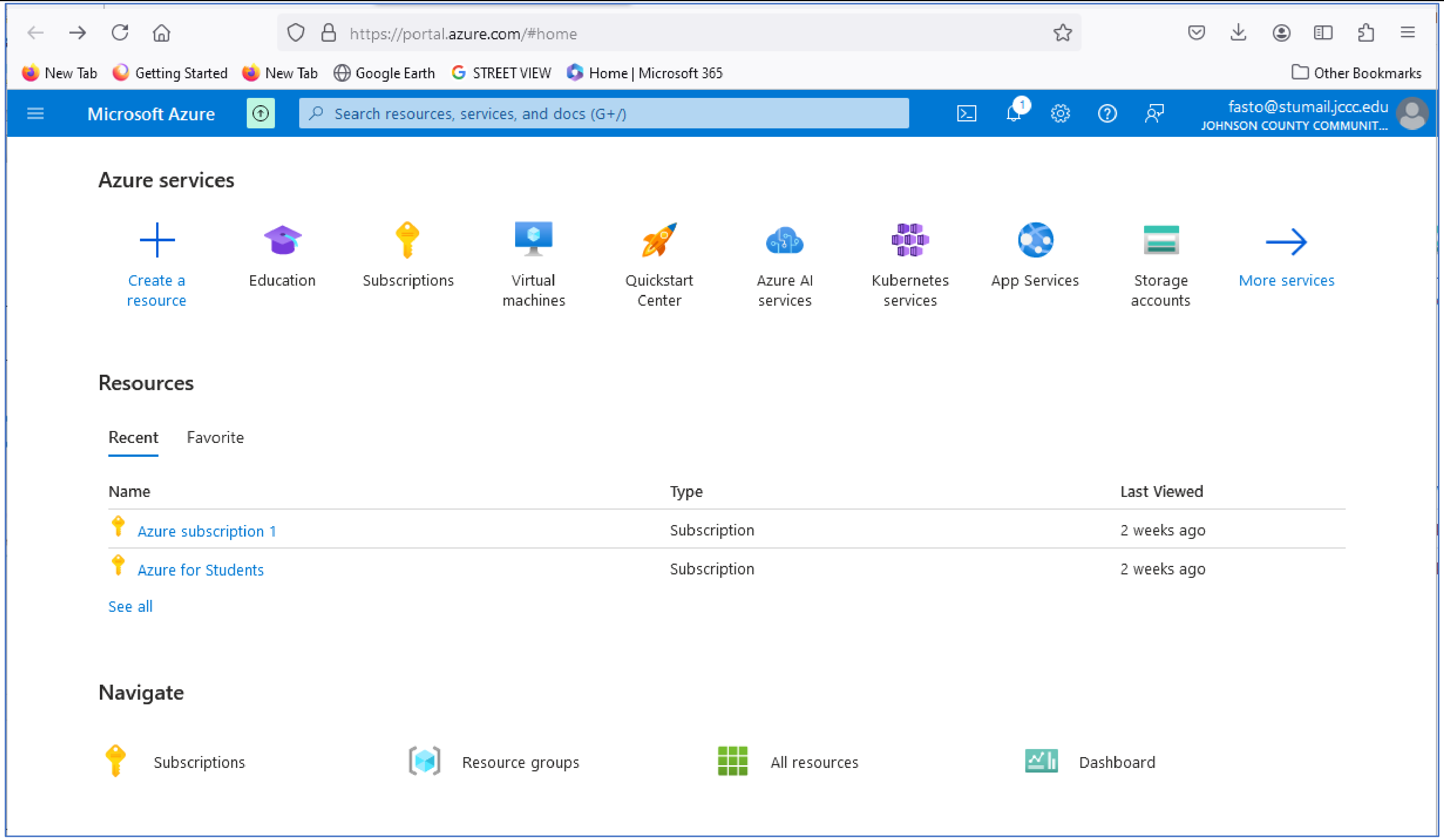
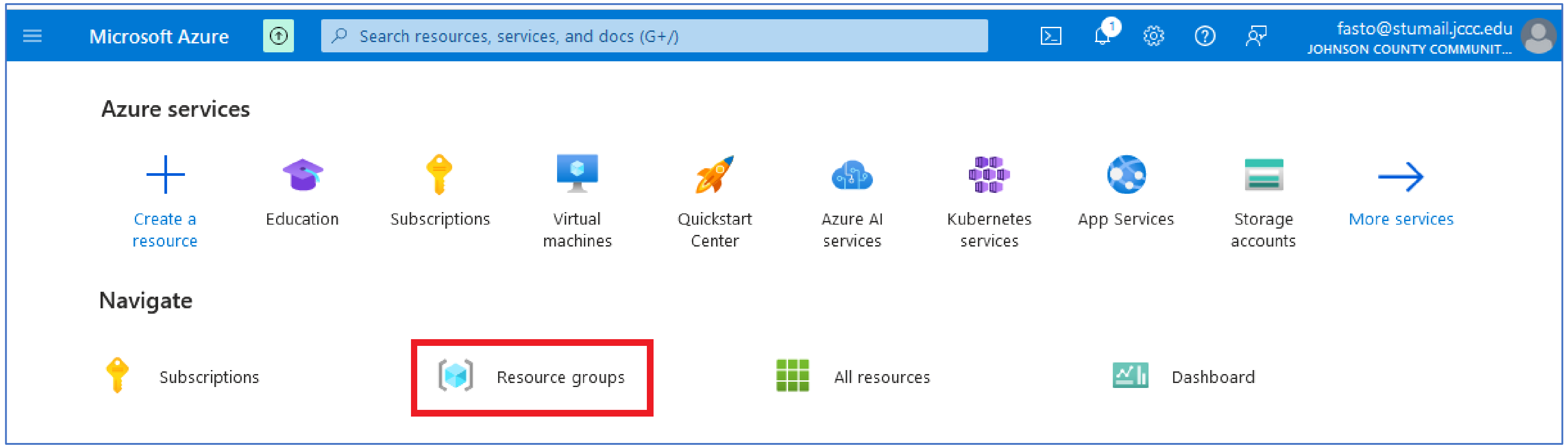
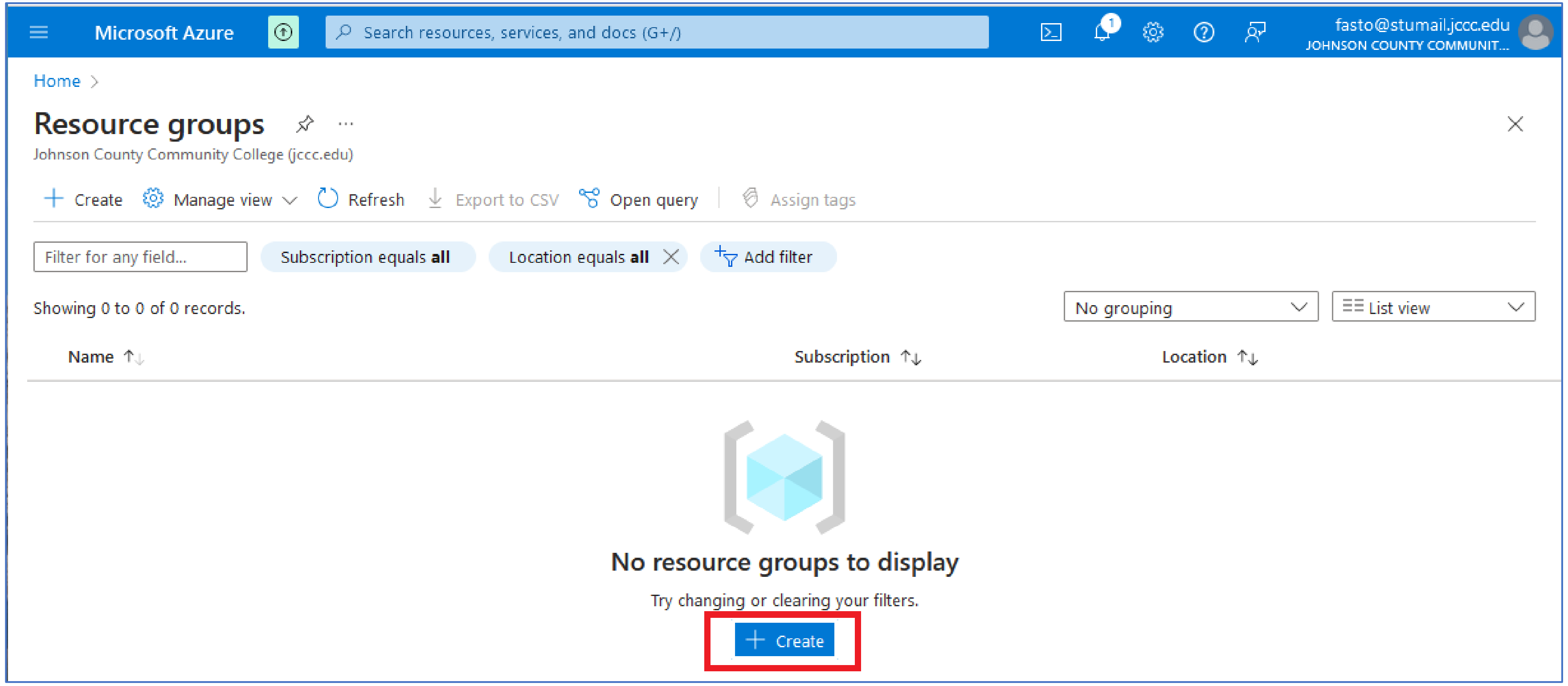
Frank Asto
DS 280
Project – Journal

