build a new notebook using a native notebook editor.



Deploy a server

Create a new instance of a relational data service on the platform of your choice.

Resources

History



Name

Location

No recent folders

Show more

Change SQL language provider: srv-caio-001.database.windows.net : <default>



Using Azure Data Studio, locate your previous connection...

CONNECTIONS

SERVERS

- srv-caio-001.database.windows.net, <default> (aaddmmiinn)
 - Databases
 - System Databases
 - sql-caio-ai1
 - Tables
 - dbo.Azure Blob Storage file
 - Columns
 - Keys
 - Constraints
 - Triggers
 - Indexes
 - Statistics
 - Views
 - Synonyms
 - Programmability
 - External Resources
 - Storage
 - Security
 - Security
 - Logins

AZURE

SQL SERVER BIG DATA CLUSTERS

Welcome

Would you like to take a quick tour of Azure Data Studio?

Start Tour

Azure Data Studio

New ▾ Open file... Open folder...

Create a connection
Connect to a database instance through the connection dialog.

Run a query
Interact with data through a query editor.

Create a notebook
Build a new notebook using a native notebook editor.

Deploy a server
Create a new instance of a relational data service on the platform of your choice.

Resources

History

Name	Location
No recent folders	

Show more

Change SQL language provider: srv-caio-001.database.windows.net : sql-caio-ai1

Select your database and your imported table

CONNECTIONS

...

SERVERS

srv-caio-001.database.windows.net, <default> (aaddmmiinn)

- Databases
 - System Databases
- sql-caio-ai1
 - Tables
 - dbo.Azure Blob Storage file
 - Columns
 - Keys
 - Constraints
 - Triggers
 - Indexes
 - Statistics
 - Views
 - Synonyms
 - Programmability
 - External Resources
 - Storage
 - Security
 - Logins

New Open file...

AZURE
SQL SERVER BIG DATA CLUSTERS

Change SOL language provider

Welcome x

Would you like to take a quick tour of Azure Data Studio?

Azure Data Studio

New Open file...

Create a connection
Connect to a database instance through the connection dialog.

Run a query
Interact with data through a query editor.

Create a notebook
Build a new notebook using a native notebook editor.

Deploy a server
Create a new instance of a relational data service on the platform of your choice.

Resources

History

Name Location

No recent folders
Show more

Right click and choose the command SELECT TOP 1000

File Edit View Help

SQLQuery_2 - srv-caio-001.database.windows.net.sql-caio-ai1 (aaddmmiinn) - Azure Data Studio

CONNECTIONS

SERVERS

srv-caio-001.database.windows.net, <default> (aaddmmiinn)

Databases

> System Databases

sql-caio-ai1

Tables

dbo.Azure Blob Storage file

Columns

clean_text (nvarchar(max), null)
category (nvarchar(max), null)

Keys
Constraints
Triggers
Indexes
Statistics
Views
Synonyms
Programmability
External Resources
Storage
Security
Logins

AZURE

SQL SERVER BIG DATA CLUSTERS

Welcome SQLQuery_2 - srv-caio-001.database.windows.net.sql-caio-ai1 (aaddmmiinn) X

Run Cancel Disconnect Change Connection sql-caio-ai1 Explain Enable SQLCMD Export as Notebook

```
1 SELECT TOP (1000) [clean_text]
2 , [category]
3 FROM [dbo].[Azure Blob Storage file]
```

Results Messages

	clean_text	category
1	when modi promised “minimum ...	-1
2	talk all the nonsense and co...	0
3	what did just say vote for m...	1
4	asking his supporters prefix...	1
5	answer who among these the m...	1
6	kiya tho refresh maarkefir c...	0
7	surat women perform yagna se...	0
8	this comes from cabinet whic...	0
9	with upcoming election india...	1
1...	gandhi was gay does modi	1
1...	things like demonetisation g...	1
1...	hope tuthukudi people would ...	1
1...	calm waters wheres the modi ...	1
1...	one vote can make all the di...	0
1...	one vote can make all the di...	0
1...	vote such party and leadersh...	-1
1...	vote modi who has not create...	0

Ln 1. Col 1 Spaces: 4 UTF-8 CRLF SOL MSSQL 1.000 rows 00:00:03 srv-caio-001.database.windows.net : sql-caio-ai1

You are connect to your database!

