TPS for Business

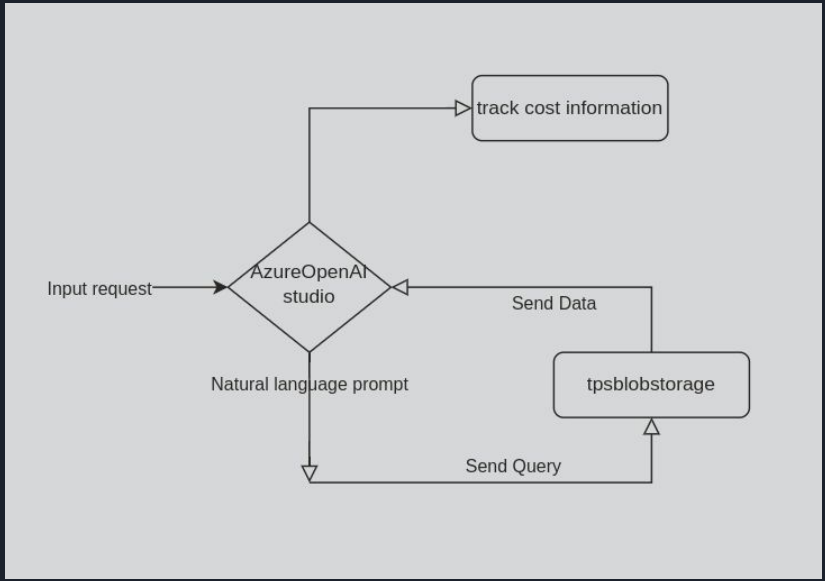
By Hassan Abioye, Elizabeth Nowak, Merrick, Kahasim Brown, Ane Jademi

Summary

Introducing TPS: Token Positioning System

Purpose: To track and manage costs associated with verbal database queries.

Goal



- Set up natural language prompts to query database
- Collect the costs of usage and data surrounding their usage
- Send the above information to a secondary table to simplify cost management

Repo

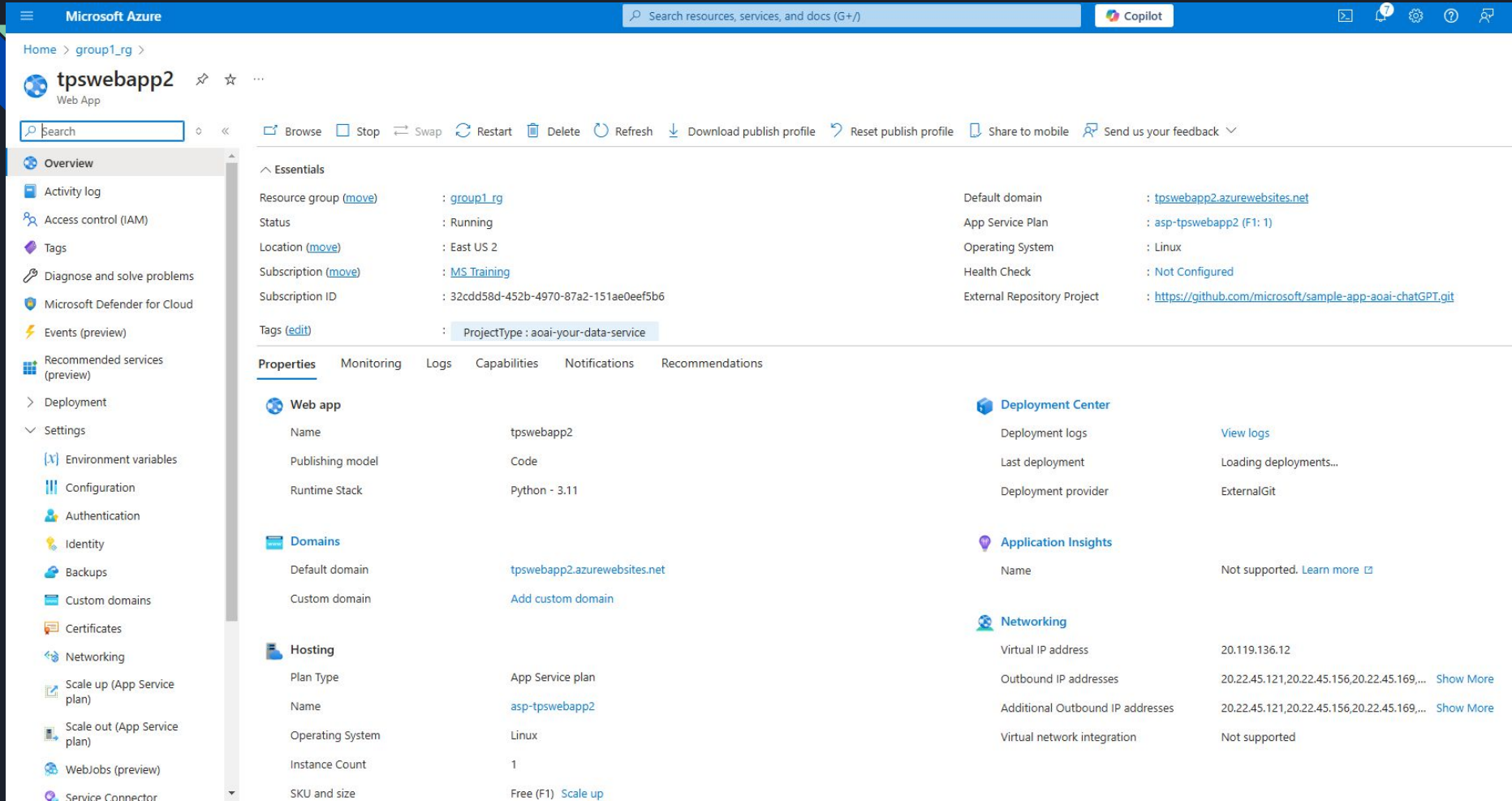
https://github.com/habioye/Azure-Innovation-Challenge