Step 1 – Open Azure	**Notes**
	This is the webpage: https://portal.azure.com/#home I sign in to the Azure portal with my JCCC email account.

Name	Type	Last Viewed
Azure subscription 1	Subscription	2 weeks ago
Azure for Students	Subscription	2 weeks ago

Step 2 – Create a Resource Group





Showing 0 to 0 of 0 records.

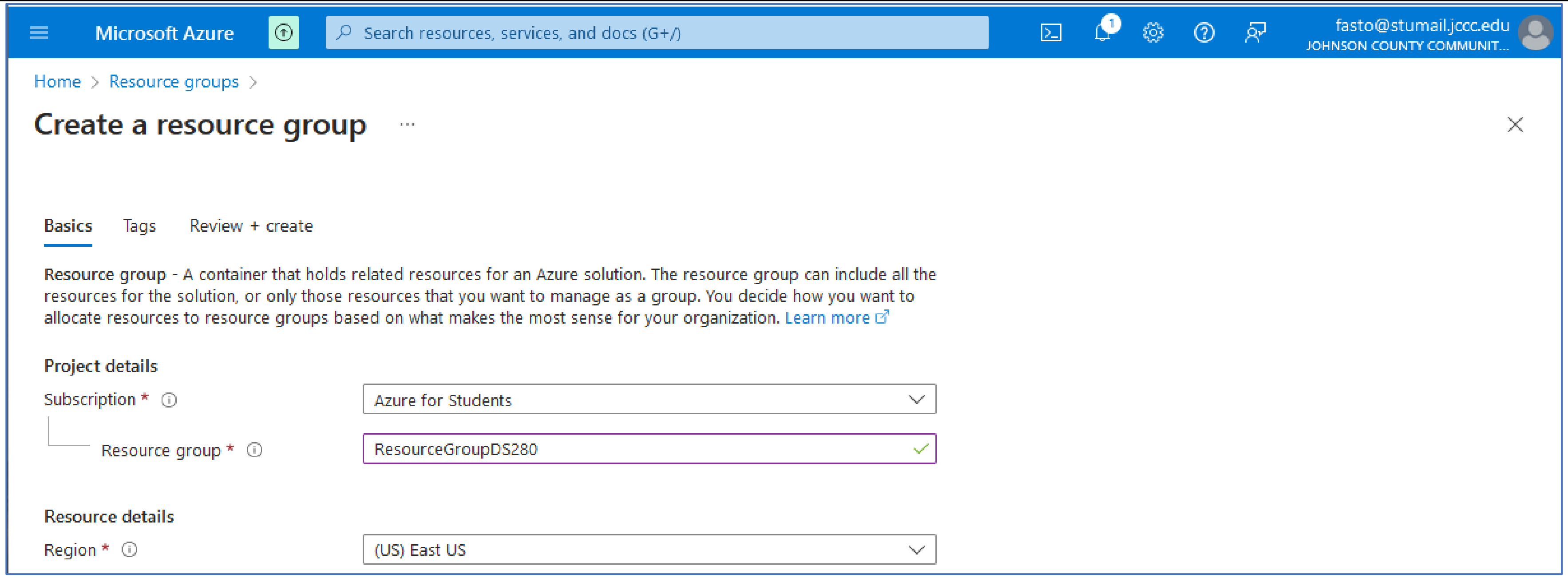
No resource groups to display

Try changing or clearing your filters.

Notes

I click on the Resource groups icon at the bottom of the page. Then I click on the +Create button.

Step 2 – Create a Resource Group - continue


Microsoft Azure
Search resources, services, and docs (G+/)
fasto@stumail.jccc.edu
JOHNSON COUNTY COMMUNIT...
Home > Resource groups >

Create a resource group ···

Basics   Tags   Review + create

Resource group - A container that holds related resources for an Azure solution. The resource group can include all the resources for the solution, or only those resources that you want to manage as a group. You decide how you want to allocate resources to resource groups based on what makes the most sense for your organization. Learn more