File Edit View Help

• SQLQuery_2 - srv-caio-001.database.windows.net.sql-caio-ai1 (aaddmmiinn) - Azure Data Studio

CONNECTIONS

SERVERS

- srv-caio-001.database.windows.net, <default> (aaddmmiinn)
 - Databases
 - System Databases
 - sql-caio-ai1
 - Tables
 - dbo.Azure Blob Storage file
 - Columns
 - clean_text (nvarchar(max), null)
 - category (nvarchar(max), null)
 - Keys
 - Constraints
 - Triggers
 - Indexes
 - Statistics
 - Views
 - Synonyms
 - Programmability
 - External Resources
 - Storage
 - Security
 - Security
 - Logins

Welcome SQLQuery_2 - srv-caio-ai1 (aaddmmiinn)

Run Cancel Disconnect Change Connection sql-caio-ai1 Explain Enable SQLCMD Export as Notebook

```
1 SELECT TOP (1000) [clean_text]
2 ,[category]
3 FROM [dbo].[Azure Blob Storage file]
4 WHERE [clean_text] LIKE '%high%'
```

Write a SQL statement and add a clause WHERE filtering the field **clean_text** with the word **high**

Results Messages

	clean_text	category
1	yes good job highly insensit...	1
2	higher voting turnout direct...	1
3	modi came power because five...	1
4	malnutrition india and const...	-1
5	growth story indian economy ...	-1
6	chowkidar hee chor hain baap...	1
7	unemployment rate years high...	1
8	raghuram rajan sent list hig...	-1
9	modi while preparing manifes...	1
1...	would like play the devils a...	1
1...	modi govt controls the price...	1
1...	1st all highest court our la...	1
1...	why vote modi dynasty vision...	-1
1...	today dollar highest ever mo...	1
1...	raghuram rajan sent list hig...	-1
1...	jawans killed the border cri...	-1
1...	the last years the economist...	-1

In 4. Col 2 (31 selected) Spaces: 4 CRLF SOL MSSQL 1.000 rows 00:00:07 srv-caio-001.database.windows.net : sql-caio-ai1

Improve your SQL statement...

Challenge #2.4

Check your subscription cost

Home - Microsoft Azure X

portal.azure.com/#home

← Upgrade Search resources, services, and docs (G+/) ⚙️ ⚡ ⓘ ? 😊

☰ Create a resource Home

Dashboard All services

★ FAVORITES All resources

Resource groups App Services

App Services Function App

Function App SQL databases

SQL databases Azure Cosmos DB

Azure Cosmos DB Virtual machines

Virtual machines Load balancers

Load balancers Storage accounts

Storage accounts Virtual networks

Virtual networks Azure Active Directory

Azure Active Directory Monitor

Monitor Advisor

Advisor Security Center

Security Center Cost Management + Bill...

Cost Management + Bill... Help + support

Azure services

+ Create a resource Cost Management ... Subscriptions All resources Data factories SQL databases Quickstart Center Virtual machines App Services More services

Recent resources

Type	Last Viewed
Subscription	a few seconds ago
SQL database	39 minutes ago
Storage account	4 days ago
Synapse workspace	7 days ago
Resource group	7 days ago
Data factory (V2)	2 weeks ago

Useful links

- View Cost Management + Billing
- View Free training from Microsoft
- View Control Azure spending and manage bills with ...
3 units · 2 hr 45 min
- View Analyze costs and create budgets with Azure C...
7 units · 40 min
- View Predict costs and optimize spending for Azure
9 units · 1 hr 14 min

Resource groups All resources Dashboard

https://portal.azure.com/#blade/Microsoft_Azure_GTM/ModernBillingMenuBlade

Left Menu, select Cost Management + Billing...

A Cost Management + Billing - Mic x df-caio-002 - Azure Data Factory x | +

portal.azure.com/#view/Microsoft_Azure_GTM/ModernBillingMenuBlade/~/Overview

Microsoft Azure

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

Home > Cost Management + Billing | Overview

Create a resource

Home

Dashboard

All services

FAVORITES

App Services

Function App

SQL databases

Azure Cosmos DB

Virtual machines

Load balancers

Storage accounts

Virtual networks

Azure Active Directory

Monitor

Advisor

Microsoft Defender for Cloud

Cost Management + Billing

Help + support

Search (Ctrl+/)

Overview

Cost Management

Diagnose and solve problems

Billing scopes

Billing

Subscriptions

Invoices

Payment methods

Settings

Properties

Support + troubleshooting

New support request

Essentials

Account admin : caiogasparine@gmail.com

Currency : BRL

Notification email : cailogasparine@gmail.com

Billing country/region : BR

Billing account type : Microsoft Online Services Program

Latest billed amount

R\$162.53

Invoice E0800HIHBH generated on 2/2/2022

Download View invoices

Invoices over time

300
200
100
0

01/02 02/02

Total amount R\$162.53

Shortcuts

Update sold to

Edit preferred communication email

Give feedback

Visualize your subscription costs and forecast.

Subscription name	Subscription ID	Status	Last billed amount	Due date	Current Cost
MSDN Platforms Subscri...	5342ccb2-6e74-4d46-ab21-889285fad578	Active	Not available	Not available	0.00

Visualize your subscription costs and forecast.