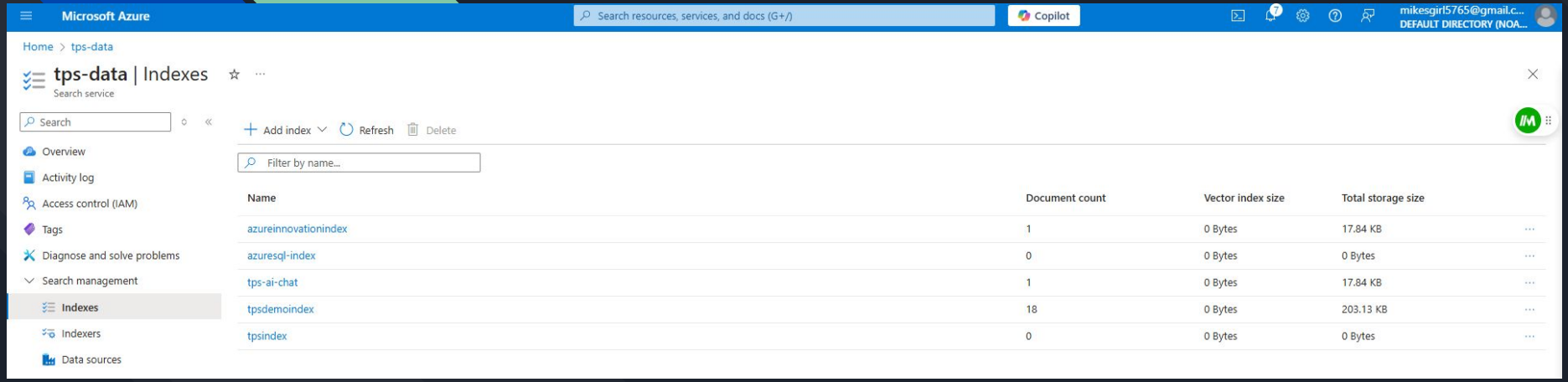
```
{messages.map((message, i) => {
  <div className="chat">
    <img className="chatImg" src={message.isBot?chatbot:user} alt="" />{" "}
    <p className="txt"> {message.text}</p>
  </div>;
})}
</div>
<div className="chatFooter">
  <div className="inp">
    <input
      type="text"
      name=""
      id=""
      placeholder="send a message"
      value={input}
      onChange={(e) => {
        setInput(e.target.value);
      }}
    />{" "}
    <button className="send" onClick={handleSend}>
      <img src="" alt="Send" />
    </button>
  </div>
</div>
```