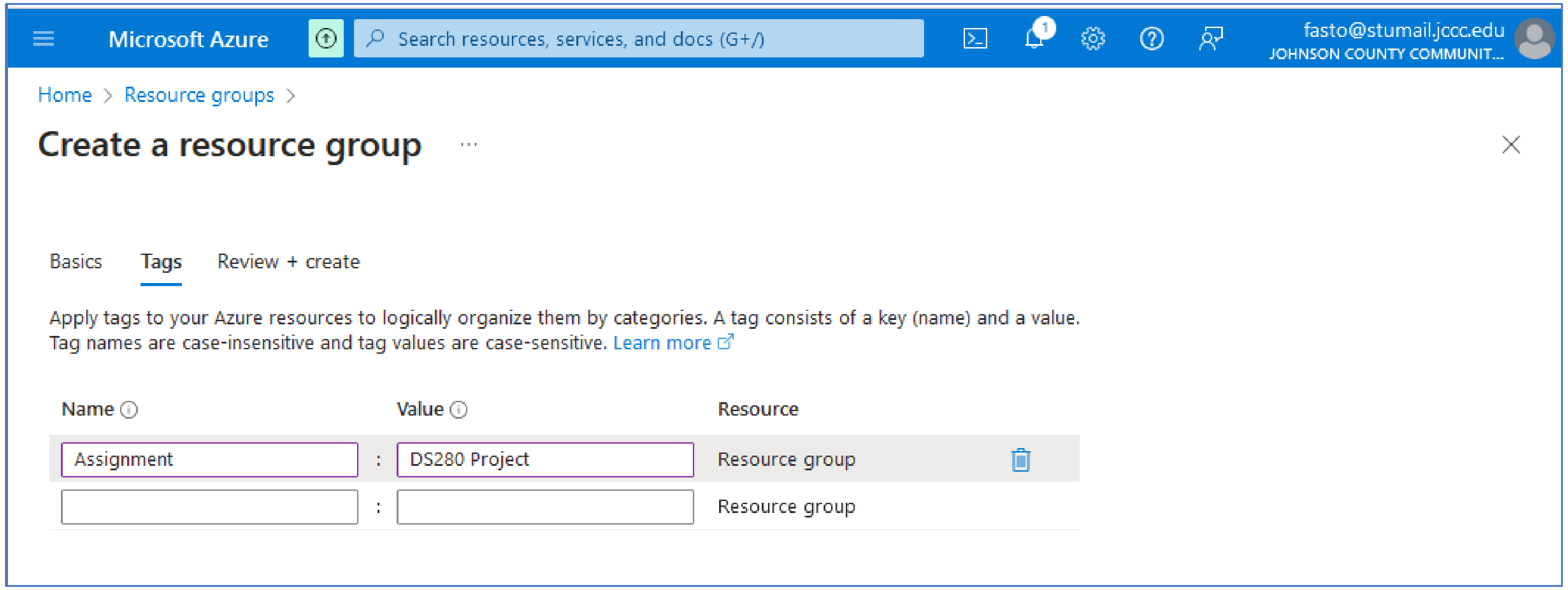
Project details

Subscription * : Azure for Students

Resource group * : ResourceGroupDS280

Resource details

Region * : (US) East US


Microsoft Azure
Search resources, services, and docs (G+/)
fasto@stumail.jccc.edu
JOHNSON COUNTY COMMUNIT...
Home > Resource groups >

Create a resource group ···

Basics   Tags   Review + create

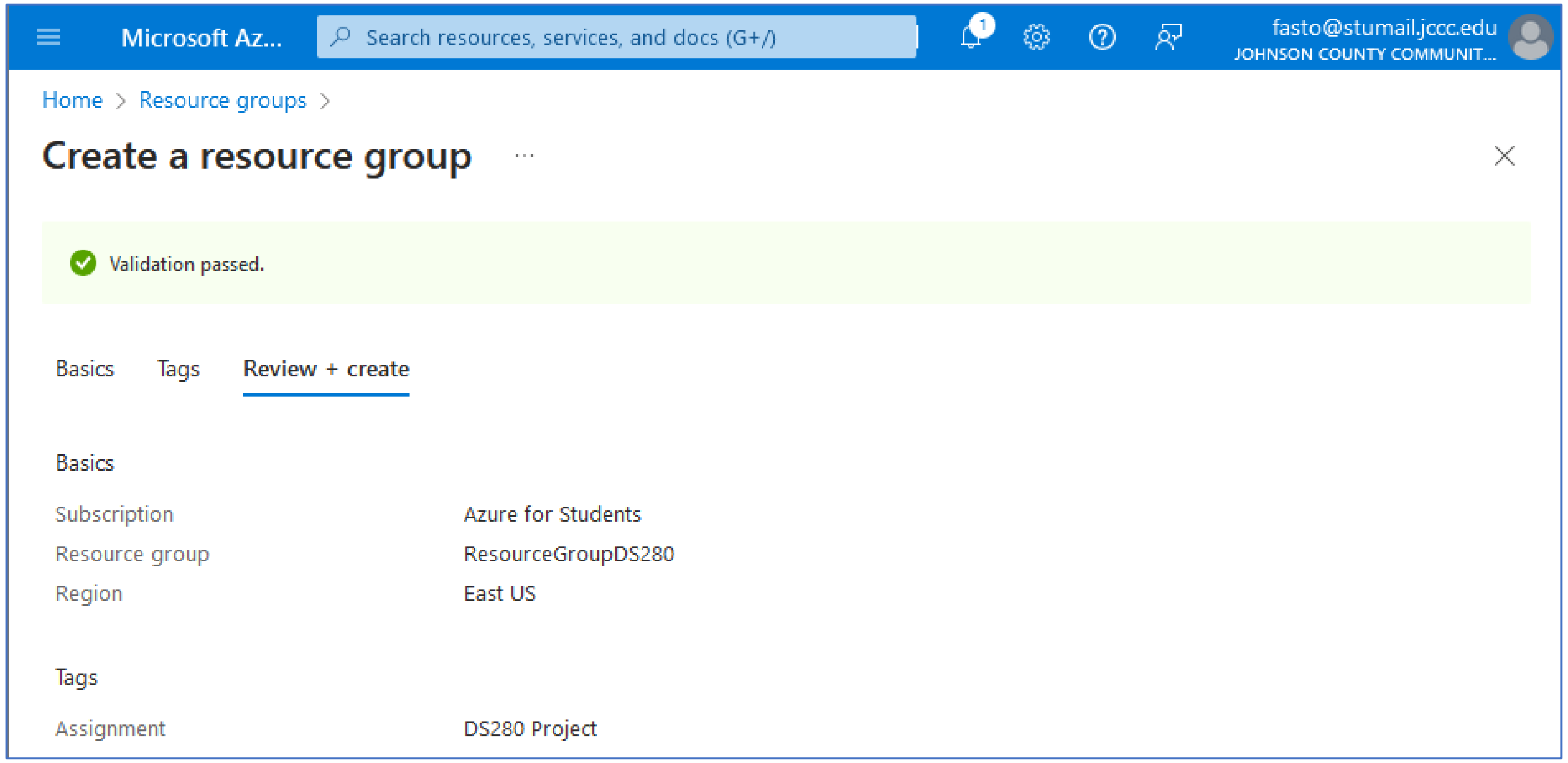
Apply tags to your Azure resources to logically organize them by categories. A tag consists of a key (name) and a value. Tag names are case-insensitive and tag values are case-sensitive. Learn more

Name		Value	Resource
Assignment	:	DS280 Project	Resource group
	:		Resource group

Notes

I choose my subscription: Azure for Students.
I name my resource group.
I choose my region: (US) East US.
Then I click Next: Tags.
I name it Assignment in Name.
I name it DS280 Project in Value.
Then I click Next.