Free Trial - Microsoft Azure + ↘

portal.azure.com/#@caiogasparinegmail.onmicrosoft.com/resource/subscriptions/bf350b48-f641-49a2-b7e4-598ce72df8ab/overview

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

Home > Cost Management + Billing >

Free Trial Subscription

Search (Ctrl+/) Up Upgrade Cancel subscription Rename Change directory Transfer billing ownership Feedback

Your free credit expires in 17 days. Upgrade to keep going with your account.

Costs by resource View details >

Resource	Cost
sql-caio-air	9.94 BRL
sql-caio-air	0.91 BRL
df-caio-001	0.28 BRL
Others	0.02 BRL

Spending rate and forecast View details >

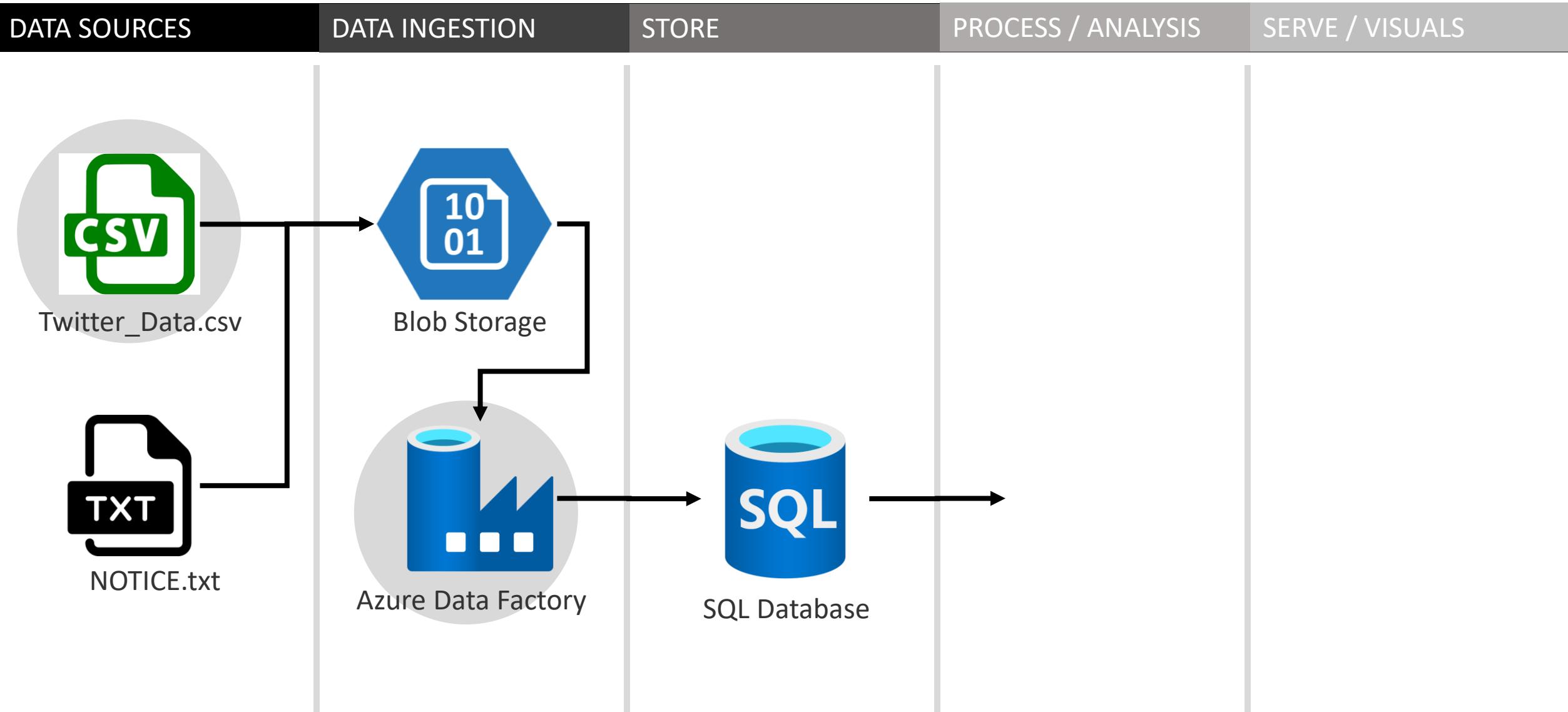
Starting credit: 980 BRL Credit remaining: 968.46 BRL Forecast: 31.53 BRL

Free services for 12 months i

Usage period: 5/20/2021 - 6/19/2021

Visualize your subscription costs and forecast.

Data Architecture so far...



Thank you! ;-)

Please e-mail me the screenshots of your final steps for each component / service to validate your bonus points.