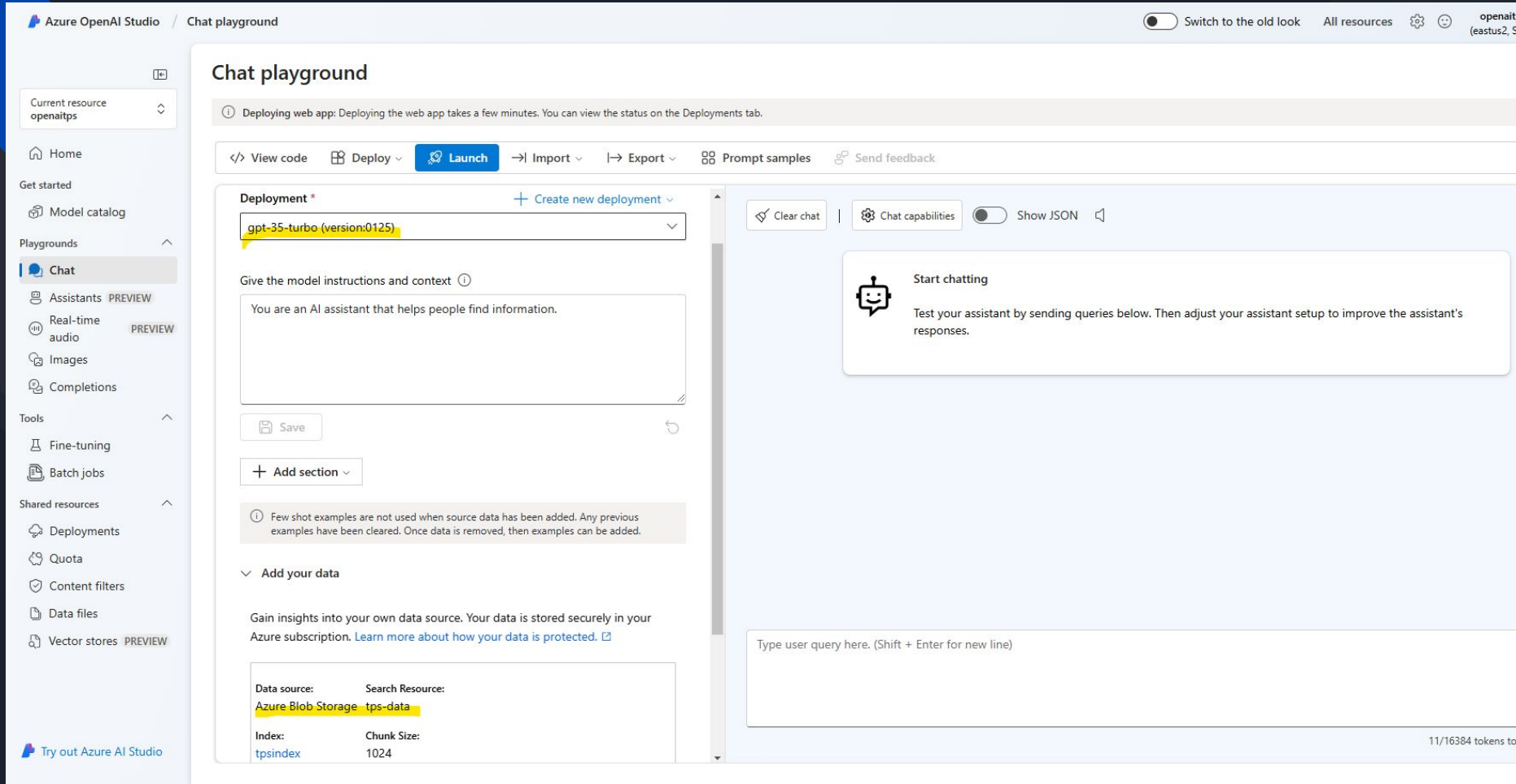
```
<div className="main">
  <div className="chats">
    <div className="chat">
      <img className="chatImg-aibot" src={chatbot} alt="" />{" "}
      <p className="txt"> Hello I am Azure AI and I will give you useful information about the data source.</p>
    </div>
    <div className="chat">
      <img className="chatImg-user" src={user} alt="" />{" "}
      <p className="txt"> Hello azure ai what is the country with the highest temperature. </p>
    </div>
```

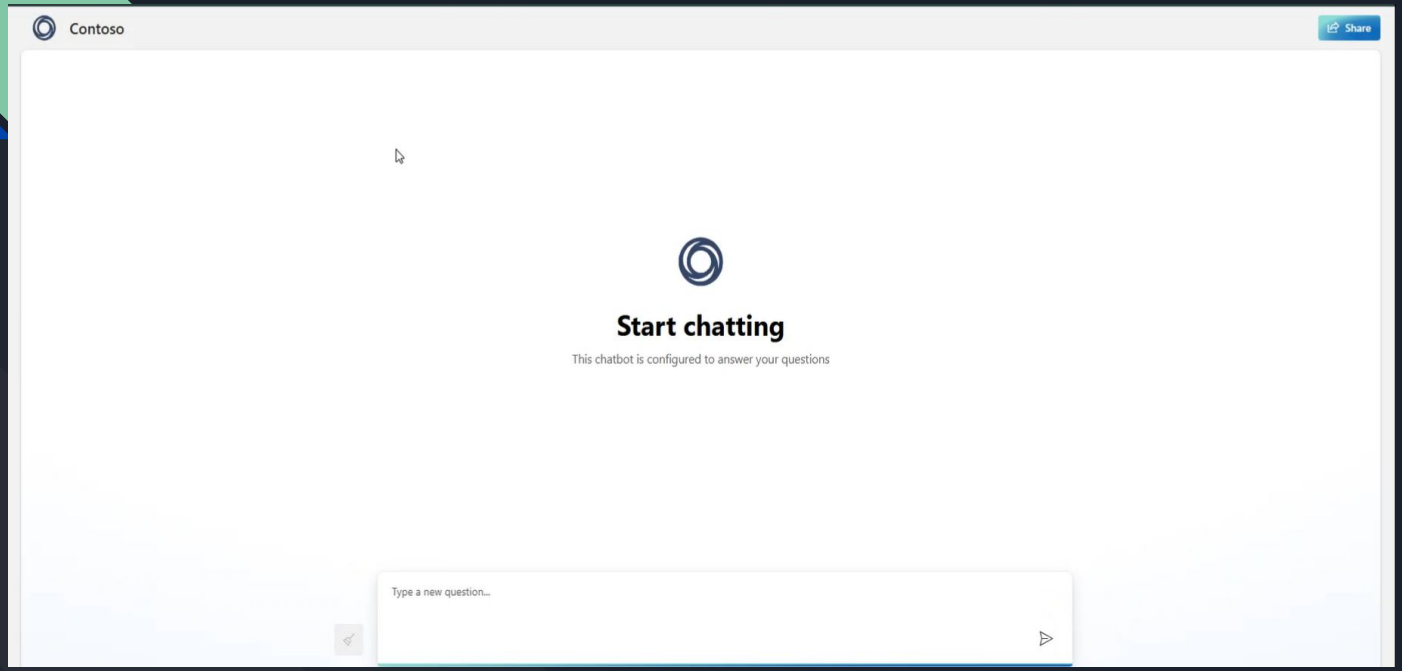
Resources Used

- ❏ Azure OpenAI Studio
- ❏ Azure SQL database
- ❏ Azure SQL server
- ❏ Azure search service
- ❏ Azure AI chat playground
- ❏ Github
- ❏ GitKraken
- ❏ Google Docs


Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
Home > group1_rg >
tpswebapp2
Web App
Search
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Microsoft Defender for Cloud
Events (preview)
Recommended services (preview)
Deployment
Settings
Environment variables
Configuration
Authentication
Identity
Backups
Custom domains
Certificates
Networking
Scale up (App Service plan)
Scale out (App Service plan)
WebJobs (preview)
Service Connector
Browse
Stop
Swap
Restart
Delete
Refresh
Download publish profile
Reset publish profile
Share to mobile
Send us your feedback
Essentials
Resource group (move) : group1_rg
Status : Running
Location (move) : East US 2
Subscription (move) : MS Training
Subscription ID : 32cdd58d-452b-4970-87a2-151ae0eef5b6
Tags (edit) : ProjectType : aoai-your-data-service
Default domain : tpswebapp2.azurewebsites.net
App Service Plan : asp-tpswebapp2 (F1: 1)
Operating System : Linux
Health Check : Not Configured
External Repository Project : https://github.com/microsoft/sample-app-aoai-chatGPT.git
Properties
Monitoring
Logs
Capabilities
Notifications
Recommendations
Web app
Name tpswebapp2
Publishing model Code
Runtime Stack Python - 3.11
Domains
Default domain tpswebapp2.azurewebsites.net
Custom domain Add custom domain
Hosting
Plan Type App Service plan
Name asp-tpswebapp2
Operating System Linux
Instance Count 1
SKU and size Free (F1) Scale up
Deployment Center
Deployment logs View logs
Last deployment Loading deployments...
Deployment provider ExternalGit
Application Insights
Name Not supported. Learn more
Networking
Virtual IP address 20.119.136.12
Outbound IP addresses 20.22.45.121,20.22.45.156,20.22.45.169,... Show More
Additional Outbound IP addresses 20.22.45.121,20.22.45.156,20.22.45.169,... Show More
Virtual network integration Not supported


Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
mikesgirl5765@gmail.c...
DEFAULT DIRECTORY (NOA...
Home > tps-data
tps-data | Indexes
Search service
Search
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Search management
Indexes
Indexers
Data sources
Add index
Refresh
Delete
Filter by name...
Name
Document count
Vector index size
Total storage size
azureinnovationindex 1 0 Bytes 17.84 KB
azuresql-index 0 0 Bytes 0 Bytes
tps-ai-chat 1 0 Bytes 17.84 KB
tpsdemoindex 18 0 Bytes 203.13 KB
tpsindex 0 0 Bytes 0 Bytes


Azure OpenAI Studio / Chat playground
Switch to the old look
All resources
Chat playground
Current resource
openaitps
Home
Get started
Model catalog
Playgrounds
Chat
Assistants PREVIEW
Real-time audio PREVIEW
Images
Completions
Tools
Fine-tuning
Batch jobs
Shared resources
Deployments
Quota
Content filters
Data files
Vector stores PREVIEW
Try out Azure AI Studio
Deploying web app: Deploying the web app takes a few minutes. You can view the status on the Deployments tab.
View code
Deploy
Launch
Import
Export
Prompt samples
Send feedback
Deployment *
Create new deployment
gpt-35-turbo (version:0125)
Give the model instructions and context
You are an AI assistant that helps people find information.
Save
Add section
Few shot examples are not used when source data has been added. Any previous examples have been cleared. Once data is removed, then examples can be added.
Add your data
Gain insights into your own data source. Your data is stored securely in your Azure subscription. Learn more about how your data is protected.
Data source:
Azure Blob Storage
Search Resource:
tps-data
Index:
tpsindex
Chunk Size:
1024
Clear chat
Chat capabilities
Show JSON
Start chatting
Test your assistant by sending queries below. Then adjust your assistant setup to improve the assistant's responses.
Type user query here. (Shift + Enter for new line)
11/16384 tokens to


Contoso
Share
Start chatting
This chatbot is configured to answer your questions
Type a new question...

tpswebapp2.azurewebsites.net

Apps | Bookmarks | My Drive | DP: P1 | LinkedIn | Sign in - DreamHost | Login | Skills for All... | LinuxJmy | YouTube | NPC - Logo | Login | CompTIA | 7.89 | Free Cybersecurity... | Inbox - eknowakcyb... | gr09email | Blue Book | All Bookmarks