Step 2 – Create a Resource Group – continue	Notes



Create a resource group

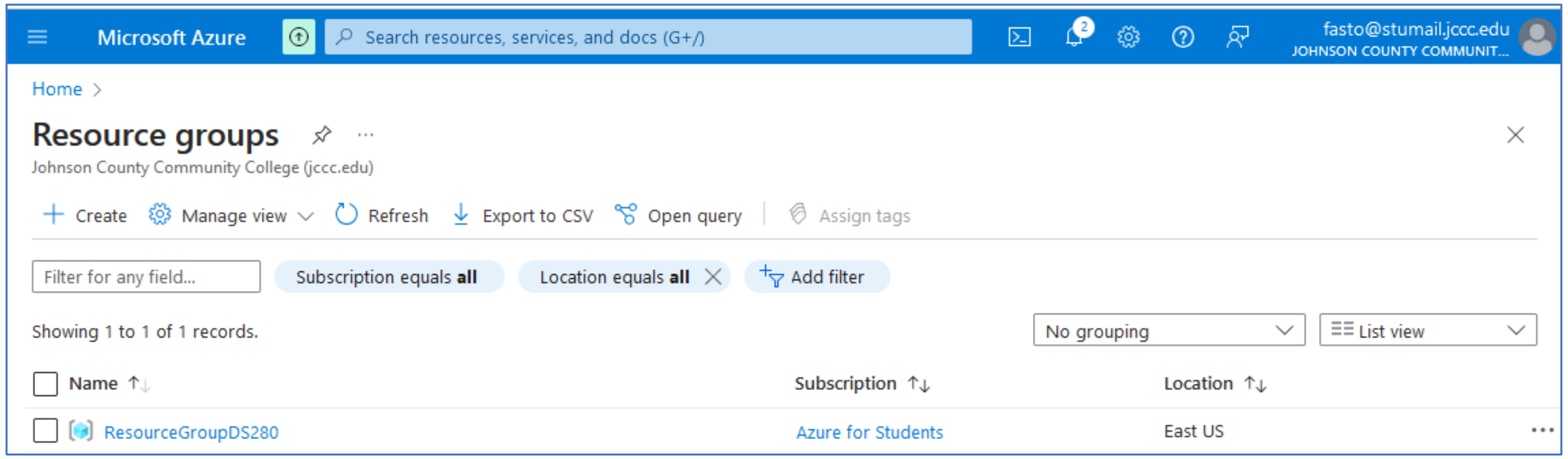
Validation passed.

Basics

Subscription	Azure for Students
Resource group	ResourceGroupDS280
Region	East US

Tags

Assignment	DS280 Project



Resource groups

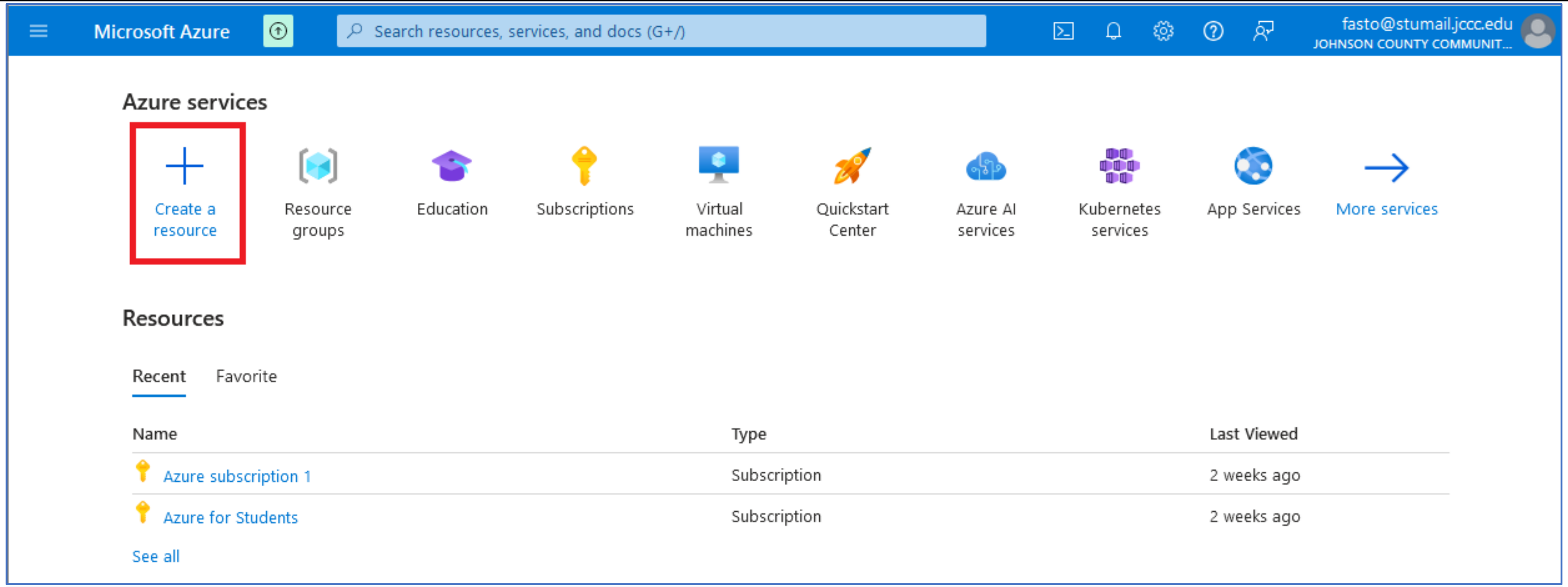
Johnson County Community College (jccc.edu)

Showing 1 to 1 of 1 records.

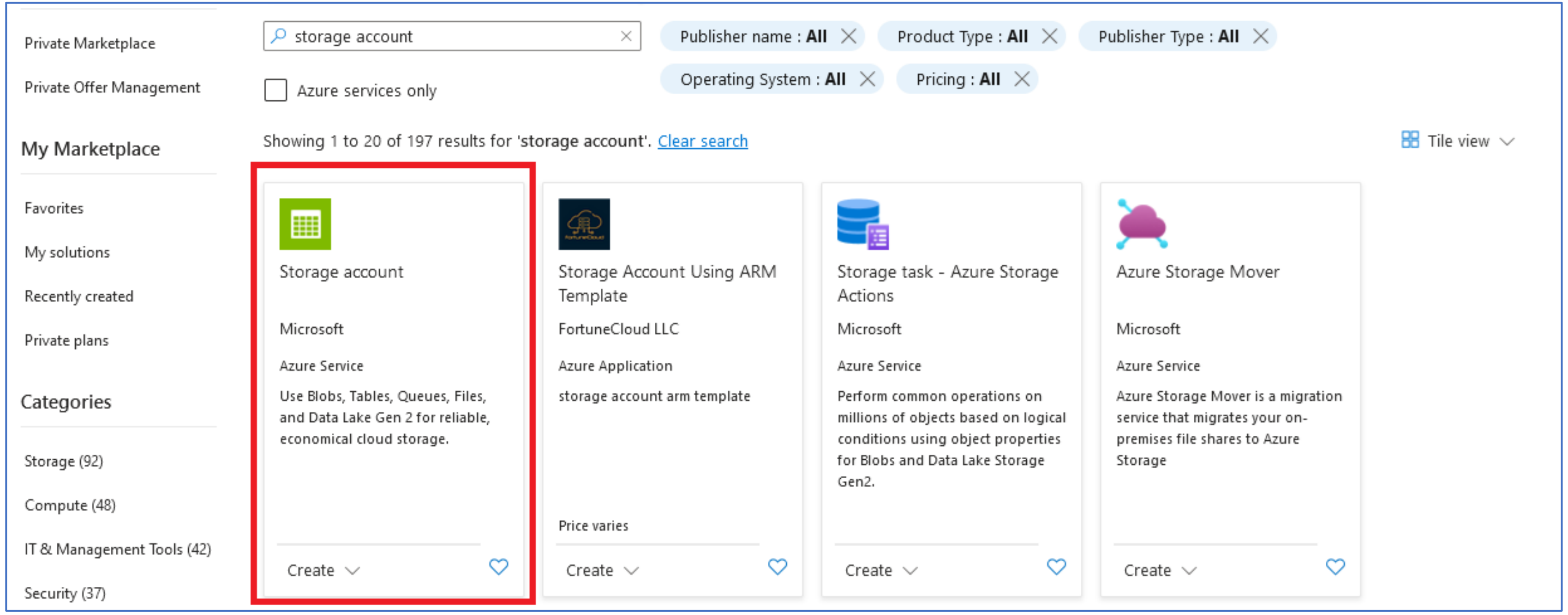
Name	Subscription	Location
ResourceGroupDS280	Azure for Students	East US

I wait until the validation passes.
Then I click on the Create button.
It takes me back to the Resource Groups page.
Now I can see the resource group that I created at the bottom.

