

Challenge #1

Create your SQL Database

IN THIS CHALLENGE:

1. Create your SQL Database
2. Connect with Azure Data Studio
3. Create your Storage Account
4. Move data to your Storage Account

Home - Microsoft Azure x + ▼ - □ X

portal.azure.com/#home ★

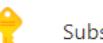
Microsoft Azure Upgrade Search resources, services, and docs (G+/-) ? ? ? ?

Azure services

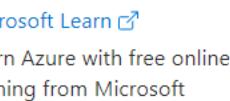
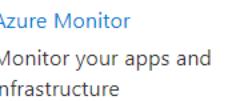
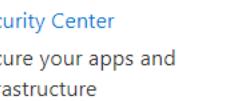
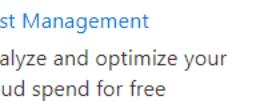
Create a resource  

 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>

Create a resource - Microsoft Azure +

portal.azure.com/#create/hub

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

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https://portal.azure.com/#

Create a resource > SQL Database > Create

Create SQL Database - Microsoft

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

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

Home > Create a resource >

Create SQL Database

Microsoft

Basics Networking Security Additional settings Tags Review + create

Create a SQL database with your preferred configurations. Complete the Basics tab then go to Review + Create to provision with smart defaults, or visit each tab to customize. [Learn more](#)

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 * [\(New\) rg-caio-ai](#) [Create new](#)

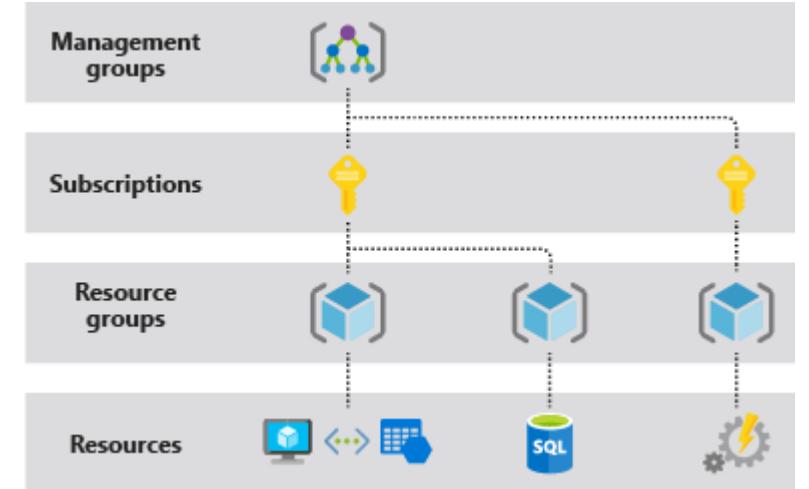
Database details

Enter required settings for this database, including picking a logical server and configuring the compute and storage resources

Database name * [sql-caio-ai1](#)

Server * [Select a server](#) [Create new](#)

[Review + create](#) [Next : Networking >](#)



The diagram shows the hierarchical structure of Azure resources:

- Management groups**: Represented by a group icon.
- Subscriptions**: Represented by a key icon. It contains two keys, one on the left and one on the right.
- Resource groups**: Represented by a blue cube icon. There are three resource groups shown, each containing a blue cube icon.
- Resources**: Represented by various icons: a monitor, a network, a SQL database, and a gear.

<https://docs.microsoft.com/en-us/azure/azure-resource-manager/management/overview>

New server - Microsoft Azure +

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

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

Home > Create a resource >

Create SQL Database

Microsoft

Basics Networking Security Additional settings Tags Review + create

Create a SQL database with your preferred configurations. Complete the Basics tab then go to Review + Create to provision with smart defaults, or visit each tab to customize. [Learn more](#)

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 * (New) rg-caio-ai Create new

Database details

Enter required settings for this database, including picking a logical server and configuring the compute and storage resources

Database name * sql-caio-ai1

Server * Select a server Create new

Review + create Next : Networking >

New server

Microsoft

Server name * srv-caio-001 .database.windows.net

Server admin login * aaddmmiinn

Password *

Confirm password *

Location * (South America) Brazil South

OK

Create SQL Database - Microsoft +

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

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

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Create SQL Database

Microsoft

Basics Networking Security Additional settings Tags Review + create

Create a SQL database with your preferred configurations. Complete the Basics tab then go to Review + Create to provision with smart defaults, or visit each tab to customize. [Learn more](#)

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 * ⓘ (New) rg-caio-ai [Create new](#)

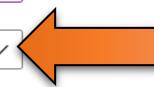
Database details

Enter required settings for this database, including picking a logical server and configuring the compute and storage resources

Database name * sql-caio-ai1

Server * ⓘ (new) srv-caio-001 (Brazil South) [Create new](#)

[Review + create](#) [Next : Networking >](#)



New Server Created!

Home > Create a resource >

Create SQL Database

Microsoft

Want to use SQL elastic pool? * 

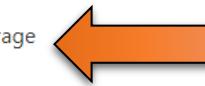
Yes No

Compute + storage * 

Standard S0

10 DTUs, 250 GB storage

[Configure database](#)



Backup storage redundancy

Choose how your PITR and LTR backups are replicated. Geo restore or ability to recover from regional outage is only available when geo-redundant storage is selected.

Backup storage redundancy * 

Locally-redundant backup storage - Preview

Zone-redundant backup storage - Preview

Geo-redundant backup storage

 Your use of either of the Preview backup storage redundancy options (ZRS and LRS) is governed by the agreement under which you obtained Microsoft Azure Services. By selecting a Preview redundancy option, you confirm that you agree to the preview terms in such agreement.
Microsoft Azure Legal Information: [Learn more](#)

Elastic Pool helps us to automatically manage and scale the multiple databases that have unpredictable and varying resource demands upon a shared resource pool. Through the Elastic Pool, we don't need to scale the databases continuously against resource demand fluctuation. The databases which take part in the pool consumes the Elastic Pool resources when they are needed but they can not exceed the Elastic Pool resource limitations so that it provides a cost-effective solution.

[Review + create](#)

[Next : Networking >](#)

Configure - Microsoft Azure x + v - □ x

portal.azure.com/#blade/SqlAzureExtension/DatabaseConfigurePricingTierBlade/internal_bladeCallId/2/internal_bladeCallerParams/%7B"initialData"%3A%7B"v"%3A%7B"databasePricin... key star

Microsoft Azure Upgrade Search resources, services, and docs (G+) Feedback 1 ? ? ?