Contoso

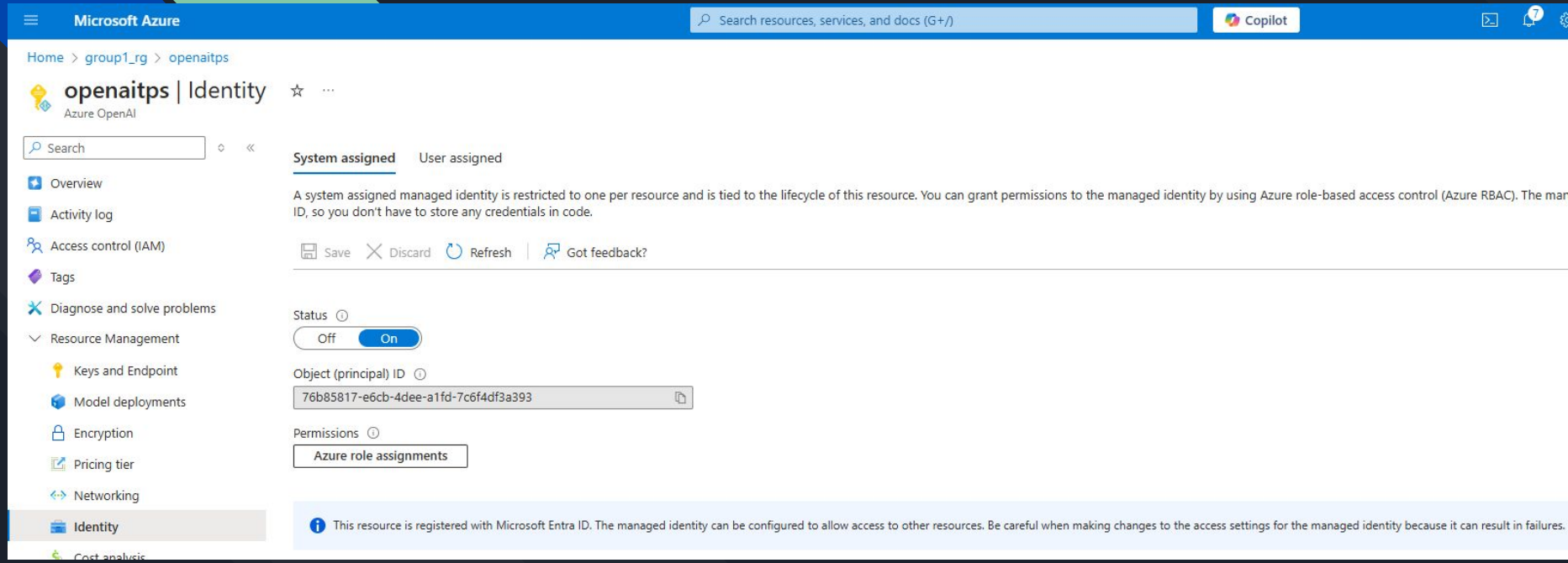
Hide chat history | Share

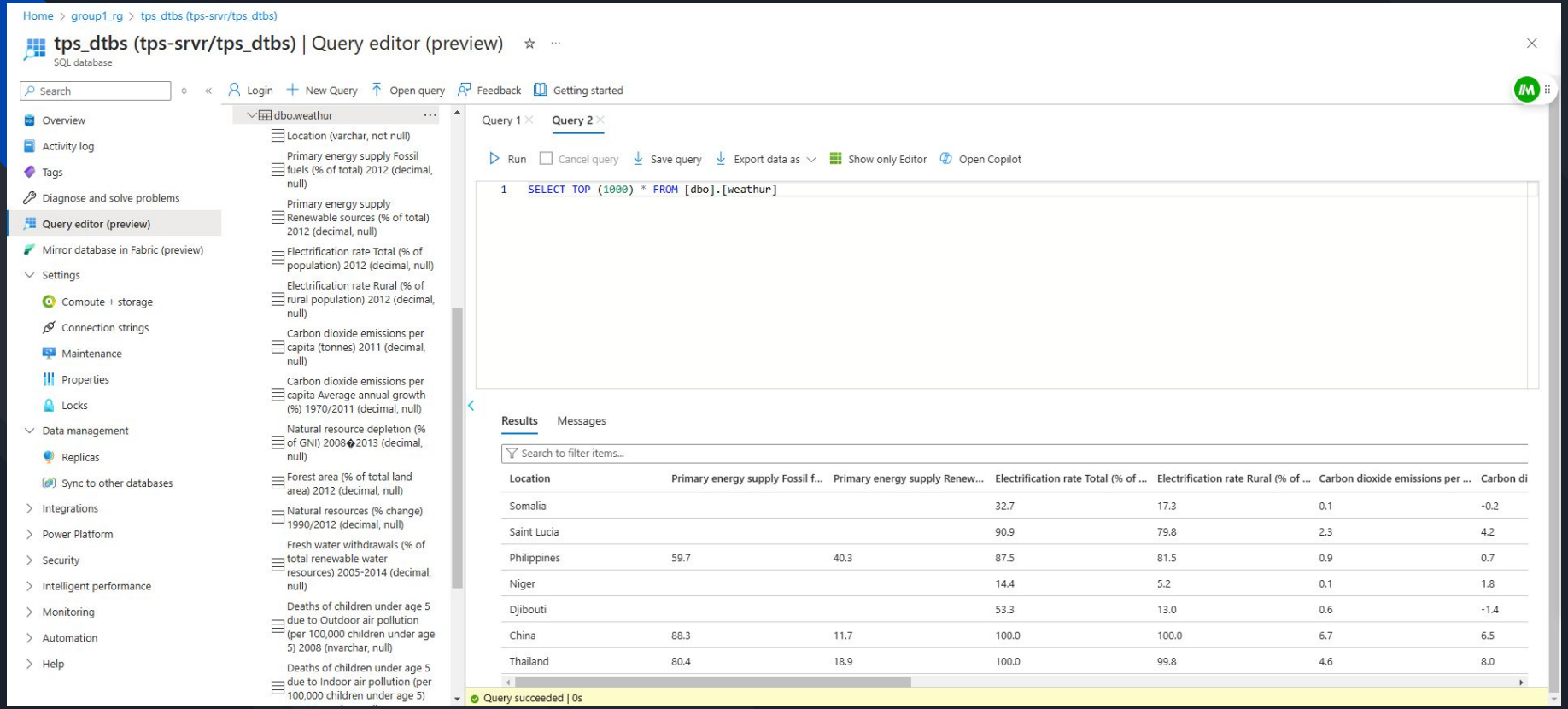
Authentication Not Configured

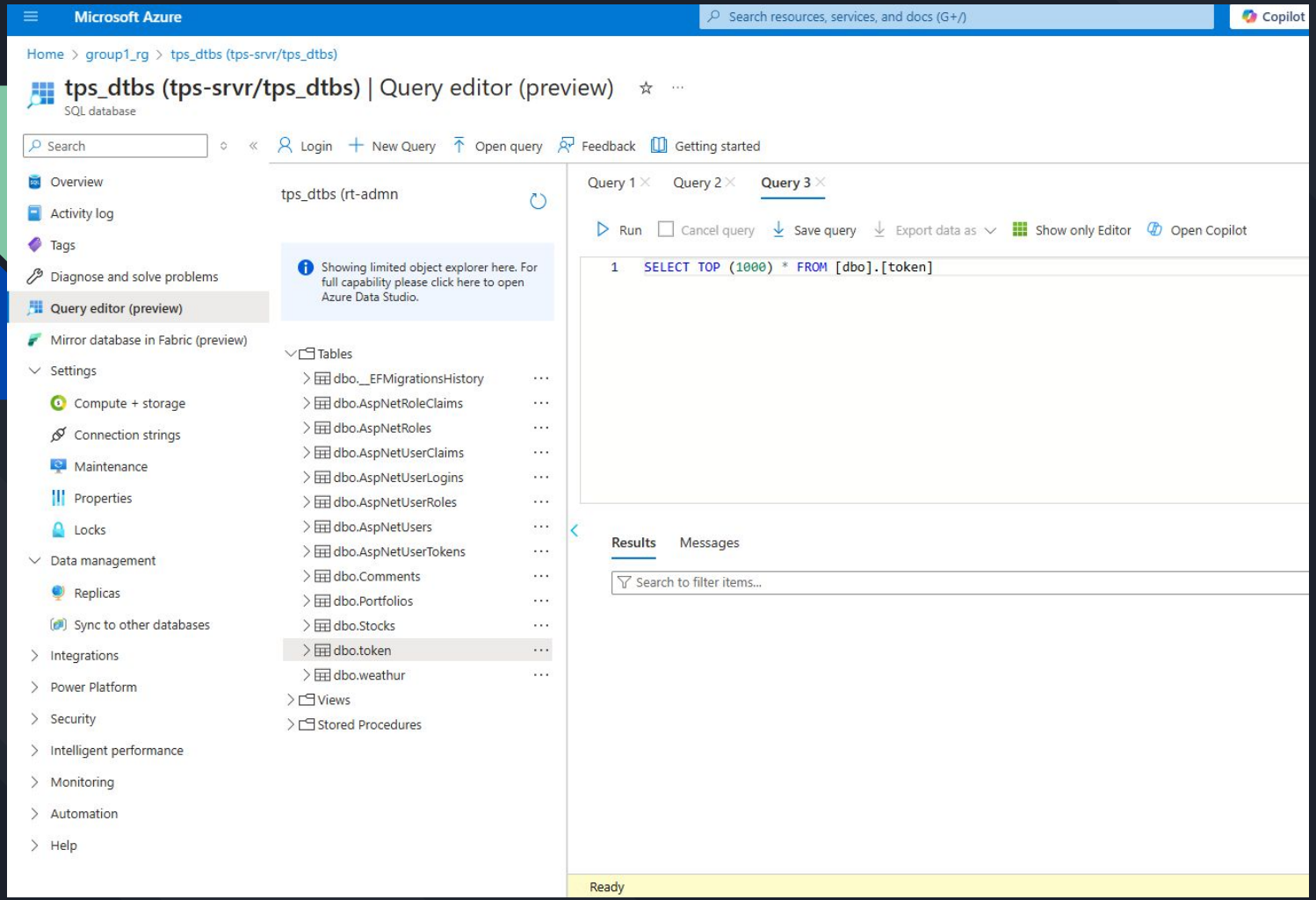
This app does not have authentication configured. Please add an identity provider by finding your app in the Azure Portal and following these instructions .