Step 3 – Create a Storage Account



Name	Type	Last Viewed
Azure subscription 1	Subscription	2 weeks ago
Azure for Students	Subscription	2 weeks ago



Showing 1 to 20 of 197 results for 'storage account'. Clear search

Storage account
Microsoft
Azure Service
Use Blobs, Tables, Queues, Files, and Data Lake Gen 2 for reliable, economical cloud storage.

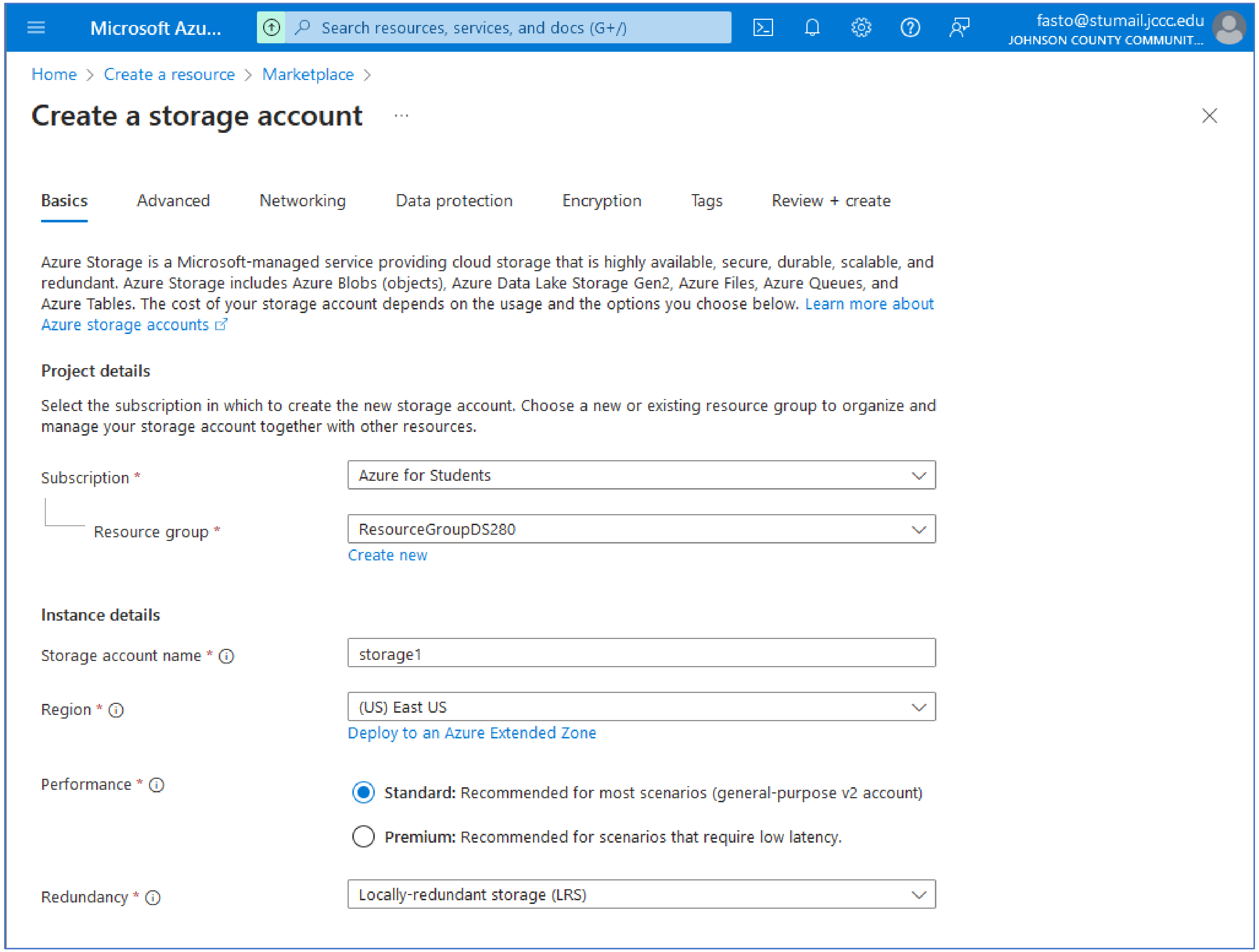
Storage Account Using ARM Template
FortuneCloud LLC
Azure Application
storage account arm template
Price varies

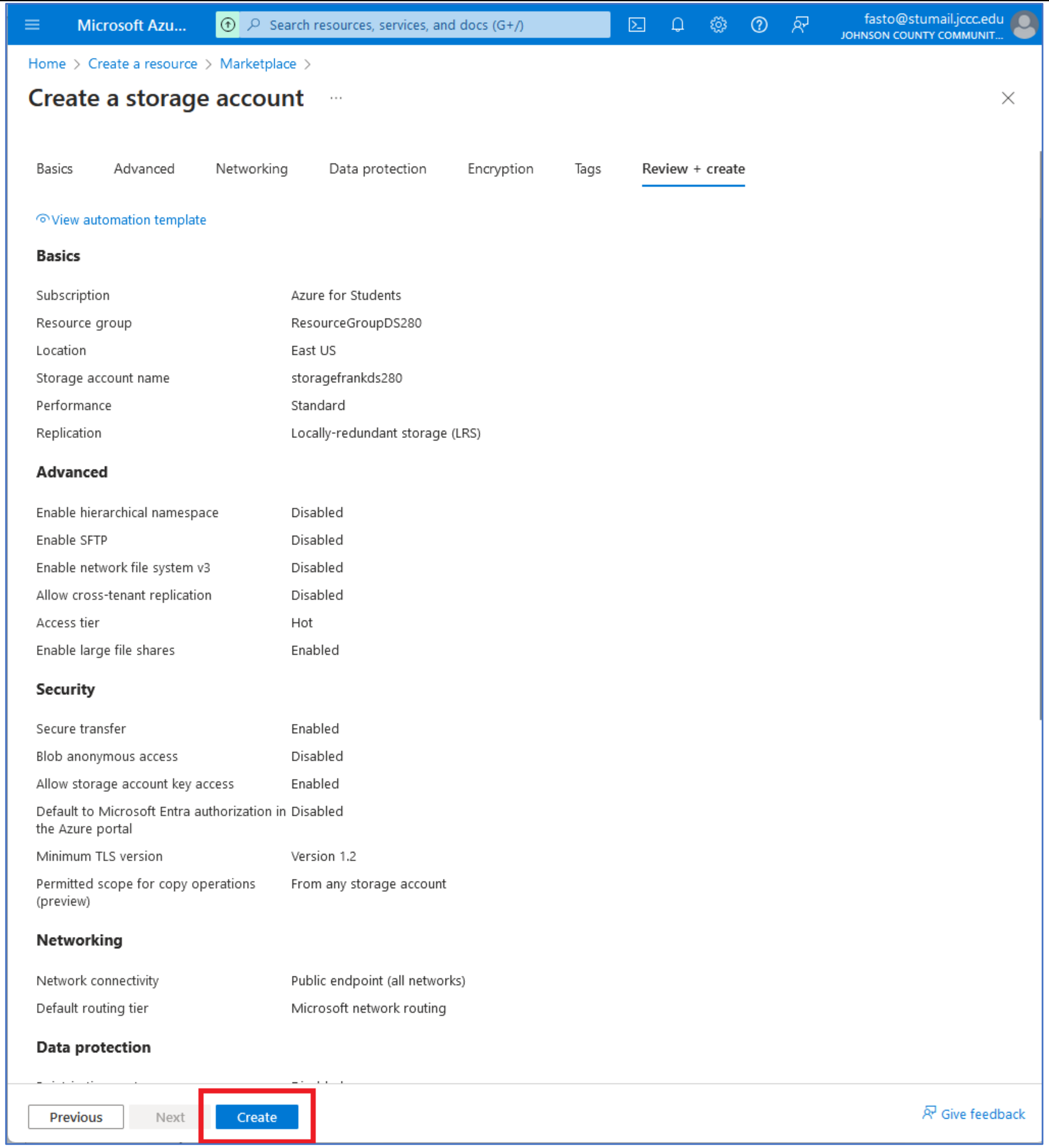
Storage task - Azure Storage Actions
Microsoft
Azure Service
Perform common operations on millions of objects based on logical conditions using object properties for Blobs and Data Lake Storage Gen2.