Home > Create a resource > Create SQL Database >

Configure

Basic ... Feedback

For less demanding workloads

Standard ... Feedback

For workloads with typical performance requirements

Premium ... Feedback

For IO-intensive workloads.

Not available ?

vCore-based purchasing options ... Feedback

Click here to customize your performance using vCores >

DTUs What is a DTU?

5 (Basic)

Data max size

Purchasing models:

- Database Transaction Unit (DTU)
- Virtual Core (vCore)

2 GB

2 GB

Cost summary

Cost per DTU (in --) --

DTUs selected x 5

ESTIMATED COST / MONTH -- --

We have a new way to configure your database.

What's new:

- Azure Hybrid Benefit for SQL Server
- Independent control of storage costs
- Transparency of hardware configuration
- Make your database zone redundant

Check it out Not now

Apply ... Feedback

<http://dtucalculator.azurewebsites.net/>

Select Basic Server Configuration

Home > Create a resource >

Create SQL Database

Microsoft

Want to use SQL elastic pool? * Yes No

Compute + storage *

Basic

2 GB storage

Configure database

Backup storage redundancy

Choose how your PITR and LTR backups are replicated. Geo restore or ability to recover from regional outage is only available when geo-redundant storage is selected.

Backup storage redundancy *

Locally-redundant backup storage - Preview

Zone-redundant backup storage - Preview

Geo-redundant backup storage

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Microsoft Azure Legal Information: [Learn more](#)

Geo-redundant and locally-redundant storage is available in all regions.

Zone-redundant storage is available in regions with availability zones.

	Locally-Redundant Storage (LRS)	Zone Redundant Storage (ZRS)	Geo-redundant storage (GRS)
Replication	Replicates your data 3 times within a single physical location synchronously in the primary region.	Replicates your data across 3 Azure Availability Zones synchronously in the primary region	Replicates your data in your storage account to a secondary region
Redundancy	Low	Moderate	High
Cost	Provides the least expensive replication option	Costs more than LRS but provides higher availability	Costs more than ZRS but provides availability in the event of regional outages

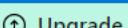
Review + create

Next : Networking >

Review + Create

Create SQL Database - Microsoft  

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

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

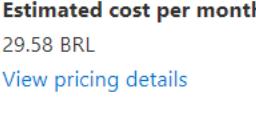
Home > Create a resource >

Create SQL Database

Microsoft

Basics Networking Security Additional settings Tags **Review + create**

Product details

SQL database by Microsoft 
Estimated cost per month
29.58 BRL
[View pricing details](#)

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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. For additional details see [Azure Marketplace Terms](#).

Basics

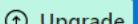
Subscription	Free Trial
Resource group	rg-caio-ai
Region	Brazil South
Database name	sql-caio-ai1
Server	(new) srv-caio-001

Create  [< Previous](#) [Download a template for automation](#)

Create the SQL Database

Create SQL Database - Microsoft  

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

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

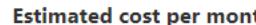
Home > Create a resource >

Create SQL Database

Microsoft

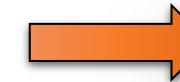
Basics Networking Security Additional settings Tags **Review + create**

Product details

SQL database by Microsoft  

Estimated cost per month
29.58 BRL

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 **Submitting deployment...**
Submitting the deployment template for resource group 'rg-caio-ai'. 

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. For additional details see [Azure Marketplace Terms](#). 

Basics

Subscription	Free Trial
Resource group	rg-caio-ai
Region	Brazil South
Database name	sql-caio-ai1
Server	(new) srv-caio-001

Validating...  [< Previous](#) [Download a template for automation](#)

Select Basic Server Configuration

A Microsoft.SQLDatabase.newData... +

portal.azure.com/#blade/HubsExtension/DeploymentDetailsBlade/overview/id/%2Fsubscriptions%2Ffbf350b48-f641-49a2-b7e4-598ce72df8ab%2FresourceGroups%2Frg-caio-ai%2Fprov... 🔒 ⭐

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

Home > Microsoft.SQLDatabase.newDatabaseNewServer_fd8449e2679b444e8d458 | Overview

Deployment

Search (Ctrl+ /) « Delete Cancel Redeploy Refresh

We'd love your feedback! →

Deployment is in progress

Deployment name: Microsoft.SQLDatabase.newDatabaseNewServer_fd8449e2679b444e8d458 Start time: 5/20/2021, 10:15:40 AM
Subscription: Free Trial Correlation ID: 9c8a1a7e-abe9-4327-bc48-dba37968474b
Resource group: rg-caio-ai

Deployment details (Download)

Resource	Type	Status	Operation details
srv-caio-001/sql-caio-ai1	Microsoft.Sql/servers/databases	Accepted	Operation details
srv-caio-001	Microsoft.Sql/servers	OK	Operation details
srv-caio-001	Microsoft.Sql/servers	Created	Operation details

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Select Basic Server Configuration

A Microsoft.SQLDatabase.newData... +

portal.azure.com/#blade/HubsExtension/DeploymentDetailsBlade/overview/id/%2Fsubscriptions%2Ffbf350b48-f641-49a2-b7e4-598ce72df8ab%2FresourceGroups%2Frg-caio-ai%2Fprov... 🔒 ⭐

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

Home >

Microsoft.SQLDatabase.newDatabaseNewServer_fd8449e2679b444e8d458 | Overview

 Deployment

 Delete  Cancel  Redeploy  Refresh

 We'd love your feedback! →

 Your deployment is complete

 Deployment name: Microsoft.SQLDatabase.newDatabaseNewServe... Start time: 5/20/2021, 10:15:40 AM
Subscription: Free Trial Correlation ID: 9c8a1a7e-abe9-4327-bc48-dba37968474b
Resource group: rg-caio-ai

Deployment details  (Download)

Next steps

 Go to resource



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

Free Microsoft tutorials
[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 >](#)

Select Basic Server Configuration

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

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 > microsoft.SQLDatabase.newDatabaseNewServer_fd8449e2679b444e8d458 >

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)

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

Settings Compute + storage Connection strings Properties Locks Data management

JSON View

Essentials

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

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

Compute utilization

Database data storage 0.2% USED SPACE

Used space 4 MB Allocated space

SQL Database details

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 →

Recent resources

Name	Type	Last Viewed
sql-caio-ai1 (srv-caio-001/sql-caio-ai1)	SQL database	12 minutes ago
rg-caio-ai	Resource group	12 minutes ago

arrow pointing to the first row of the recent resources table

Navigate

key icon Subscriptions cube icon Resource groups grid icon All resources dash icon Dashboard