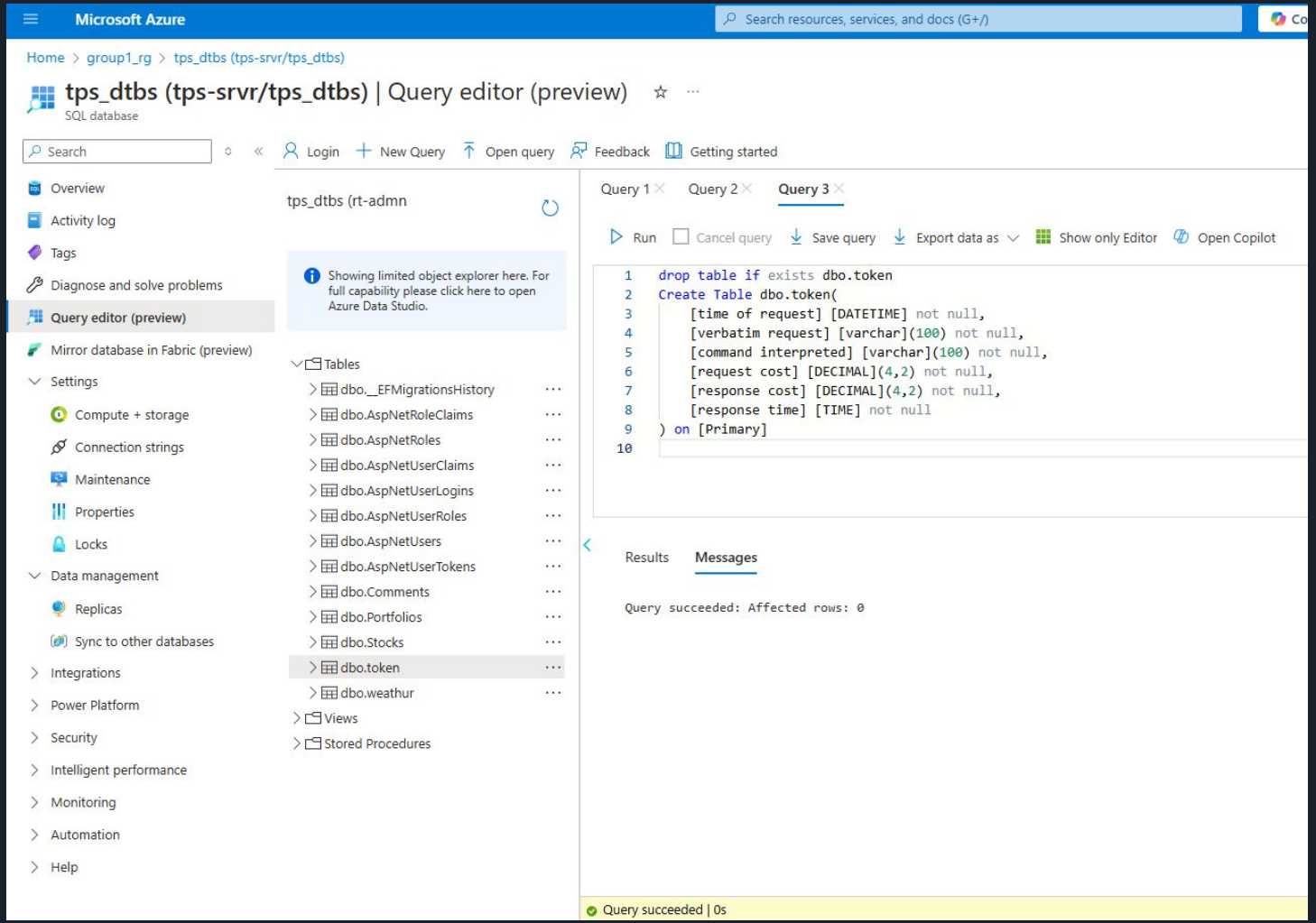
Authentication configuration takes a few minutes to apply.

If you deployed in the last 10 minutes, please wait and reload the page after 10 minutes.


Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
Home > group1_rg > openaitps
openaitps | Identity
Azure OpenAI
Search
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Resource Management
Keys and Endpoint
Model deployments
Encryption
Pricing tier
Networking
Identity
Cost analysis
System assigned
User assigned
A system assigned managed identity is restricted to one per resource and is tied to the lifecycle of this resource. You can grant permissions to the managed identity by using Azure role-based access control (Azure RBAC). The mar
ID, so you don't have to store any credentials in code.
Save
Discard
Refresh
Got feedback?
Status
Off
On
Object (principal) ID
76b85817-e6cb-4dee-a1fd-7c6f4df3a393
Permissions
Azure role assignments
This resource is registered with Microsoft Entra ID. The managed identity can be configured to allow access to other resources. Be careful when making changes to the access settings for the managed identity because it can result in failures.


Home > group1_rg > tps_dtbs (tps-srvr/tps_dtbs)
tps_dtbs (tps-srvr/tps_dtbs) | Query editor (preview)
SQL database
Search
Login
New Query
Open query
Feedback
Getting started
Overview
Activity log
Tags
Diagnose and solve problems
Query editor (preview)
Mirror database in Fabric (preview)
Settings
Compute + storage
Connection strings
Maintenance
Properties
Locks
Data management
Replicas
Sync to other databases
Integrations
Power Platform
Security
Intelligent performance
Monitoring
Automation
Help
dbo.weathur
Location (varchar, not null)
Primary energy supply Fossil fuels (% of total) 2012 (decimal, null)
Primary energy supply Renewable sources (% of total) 2012 (decimal, null)
Electrification rate Total (% of population) 2012 (decimal, null)
Electrification rate Rural (% of rural population) 2012 (decimal, null)
Carbon dioxide emissions per capita (tonnes) 2011 (decimal, null)
Carbon dioxide emissions per capita Average annual growth (%) 1970/2011 (decimal, null)
Natural resource depletion (% of GNI) 2008–2013 (decimal, null)
Forest area (% of total land area) 2012 (decimal, null)
Natural resources (% change) 1990/2012 (decimal, null)
Fresh water withdrawals (% of total renewable water resources) 2005-2014 (decimal, null)
Deaths of children under age 5 due to Outdoor air pollution (per 100,000 children under age 5) 2008 (nvarchar, null)
Deaths of children under age 5 due to Indoor air pollution (per 100,000 children under age 5)
Query 1
Query 2
Run
Cancel query
Save query
Export data as
Show only Editor
Open Copilot
1 SELECT TOP (1000) * FROM [dbo].[weathur]
Results
Messages
Search to filter items...
Location
Primary energy supply Fossil f...
Primary energy supply Renew...
Electrification rate Total (% of ...
Electrification rate Rural (% of ...
Carbon dioxide emissions per ...
Carbon di
Somalia 32.7 17.3 0.1 -0.2
Saint Lucia 90.9 79.8 2.3 4.2
Philippines 59.7 40.3 87.5 81.5 0.9 0.7
Niger 14.4 5.2 0.1 1.8
Djibouti 53.3 13.0 0.6 -1.4
China 88.3 11.7 100.0 100.0 6.7 6.5
Thailand 80.4 18.9 100.0 99.8 4.6 8.0
Query succeeded | 0s


Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
Home > group1_rg > tps_dtbs (tps-srvr/tps_dtbs)
tps_dtbs (tps-srvr/tps_dtbs) | Query editor (preview)
SQL database
Search
Login
New Query
Open query
Feedback
Getting started
Overview
Activity log
Tags
Diagnose and solve problems
Query editor (preview)
Mirror database in Fabric (preview)
Settings
Compute + storage
Connection strings
Maintenance
Properties
Locks
Data management
Replicas
Sync to other databases
Integrations
Power Platform
Security
Intelligent performance
Monitoring
Automation
Help
tps_dtbs (rt-admn
Showing limited object explorer here. For full capability please click here to open Azure Data Studio.
Tables
dbo.__EFMigrationsHistory
dbo.AspNetRoleClaims
dbo.AspNetRoles
dbo.AspNetUserClaims
dbo.AspNetUserLogins
dbo.AspNetUserRoles
dbo.AspNetUsers
dbo.AspNetUserTokens
dbo.Comments
dbo.Portfolios
dbo.Stocks
dbo.token
dbo.weathur
Views
Stored Procedures
Query 1
Query 2
Query 3
Run
Cancel query
Save query
Export data as
Show only Editor
Open Copilot
1 SELECT TOP (1000) * FROM [dbo].[token]
Results
Messages
Search to filter items...
Ready


Microsoft Azure
Search resources, services, and docs (G+/)
Home > group1_rg > tps_dtbs (tps-srvr/tps_dtbs)
tps_dtbs (tps-srvr/tps_dtbs) | Query editor (preview)
SQL database
Search
Login
New Query
Open query
Feedback
Getting started
Overview
Activity log
Tags
Diagnose and solve problems
Query editor (preview)
Mirror database in Fabric (preview)
Settings
Compute + storage
Connection strings
Maintenance
Properties
Locks
Data management
Replicas
Sync to other databases
Integrations
Power Platform
Security
Intelligent performance
Monitoring
Automation
Help
tps_dtbs (rt-admn
Showing limited object explorer here. For full capability please click here to open Azure Data Studio.
Tables
dbo.__EFMigrationsHistory
dbo.AspNetRoleClaims
dbo.AspNetRoles
dbo.AspNetUserClaims
dbo.AspNetUserLogins
dbo.AspNetUserRoles
dbo.AspNetUsers
dbo.AspNetUserTokens
dbo.Comments
dbo.Portfolios
dbo.Stocks
dbo.token
dbo.weathur
Views
Stored Procedures
Query 1
Query 2
Query 3
Run
Cancel query
Save query
Export data as
Show only Editor
Open Copilot
1 drop table if exists dbo.token
2 Create Table dbo.token(
3 [time of request] [DATETIME] not null,
4 [verbatim request] [varchar](100) not null,
5 [command interpreted] [varchar](100) not null,
6 [request cost] [DECIMAL](4,2) not null,
7 [response cost] [DECIMAL](4,2) not null,
8 [response time] [TIME] not null
9) on [Primary]
10
Results
Messages
Query succeeded: Affected rows: 0
Query succeeded | 0s

Lessons Learned

Connecting to Azure involves multipale steps across various components—backend, frontend, dta, and AI chatbot. Each of these requires its own instance, incurring separate costs. Instances can be created and attached individually, emphasizing the need to plan for both setup complexity and budget management.

Access management is a key ingredient to Azure resource management. Without proper access, no management is possible, including cost oversight.

Mentors are necessary, but they should be made aware of the different projects and be prepared to guide or help specifically.

Azure AI Studio and Azure OpenAI Studio do not work the same.

Creating web apps and SQL servers is not the same as deploying a web app or a sql database in Azure resources.

Links to LinkedIn/Github

Hassan-Cloud Software Engineer

https://github.com/habioye

https://www.linkedin.com/in/hassan-abioye-801613186/

Merrick-Full stack Programmer

linkedin.com/in/merrick-brown-4a507313b

Elizabeth-Cybersecurity/AI /junior developer

https://linkedin.com/in/eknowak2024

Kahasim-

https://www.linkedin.com/in/kahasim-brown/

Ane- IT Program Manager

www.linkedin.com/in/annjade

THANK YOU!!!

Special thanks to

- Noah Feldman
- Kyle Johnson