Azure Storage Mover
Microsoft
Azure Service
Azure Storage Mover is a migration service that migrates your on-premises file shares to Azure Storage

Notes

I click on the Create a resource icon.
Then I search for "storage account."
I choose the first storage account option and click Create.

Step 3 – Create a Storage Account – continue	Notes
 Microsoft Azu... Search resources, services, and docs (G+/) fasto@stumail.jccc.edu JOHNSON COUNTY COMMUNIT... Home > Create a resource > Marketplace > **Create a storage account** ... **Basics** Advanced Networking Data protection Encryption 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 * : Azure for Students Resource group * : ResourceGroupDS280 Create new **Instance details** Storage account name * : storage1 Region * : (US) East US Deploy to an Azure Extended Zone Performance * : ● **Standard:** Recommended for most scenarios (general-purpose v2 account) ○ **Premium:** Recommended for scenarios that require low latency. Redundancy * : Locally-redundant storage (LRS)	I name my storage account. For Redundancy, I choose Locally-redundant storage (LRS). I don't modify anything else. I click Next. I keep the default settings for: - Advanced - Networking - Data protection - Encryption - Tags

Step 3 – Create a Storage Account – continue	Notes
	Then I click the Create button.

Create a storage account

Basics

Subscription	Azure for Students
Resource group	ResourceGroupDS280
Location	East US
Storage account name	storagefrankds280
Performance	Standard
Replication	Locally-redundant storage (LRS)

Advanced

Enable hierarchical namespace	Disabled
Enable SFTP	Disabled
Enable network file system v3	Disabled
Allow cross-tenant replication	Disabled
Access tier	Hot
Enable large file shares	Enabled