Tools

book icon Microsoft Learn speedometer icon Azure Monitor shield icon Security Center dollar sign icon Cost Management

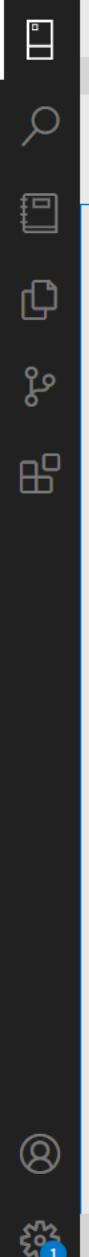
Learn Azure with free online training from Microsoft Monitor your apps and infrastructure Secure your apps and infrastructure Analyze and optimize your cloud spend for free

Challenge #1.2

Connect with your SQL Database

Download and install Azure Data Studio

<https://docs.microsoft.com/en-us/sql/azure-data-studio/download-azure-data-studio?view=sql-server-ver15>



CONNECTIONS

Welcome X

▼ SERVERS



Add Connection



Azure Data Studio

Start

- New connection
- New query
- New notebook
- Open file

Deploy

- New Deployment...

Recent

- No recent folders

Help

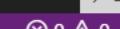
- Getting started
- Documentation
- Report issue or feature request
- GitHub repository
- Release notes

Show welcome page on startup



> AZURE

> SQL SERVER BIG DATA CLUSTERS



Change SQL language provider

CONNECTIONS ...

SERVERS

Add Connection

Start

- New connection
- New query
- New notebook
- Open file

Deploy

- New Deployment...

Recent

- No recent folders

Help

- Getting started
- Documentation
- Report issue or feature request
- GitHub repository
- Release notes

Show welcome page on startup

> AZURE

> SQL SERVER BIG DATA CLUSTERS

(0) 0 A 0

Azure Data Studio

Connection

Recent Connections Saved Connections Browse (Preview)

No recent connection

Customize

Extensions

Download extension

Keyboard Shortcut

Find your favorite

Color theme

Make the editor ar

Connection Details

Connection type

Microsoft SQL Server

Server

Windows Authentication

User name

Password

Remember password

Database

<Default>

Server group

<Default>

Name (optional)



Advanced...

Connect

Cancel

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-001/databases/sql-caio-ai1/connectionStrings

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

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

SQL 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 Server name : srv-caio-001.database.windows.net

Status : Online Elastic pool : No elastic pool

Location : Brazil South Connection strings : Show database connection strings

Subscription (change) : Free Trial Pricing tier : Basic

Subscription ID : bf350b48-f641-49a2-b7e4-598ce72df8ab Earliest restore point : 2021-05-20 14:34 UTC

Tags (change) : Click here to add tags

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

Compute utilization

Database data storage 0.98% USED SPACE

Used space 20 MB Allocated space 22 MB

Compute + storage Connection strings Properties Locks

Go to Connection Strings to verify your connection details

<https://portal.azure.com/#@caiogasparinegmail.onmicrosoft.com/resource/subscriptions/bf350b48-f641-49a2-b7e4-598ce72df8ab/resourceGroups/rg-caio-ai/providers/Microsoft.Sql/servers/srv-caio-001/databases/sql-caio-ai1/connectionStrings>

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

portal.azure.com/#@caigasparinegmail.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) | Connection strings

SQL database

Search (Ctrl+ /) <

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

ADO.NET JDBC ODBC PHP Go

ADO.NET (SQL authentication)

```
Server=tcp:srv-caio-001.database.windows.net, 433;Initial Catalog=sql-caio-ai1;Persist Security Info=False;User ID=aaddmmiinn;Password=[REDACTED];[your_password];MultipleActiveResultSets=False;Encrypt=True;TrustServerCertificate=False;Connection Timeout=30;
```

Download ADO.NET driver for SQL server

Power Platform

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

Settings

Compute + storage Connection strings Properties Locks

Connection strings

Copy your Server data and User ID

The screenshot shows the Microsoft Azure portal interface for managing an Azure SQL database named 'sql-caio-ai1'. In the left sidebar, under the 'Settings' section, the 'Connection strings' item is selected and highlighted with a red wavy underline. The main content area displays the connection string configuration for the ADO.NET provider. The connection string itself is enclosed in a large red box. Within this box, two specific segments are highlighted with red boxes and arrows pointing to them: the 'User ID' field containing 'aaddmmiinn;' and the 'Password' field, which is completely redacted. The URL portion of the connection string, 'tcp:srv-caio-001.database.windows.net, 433;', is also highlighted with a red box.

CONNECTIONS

SERVERS

Add Connection

Azure Data Studio

Start

- New connection
- New query
- New notebook
- Open file

Deploy

- New Deployment...

Recent

- No recent folders

Help

- Getting started
- Documentation
- Report issue or feature request
- GitHub repository
- Release notes

Show welcome page on startup

> AZURE

> SQL SERVER BIG DATA CLUSTERS

← Create new firewall rule



Your client IP address does not have access to the server. Sign in to an Azure account and create a new firewall rule to enable access.

[Learn more about firewall settings](#)

Azure account



caiogasparine@gmail.com - caiogasparine@gmail.com (Microsoft Account)

Azure tenant



Default Directory

Firewall rule

- Add my client IP (142.114.133.8)
 Add my subnet IP range

From 142.114.133.0 To 142.114.133.255

OK Cancel



Create a new firewall rule for your user // You can create it here or in the Azure Portal

File Edit View Help

srv-caio-001.database.windows.net - Azure Data Studio

CONNECTIONS

SERVERS

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

Databases

Security

Welcome

srv-caio-001.database.windows.net

Home > srv-caio-001.database.windows.net

New Query New Notebook Refresh Learn More

Home Version : 12.0.2000.8 Type : Azure SQL DB

Search

Name	Status	Size (MB)	...
master	ONLINE
sql-caio-ai1	ONLINE	20	...

You are connected!

Choose SQL Language srv-caio-001.database.windows.net : <default>

A screenshot of the Azure Data Studio interface. The left sidebar shows a tree view with 'SERVERS' expanded, displaying a connection to 'srv-caio-001.database.windows.net, <default> (aaddmmiinn)'. This connection is highlighted with an orange arrow pointing to it from the top-left. The main pane shows the 'Home' page for this database, indicating version 12.0.2000.8 and type 'Azure SQL DB'. A search bar at the top of the main pane is labeled 'Search' and contains the placeholder 'Search databases'. Below the search bar is a table listing databases: 'master' (ONLINE, Size 0 MB) and 'sql-caio-ai1' (ONLINE, Size 20 MB). The bottom status bar says 'You are connected!'.

CONNECTIONS

...

SERVERS

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

- Databases
 - System Databases
 - sql-caio-ai1
- Tables (highlighted with a red box and orange arrow)
- Views
- Synonyms
- Programmability
- External Resources
- Storage
- Security

Security

Logins

- aaddmmiinn

> AZURE

> SQL SERVER BIG DATA CLUSTERS

Explore your SQL Database

Welcome x

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

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

Challenge #1.3

Creating a Storage Account (Blob)

Home - Microsoft Azure x + ▼ - □ X

portal.azure.com/#home ★

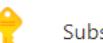
Microsoft Azure Upgrade Search resources, services, and docs (G+/-) ? ? ? ?

Azure services

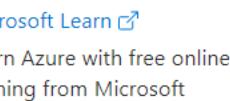
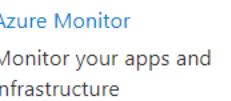
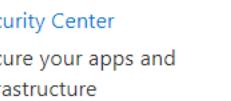
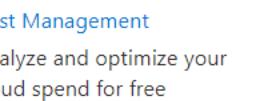
Create a resource  

 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

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[Azure Migration Tools](#) [Find an Azure expert](#) [Quickstart Center](#)

Azure mobile app

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

A Storage account - Microsoft Azure +

portal.azure.com/#blade/Microsoft_Azure_Marketplace/GalleryItemDetailsBladeNopdl/product/%7B"displayName"%3A"Storage%20account"%2C"itemDisplayName"%3A"Storage%20ac... 🔒 ⭐

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

Home > Create a resource >

Storage account

Microsoft

Storage account Microsoft Add to Favorites 4.2 (1740 reviews) Create

Overview Plans Usage Information + Support Reviews

Microsoft Azure provides scalable, durable cloud storage, backup, and recovery solutions for any data, big or small. It works with the infrastructure you already have to cost-effectively enhance your existing applications and business continuity strategy, and provide the storage required by your cloud applications, including unstructured text or binary data such as video, audio, and images.

More offers from Microsoft See All

 Workspace Microsoft Virtual Machine Windows Virtual Desktop resource	 Microsoft HPC Pack 2012 R2 Microsoft Virtual Machine Enterprise-class HPC solution. Easy to deploy, cost-effective and supports Windows/Linux workloads.	 Windows 10 IoT Core Services Microsoft Azure Service Commercialize your project with enterprise-grade security and support	 Web App + SQL Microsoft Azure Service Enjoy secure and flexible development, deployment, and scaling options for your web app
--	---	---	--

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

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

Create a storage account - Micro +

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

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

Home > Create a resource > Storage account >

Create a storage account

Basics Advanced Networking Data protection Tags Review + create

Azure Storage is a Microsoft-managed service providing cloud storage that is highly available, secure, durable, scalable, and redundant. Azure Storage includes Azure Blobs (objects), Azure Data Lake Storage Gen2, Azure Files, Azure Queues, and Azure Tables. The cost of your storage account depends on the usage and the options you choose below. [Learn more about Azure storage accounts](#)

Project details

Select the subscription in which to create the new storage account. Choose a new or existing resource group to organize and manage your storage account together with other resources.

Subscription * Free Trial

Storage account name * storageaccountcaio [Create new](#)

Instance details

If you need to create a legacy storage account type, please click [here](#).

Storage account name * sa-caio-001



[Review + create](#) < Previous Next : Advanced >

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

Create a storage account - Micro +

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

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

Home > Create a resource > Storage account >

Create a storage account

Basics • Advanced Networking Data protection Tags Review + create

Resource group * rg-caio-ai Create new

Instance details

If you need to create a legacy storage account type, please click [here](#).

Storage account name ⓘ *

Region ⓘ *

Performance ⓘ *

Redundancy ⓘ *

Review + create < Previous Next : Advanced >



The screenshot shows the Microsoft Azure 'Create a storage account' wizard. The 'Basics' tab is selected. A red arrow points to the 'Storage account name' input field containing 'storageaccountcaio'. Another red arrow points to the 'Region' dropdown menu showing '(US) East US'. The 'Performance' section has 'Standard' selected. The 'Redundancy' dropdown shows 'Locally-redundant storage (LRS)'. At the bottom, there are navigation buttons: 'Review + create' (highlighted), '< Previous', and 'Next : Advanced >'.

Create a storage account - Micro +

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

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

Home > Create a resource > Storage account >

Create a storage account

Basics • Advanced Networking Data protection Tags Review + create

Resource group * rg-caio-ai

Locally-redundant storage (LRS):
Lowest-cost option with basic protection against server rack and drive failures. Recommended for non-critical scenarios.

Geo-redundant storage (GRS):
Intermediate option with failover capabilities in a secondary region.
Recommended for backup scenarios.

Zone-redundant storage (ZRS):
Intermediate option with protection against datacenter-level failures.
Recommended for high availability scenarios.

Geo-zone-redundant storage (GZRS):
Optimal data protection solution that includes the offerings of both GRS and ZRS. Recommended for critical data scenarios.

Redundancy * Locally-redundant storage (LRS) 

Review + create < Previous Next : Advanced >

Create a storage account - Micro +

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

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

Home > Create a resource > Storage account >

Create a storage account

Validation passed

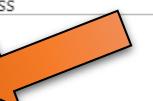
Basics Advanced Networking Data protection Tags Review + create

Basics

Subscription	Free Trial
Resource Group	rg-caio-ai
Location	eastus
Storage account name	storageaccountcaio
Deployment model	Resource manager
Performance	Standard
Replication	Locally-redundant storage (LRS)

Advanced

Secure transfer	Enabled
Allow storage account key access	Enabled
Infrastructure encryption	Disabled
Blob public access	Enabled

Create  < Previous Next > Download a template for automation

Create a storage account - Micro +

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

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

Home > Create a resource > Storage account >

Create a storage account

Deploying...