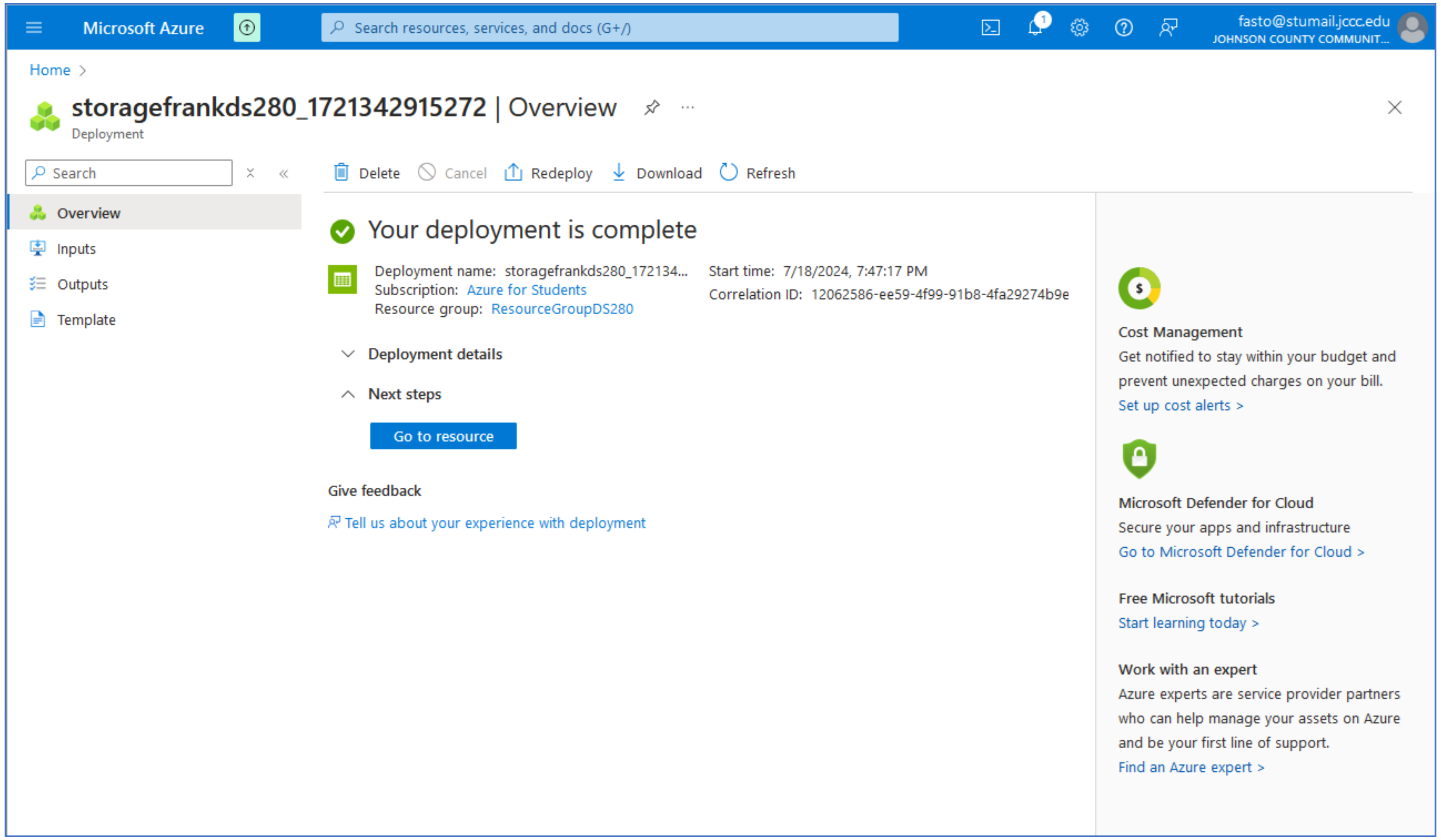
Security

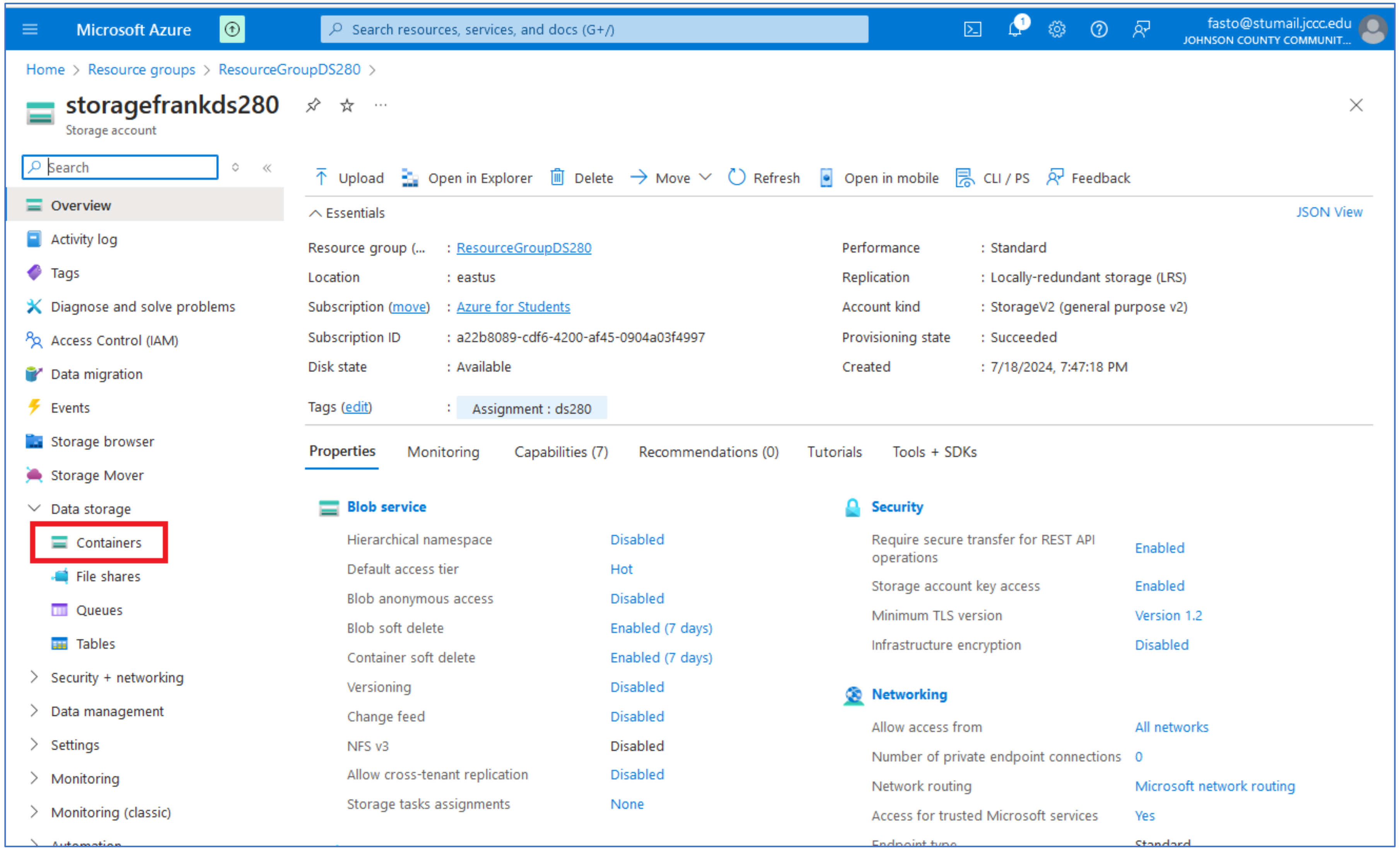
Secure transfer	Enabled
Blob anonymous access	Disabled
Allow storage account key access	Enabled
Default to Microsoft Entra authorization in the Azure portal	Disabled
Minimum TLS version	Version 1.2
Permitted scope for copy operations (preview)	From any storage account

Networking

Network connectivity	Public endpoint (all networks)
Default routing tier	Microsoft network routing

Data protection

Step 3 – Create a Storage Account – continue	Notes
 Microsoft Azure Search resources, services, and docs (G+/) fasto@stumail.jccc.edu JOHNSON COUNTY COMMUNIT... Home > storagefrankds280_1721342915272 | Overview Deployment Search Overview Inputs Outputs Template Delete Cancel Redeploy Download Refresh Your deployment is complete Deployment name: storagefrankds280_172134... Subscription: Azure for Students Resource group: ResourceGroupDS280 Start time: 7/18/2024, 7:47:17 PM Correlation ID: 12062586-ee59-4f99-91b8-4fa29274b9e Deployment details Next steps Go to resource Give feedback Tell us about your experience with deployment Cost Management Get notified to stay within your budget and prevent unexpected charges on your bill. Set up cost alerts > Microsoft Defender for Cloud Secure your apps and infrastructure Go to Microsoft Defender for Cloud > 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 >	I have created a storage account.

Step 4 – Upload the JSON File	Notes
	I go to Resource groups. I click on my resource group. I click on my storage account. On the left side, I click on Containers.

Microsoft Azure

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

fasto@stumail.jccc.edu
JOHNSON COUNTY COMMUNIT...

Home > Resource groups > ResourceGroupDS280 >

storagefrankds280
Storage account

Search

- Overview
- Activity log
- Tags
- Diagnose and solve problems
- Access Control (IAM)
- Data migration
- Events
- Storage browser
- Storage Mover
- Data storage
  - Containers
  - File shares
  - Queues
  - Tables
- Security + networking
- Data management
- Settings
- Monitoring
- Monitoring (classic)
- Automation

Upload | Open in Explorer | Delete | Move | Refresh | Open in mobile | CLI / PS | Feedback

Essentials | JSON View

Resource group (...	: ResourceGroupDS280	Performance	: Standard
Location	: eastus	Replication	: Locally-redundant storage (LRS)
Subscription (move)	: Azure for Students	Account kind	: StorageV2 (general purpose v2)
Subscription ID	: a22b8089-cdf6-4200-af45-0904a03f4997	Provisioning state	: Succeeded
Disk state	: Available	Created	: 7/18/2024, 7:47:18 PM

Tags (edit) : Assignment : ds280

Properties | Monitoring | Capabilities (7) | Recommendations (0) | Tutorials | Tools + SDKs