Basics Advanced Networking Data protection Tags Review + create

Basics

Subscription	Free Trial
Resource Group	rg-caio-ai
Location	eastus
Storage account name	storageaccountcaio
Deployment model	Resource manager
Performance	Standard
Replication	Locally-redundant storage (LRS)

Advanced

Secure transfer	Enabled
Allow storage account key access	Enabled
Infrastructure encryption	Disabled
Blob public access	Enabled

Create < Previous Next > Download a template for automation

3 11:19 AM X

Initializing deployment...
Initializing template deployment to resource group 'rg-caio-ai'.



A storageaccountcaio_1621523999972 x +

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

Microsoft Azure Upgrade Search resources, services, and docs (G+/-) 3 ? ☺

Home >

storageaccountcaio_1621523999972 | Overview

Deployment

Search (Ctrl+ /) « >Delete Cancel Redeploy Refresh

We'd love your feedback! →

Deployment is in progress ↗

Deployment name: storageaccountcaio_1621523999972
Subscription: Free Trial
Resource group: rg-caio-ai

Start time: 5/20/2021, 11:20:07 AM
Correlation ID: d2c78e53-d027-41dd-901f-7b6b728d34c3

Deployment details (Download)

Resource	Type	Status	Operation details
No results.			

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

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

A storageaccountcaio_1621523999972 x +

portal.azure.com/#blade/HubsExtension/DeploymentDetailsBlade/overview/id/%2Fsubscriptions%2Ffbf350b48-f641-49a2-b7e4-598ce72df8ab%2FresourceGroups%2Frg-caio-ai%2Fprov... 🔒 ⭐

Microsoft Azure Upgrade Search resources, services, and docs (G+/-) ☰ ⓘ 3 🔍 🚧 ? 😊

Home >

storageaccountcaio_1621523999972 | Overview ✎ ...

Deployment

Search (Ctrl+ /) « Delete Cancel Redeploy Refresh

We'd love your feedback! →

✓ Your deployment is complete

Deployment name: storageaccountcaio_1621523999972
Subscription: Free Trial
Resource group: rg-caio-ai

Start time: 5/20/2021, 11:20:07 AM
Correlation ID: d2c78e53-d027-41dd-901f-7b6b728d34c3

Deployment details (Download)

Next steps

Go to resource

Security Center  Secure your apps and infrastructure Go to Azure security center >

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

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/stor... 🔒 ⭐

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

Home > storageaccountcaio_162152399972 > storageaccountcaio ...

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

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/#home>

Azure services

Create a
resource

SQL databases



Subscriptions

Quickstart
CenterVirtual
machines

App Services

Storage
accountsAzure Cosmos
DBKubernetes
services

More services

Recent resources

Name	Type	Last Viewed
storageaccountcaio	Storage account	a few seconds ago
rg-caio-ai	Resource group	3 minutes ago
sql-caio-ai1 (srv-caio-001/sql-caio-ai1)	SQL database	42 minutes ago

Navigate



Subscriptions



Resource groups



All resources



Dashboard

Tools



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Monitor your apps and
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Security Center

Secure your apps and
infrastructure

Cost Management

Analyze and optimize your
cloud spend for free

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azure.microsoft.com/en-us/pricing/details/storage/blobs/

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Storage Family Overview Pricing table Purchase options Resources FAQs Azure Blob Storage >

Massively scalable and secure object storage

Block blob storage is used for streaming and storing documents, videos, pictures, backups, and other unstructured text or binary data.

Total cost of block blob storage depends on:

- Volume of data stored per month.
- Quantity of types of operations performed, along with any data transfer costs.



Chat with Sales

Challenge #1.4

Moving data to your storage account

Copy or move data to Azure Storage +

docs.microsoft.com/en-us/azure/storage/common/storage-use-azcopy-v10

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Portal Free account

Azure / Storage

Save Feedback Edit Share

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- AzCopy
- Get started**
- Authorize with Azure AD
- Optimize performance
- Use logs to find errors and resume jobs
- Examples: Upload
- Examples: Download
- Examples: Copy between

Download PDF

Get started with AzCopy

04/02/2021 • 6 minutes to read • 5 contributors +19

AzCopy is a command-line utility that you can use to copy blobs or files to or from a storage account. This article helps you download AzCopy, connect to your storage account, and then transfer files.

Note

AzCopy V10 is the currently supported version of AzCopy.

If you need to use a previous version of AzCopy, see the [Use the previous version of AzCopy](#) section of this article.

Is this page helpful?

Yes No

In this article

- [Download AzCopy](#)
- [Run AzCopy](#)
- [Authorize AzCopy](#)
- [Transfer data](#)
- [Get command help](#)
- [Use in a script](#)
- [Use in Azure Storage Explorer](#)
- [Configure, optimize,](#)

8ae8d77e6a20575....pdf azcopy_windows_a....zip Show all

<https://docs.microsoft.com/en-us/azure/storage/common/storage-use-azcopy-v10>

Copy or move data to Azure Storage Home - Microsoft Azure

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

Recent resources

Name	Type	Last Viewed
storageaccountcaio	Storage account	a few seconds ago
rg-caio-ai	Resource group	2 hours ago
sql-caio-ai1	SQL database	2 hours ago

Navigate

Subscriptions Resource groups All resources Dashboard

Tools

Microsoft Learn Azure Monitor Security Center Cost Management

Learn Azure with free online training from Microsoft Monitor your apps and infrastructure Secure your apps and infrastructure Analyze and optimize your cloud spend for free

Select your storage account

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

Blob service

Hierarchical namespace	Disabled
Default access tier	Hot
Blob public access	Enabled
Blob soft delete	Enabled (7 days)
Container soft delete	Disabled
Versioning	Disabled
Change feed	Disabled

Security

Secure transfer required	Enabled
Storage account key access	Enabled

Minimum TLS version	Version 1.2
Infrastructure encryption	Enabled

Allow access from	All networks
-------------------	------------------------------

Networking

Data storage

 Containers



 File shares

 Queues

 Tables

Security + networking

 Networking

 Azure CDN

Select your storage account

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

Blob service

Hierarchical namespace	Disabled
Default access tier	Hot
Blob public access	Enabled
Blob soft delete	Enabled (7 days)
Container soft delete	Disabled
Versioning	Disabled
Change feed	Disabled

Security

Secure transfer required	Enabled
Storage account key access	Enabled
Minimum TLS version	Version 1.2
Infrastructure encryption	Enabled

Networking

Allow access from [All networks](#)

Select your storage account

storageaccountcaio | Containers

Storage account

Search (Ctrl+ /) Container Change access level Restore containers Refresh Delete

Search containers by prefix Show deleted containers

Name	Last modified	Public access level	Lease state
\$logs	5/20/2021, 11:21:03 AM	Private	Available

An orange arrow points to the "Container" button in the top navigation bar.

- Overview
- Activity log
- Tags
- Diagnose and solve problems
- Access Control (IAM)
- Data migration
- Events
- Storage Explorer (preview)

Data storage

- Containers
- File shares
- Queues
- Tables

Security + networking

- Networking
- Azure CDN

New container - Microsoft Azure +

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

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

Home > storageaccountcaio

storageaccountcaio | Containers

Storage account

Search (Ctrl +/)

+ Container Change access level Restore containers Refresh Delete

Search containers by prefix

Name	Last modified	Public access level
\$logs	5/20/2021, 11:21:03 AM	Private

Overview Activity log Tags Diagnose and solve problems Access Control (IAM) Data migration Events Storage Explorer (preview)

Data storage

Containers File shares Queues Tables

Security + networking

Networking Azure CDN

Select your storage account

New container

Name * my-container ✓

Public access level Private (no anonymous access)

Advanced

Create Discard

The screenshot shows the Microsoft Azure portal interface for managing storage accounts. On the left, there's a sidebar with various navigation options like Overview, Activity log, Tags, and Storage Explorer. The main area displays the 'Containers' blade for the 'storageaccountcaio' storage account. It lists one existing container named '\$logs' with its last modified date and public access level set to Private. To the right, a modal window titled 'New container' is open, allowing the creation of a new container. The 'Name' field is populated with 'my-container'. Below it, the 'Public access level' dropdown is set to 'Private (no anonymous access)'. At the bottom of the modal, there are 'Create' and 'Discard' buttons, with an orange arrow pointing to the 'Create' button.

storageaccountcaio - Microsoft A X +

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

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

Home > storageaccountcaio

storageaccountcaio | Containers

Storage account

Search (Ctrl +/)

+ Container Change access level Restore containers Refresh Delete

Search containers by prefix Show deleted containers

Name	Last modified	Public access level	Lease state
\$logs	5/20/2021, 11:21:03 AM	Private	Available
<input checked="" type="checkbox"/> my-container	5/20/2021, 1:11:54 PM	Private	Available

Overview Activity log Tags Diagnose and solve problems Access Control (IAM) Data migration Events Storage Explorer (preview)

Containers File shares Queues Tables

Networking Azure CDN

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

Select your storage account

The screenshot shows the Microsoft Azure portal interface for a storage account named 'storageaccountcaio'. The left sidebar contains navigation links for Overview, Activity log, Tags, Diagnose and solve problems, Access Control (IAM), Data migration, Events, and Storage Explorer (preview). Under 'Data storage', 'Containers' is selected. The main content area displays a table of containers with columns for Name, Last modified, Public access level, and Lease state. Two containers are listed: '\$logs' and 'my-container'. The 'my-container' row has an orange arrow pointing to its checkbox and another orange arrow pointing to its three-dot menu icon.

 storageaccountcaio | Containers  

Storage account

 Search (Ctrl+/)

 Container  Change access level  Restore containers  Refresh  Delete

Search containers by prefix  Show deleted containers

Name	Last modified	Public access level	Lease state	More
\$logs	5/20/2021, 11:21:03 AM	Private	Available	
my-container	5/20/2021, 1:11:54 PM	Private	Available	  Container properties  Generate SAS  Access policy  Acquire lease  Break lease  Change access level  Edit metadata  Delete

-  Overview
-  Activity log
-  Tags
-  Diagnose and solve problems
-  Access Control (IAM)
-  Data migration
-  Events
-  Storage Explorer (preview)

Data storage

-  Containers
-  File shares
-  Queues
-  Tables

Security + networking

-  Networking
-  Azure CDN

Generate SAS - Microsoft Azure

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

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

Home > storageaccountcaio

storageaccountcaio | Containers

Storage account

Search (Ctrl +/)

+ Container Change access level Restore containers Refresh Delete

Search containers by prefix

Name	Last modified
\$logs	5/20/2021, 11:21:03 AM
my-container	5/20/2021, 1:11

Overview Activity log Tags Diagnose and solve problems Access Control (IAM) Data migration Events Storage Explorer (preview)

Data storage

Containers File shares Queues Tables

Security + networking

Networking Azure CDN

Select your storage account

Generate SAS

A shared access signature (SAS) is a URI that grants restricted access to an Azure Storage container. Use it when you want to grant access to storage account resources for a specific time range without sharing your storage account key. [Learn more](#)

Signing method

Account key User delegation key

Signing key

Key 1

Permissions *

6 selected

- Read
- Add
- Create
- Write
- Delete
- List

(UTC-05:00) Eastern Time (US & Canada)

Allowed IP addresses

for example, 168.1.5.65 or 168.1.5.65-168.1....

Allowed protocols

HTTPS only HTTPS and HTTP

Generate SAS token and URL

The screenshot shows the Microsoft Azure portal interface for managing a storage account named 'storageaccountcaio'. On the left, there's a navigation menu with various options like Overview, Activity log, Tags, and Data storage. Under Data storage, 'Containers' is selected. The main area displays a list of containers with two entries: '\$logs' and 'my-container'. A search bar is available above the list. To the right, a modal window titled 'Generate SAS' is open. This window provides instructions about what a SAS token is and how it can be used. It includes sections for 'Signing method' (set to 'Account key'), 'Signing key' (set to 'Key 1'), and 'Permissions' (which are currently set to '6 selected' and include 'Read', 'Add', 'Create', 'Write', 'Delete', and 'List'). Below these, there are fields for 'Allowed IP addresses' and 'Allowed protocols' (set to 'HTTPS only'). At the bottom of the dialog is a prominent blue button labeled 'Generate SAS token and URL'.

Generate SAS - Microsoft Azure

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 | Containers

Storage account

Search (Ctrl +/)

+ Container Change access level Restore containers Refresh Delete

Search containers by prefix

Name	Last modified
\$logs	5/20/2021, 11:21:03 AM
my-container	5/20/2021, 1:11:54 PM

SAS token is a string that you generate on the client side. The SAS token is not tracked by Azure Storage in any way. You can create an unlimited number of SAS tokens on the client side. After you create a SAS, you can distribute it to client applications that require access to resources in your storage account. Client applications provide the SAS URI to Azure Storage as part of a request. Then, the service checks the SAS parameters and the signature to verify that it is valid. If the service verifies that the signature is valid, then the request is authorized. Otherwise, the request is declined with error code 403 (Forbidden).

<https://docs.microsoft.com/en-us/azure/storage/common/storage-sas-overview>

Generate SAS

Key 1

Permissions * Read

Start and expiry date/time

Start: 05/27/2021 3:09:35 PM (UTC-05:00) Eastern Time (US & Canada)

Expiry: 05/27/2021 11:09:35 PM (UTC-05:00) Eastern Time (US & Canada)

Allowed IP addresses: for example, 168.1.5.65 or 168.1.5.65-168.1....

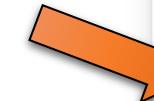
Allowed protocols: HTTPS only (selected)

Generate SAS token and URL

Blob SAS token: sp=r&st=2021-05-27T19:09:35Z&se=2021-05-28T03:09:35Z&spr=https&sv=2020-0...

Blob SAS URL: https://storageaccountcaio.blob.core.windows.net/my-container?sp=r&st=2021-05-27T19:09:35Z&se=2021-05-28T03:09:35Z&spr=https&sv=2020-0...

Copy your <Blob SAS URL> to use in your AZCOPY command



```
azcopy copy "SOURCE FILE" "BLOB SAS URL" --  
recursive=true
```

```
azcopy copy "NOTICE.txt"  
"https://storageaccountcaio.blob.core.windo  
ws.net/my-container?sp=racwdl&st=2021-05-  
20T17:13:48Z&se=2021-05-  
21T01:13:48Z&spr=https&sv=2020-02-  
10&sr=c&sig=guJgeD7PaUOgMSE55knbeVw1OfBoA47  
dEMk46bCRHh0%3D" --recursive=true
```

Using the Command Prompt type this command using **SOURCE FILE** name and your **BLOB SAS URL**

Generate SAS - Microsoft Azure

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

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Select Command Prompt

```
C:\azcopy>azcopy copy "NOTICE.txt" "https://storageaccountcaio.blob.core.windows.net/my-container?sp=racwdl&st=2021-05-27T19:19:20Z&se=2021-05-28T03:19:20Z&spr=https&sv=2020-02-10&sr=c&sig=AvDuZ5rI4%2B%2B6ZBjA1cozvIARLAvrVMtX7JuvezUXbg4%3D" --recursive=true
INFO: Scanning...
INFO: Any empty folders will not be processed, because source and/or destination doesn't have full folder support
Job 1aa956cd-0173-8c49-405d-5b6ff499f371 has started
Log file is located at: C:\Users\caig\azcopy\1aa956cd-0173-8c49-405d-5b6ff499f371.log
0.0 %, 0 Done, 0 Failed, 1 Pending, 0 Skipped, 1 Total,
Job 1aa956cd-0173-8c49-405d-5b6ff499f371 summary
Elapsed Time (Minutes): 0.0334
Number of File Transfers: 1
Number of Folder Property Transfers: 0
Total Number of Transfers: 1
Number of Transfers Completed: 1
Number of Transfers Failed: 0
Number of Transfers Skipped: 0
TotalBytesTransferred: 367564
Final Job Status: Completed

C:\azcopy>
```

Generate SAS

Key 1

Permissions * 6 selected

Start and expiry date/time

Start 05/27/2021 3:19:20 PM (UTC-05:00) Eastern Time (US & Canada)

Expiry 05/27/2021 11:19:20 PM (UTC-05:00) Eastern Time (US & Canada)

Allowed IP addresses for example, 168.1.5.65 or 168.1.5.65-168.1....

Allowed protocols HTTPS only HTTPS and HTTP

Generate SAS token and URL

Blob SAS token sp=racwdl&st=2021-05-27T19:19:20Z&se=2021-05-28T03:19:20Z&spr=https&sv=2020-02-10&sr=c&sig=AvDuZ5rI4%2B%2B6ZBjA1cozvIARLAvrVMtX7JuvezUXbg4%3D

Blob SAS URL https://storageaccountcaio.blob.core.windows.net/my-container?sp=racwdl&st=2021-05-27T19:19:20Z&se=2021-05-28T03:19:20Z&spr=https&sv=2020-02-10&sr=c&sig=AvDuZ5rI4%2B%2B6ZBjA1cozvIARLAvrVMtX7JuvezUXbg4%3D

Your command should be something similar to this...

C:\azcopy>azcopy --help

AzCopy 10.10.0 // Project URL: github.com/Azure/azure-storage-azcopy

AzCopy is a command line tool that moves data into and out of Azure Storage.

To report issues or to learn more about the tool, go to github.com/Azure/azure-storage-azcopy

The general format of the commands is: 'azcopy [command] [arguments] --[flag-name]=[flag-value]'.

Usage:

azcopy [command]

Available Commands:

bench Performs a performance benchmark

copy Copies source data to a destination location

doc Generates documentation for the tool in Markdown format

env Shows the environment variables that you can use to configure the behavior of AzCopy.

help Help about any command

jobs Sub-commands related to managing jobs

list List the entities in a given resource

login Log in to Azure Active Directory (AD) to access Azure Storage resources.

logout Log out to terminate access to Azure Storage resources.

make Create a container or file share.

remove Delete blobs or files from an Azure storage account

sync Replicate source to the destination location

Use "azcopy [command] --help" for more information about a command.

C:\azcopy>

A storageaccountcaio - Microsoft A X +

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

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https://portal.azure.com/#@caiogasparinegmail.onmicrosoft.com/resource/subscriptions/bf350b48-f641-49a2-b7e4-598ce72df8ab/resourcegroups/rg-caio-ai/providers/Microsoft.Storage/storageAccounts/storageaccountcaio/storageexplorer

Select your storage account

storageaccountcaio | Storage Explorer (preview) ⚡ ...

Storage account

Search (Ctrl+ /) Search

BLOB CONTAINERS my-container

FILE SHARES

QUEUES

TABLES

Active blobs (default) my-container

NAME ACCESS TIER AC... LAST MODIFIED BLOB TYPE CONTENT TYPE SIZE STATUS REMAINING DAYS DELETED TIME LEASE STA...

NAME	ACCESS TIER	AC...	LAST MODIFIED	BLOB TYPE	CONTENT TYPE	SIZE	STATUS	REMAINING DAYS	DELETED TIME	LEASE STA...
NOTICE.txt	Hot (inferred)		5/20/2021, 1:16:25 PM	Block Blob	text/plain	358.9 KB	Active			

PRICE per Gigabyte

HOT COOL ARCHIVE

PRICE per Transaction and Access

Showing 1 to 1 of 1 cached items

Your file is stored in you Blob Storage

Additional info about Azure Storage Accounts

The main difference between **Azure Blob Storage** and **Azure File Storage** is the folder structure that is possible:

- Azure Blob Storage does not provide for folders; it is a flat structure
- Azure File Storage allows for folders just like any other file server

Blob Storage is cheaper than File Storage but both types of storage have the same redundancy options. By default, all data stored is stored in a single Microsoft data center and is cloned to three different servers.

Azure Table Storage - is a scalable, NoSQL, key-value data storage system that can be used to store large amounts of data in the cloud. This storage offering has a schema less design, and each table has rows that are composed of key-value pairs. Microsoft describes it as an ideal solution for storing structured and non-relational data, covering use cases ranging from storing terabytes of structured data that serves web applications, to storing datasets that do not require complex joins or foreign keys, to accessing data using .NET libraries.

Azure Queue Storage – Simple FIFO (first in, first out) architecture makes queues a versatile solution for storing messages that do not need to be in a certain order. In simple terms, Azure Queue Storage is a service that allows users to store high volumes of messages, process them asynchronously and consume them when needed while keeping costs down by leveraging a pay-per-use pricing model.

More info about Azure Storage

<https://www.youtube.com/watch?v=UzTtastcBsk>

Additional info about Azure Storage Accounts

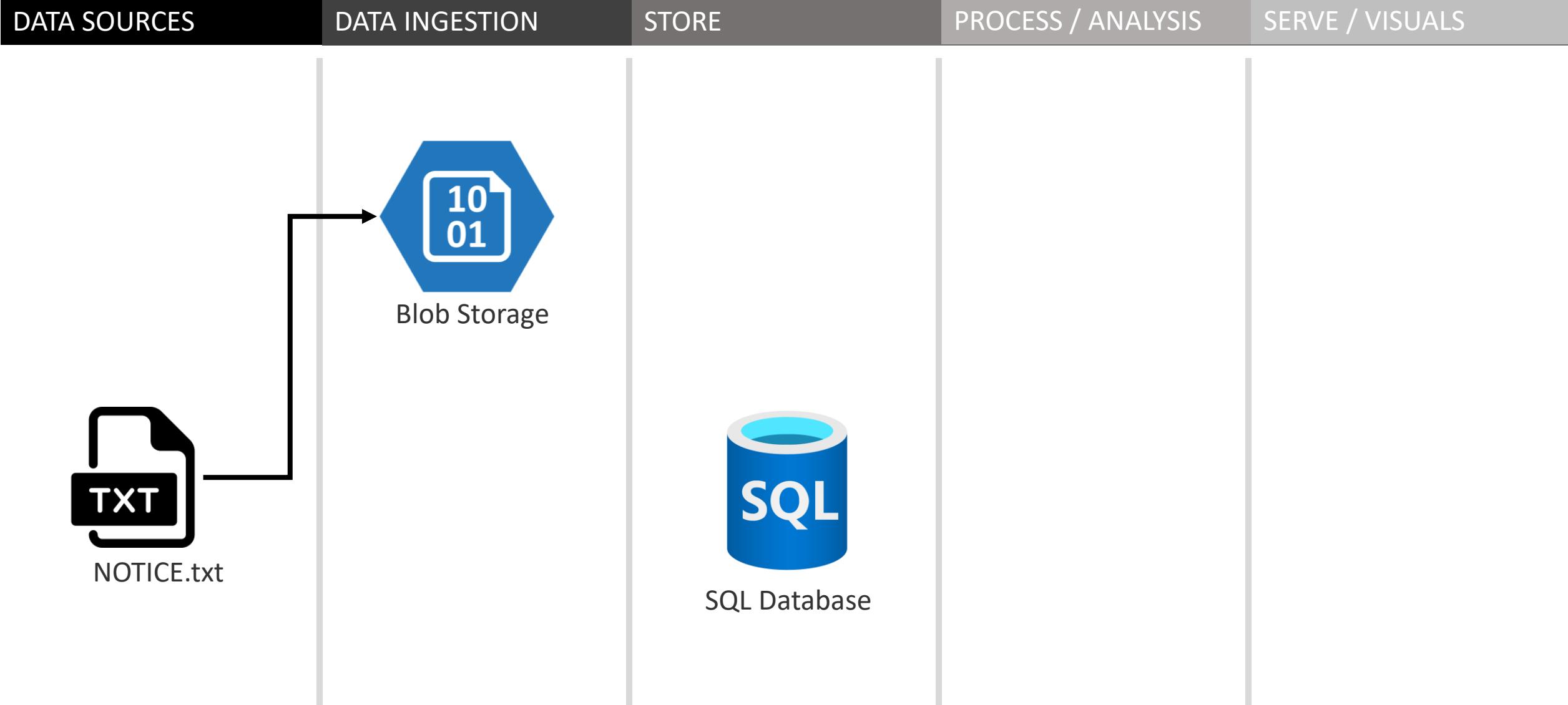
Blob storage provides you with three storage tiers:

- **Hot access tier** Optimized for storing data that you or your applications usually access. This tier has the highest costs for storing data but the lowest cost for access and transactions. Data read and written frequently by your application is a good example of usage of this tier.
- **Cool access tier** Optimized for storing data that will be stored for at least 30 days. You usually put data here that is infrequently accessed. Access and transaction costs are higher, while storing costs are lower than those from the hot storage tier. You can find short-term backups or large-term storage for telemetry data using this type of storage tier.
- **Archive access tier** This tier is available only at the blob level. You will typically store data here for at least 180 days. You cannot read, update, or copy a blob that is in the archive tier, since the blob is offline. You can access its metadata and perform some operations like delete, list, get blob's metadata and properties, or change the blob tier. This tier is suitable for storing data required for law compliance or archiving. The archive tier has the highest costs for access and transactions, while the lowest costs for storage.

More info about Azure Storage

<https://www.youtube.com/watch?v=UzTtastcBsk>

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.