Blob service

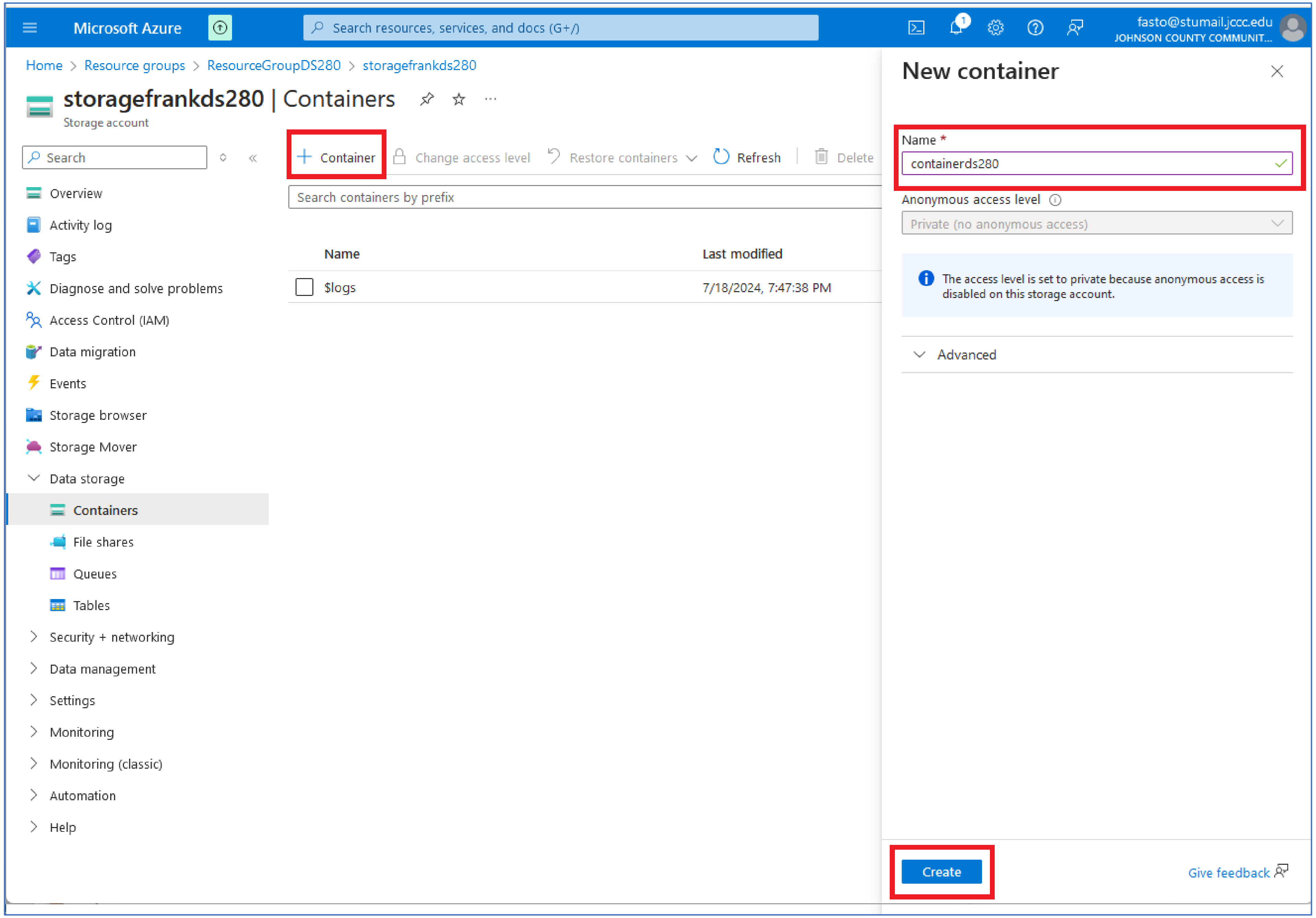
Hierarchical namespace	Disabled
Default access tier	Hot
Blob anonymous access	Disabled
Blob soft delete	Enabled (7 days)
Container soft delete	Enabled (7 days)
Versioning	Disabled
Change feed	Disabled
NFS v3	Disabled
Allow cross-tenant replication	Disabled
Storage tasks assignments	None

Security

Require secure transfer for REST API operations	Enabled
Storage account key access	Enabled
Minimum TLS version	Version 1.2
Infrastructure encryption	Disabled

Networking

Allow access from	All networks
Number of private endpoint connections	0
Network routing	Microsoft network routing
Access for trusted Microsoft services	Yes
Endpoint type	Standard

Step 4 – Upload the JSON File - continue	Notes
	I click on the + Container icon. I give it a name on the right side. Then I click the Create button. Now I have created a container. I click on my container.

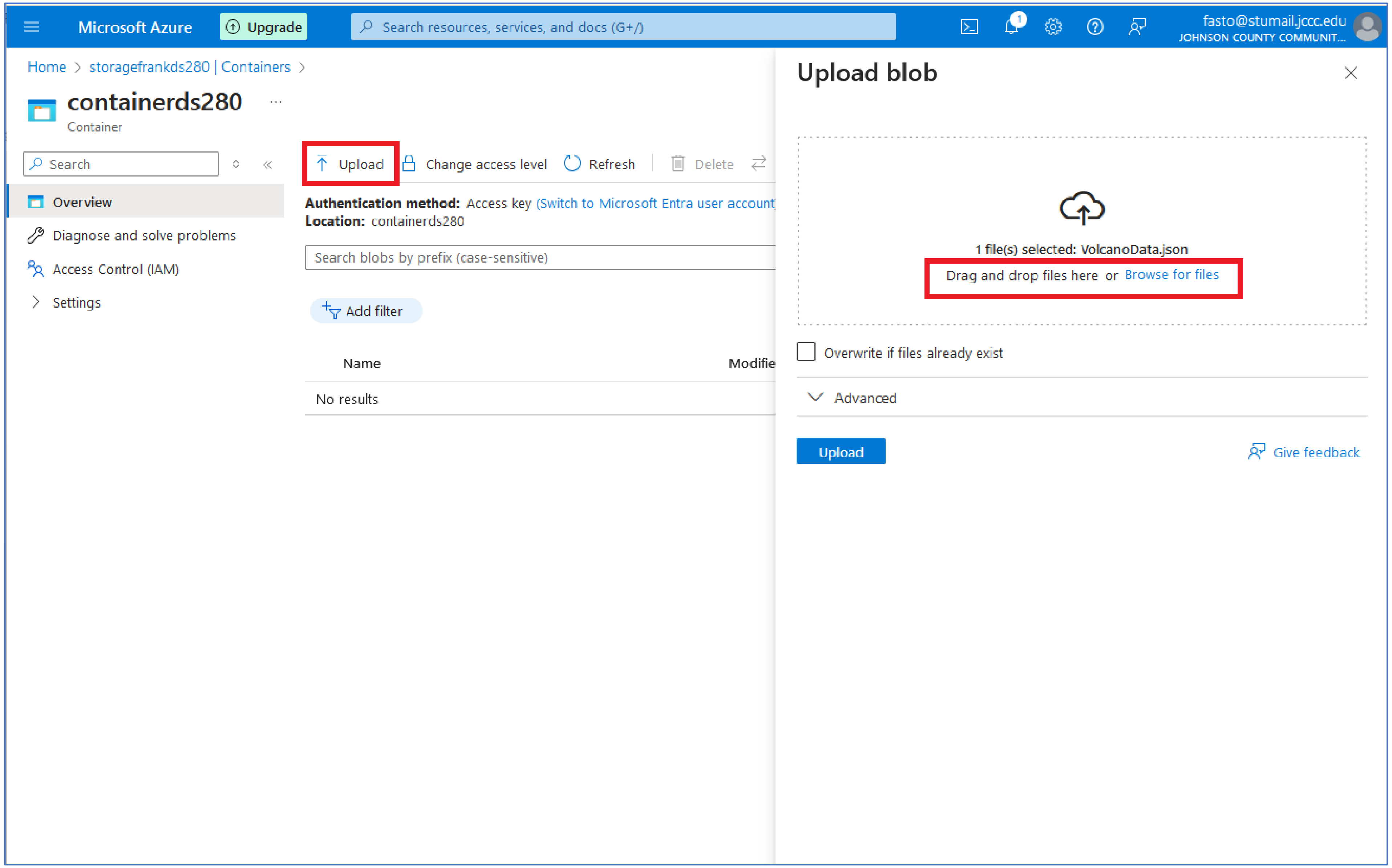
Name	Last modified
□ $logs	7/18/2024, 7:47:38 PM

New container

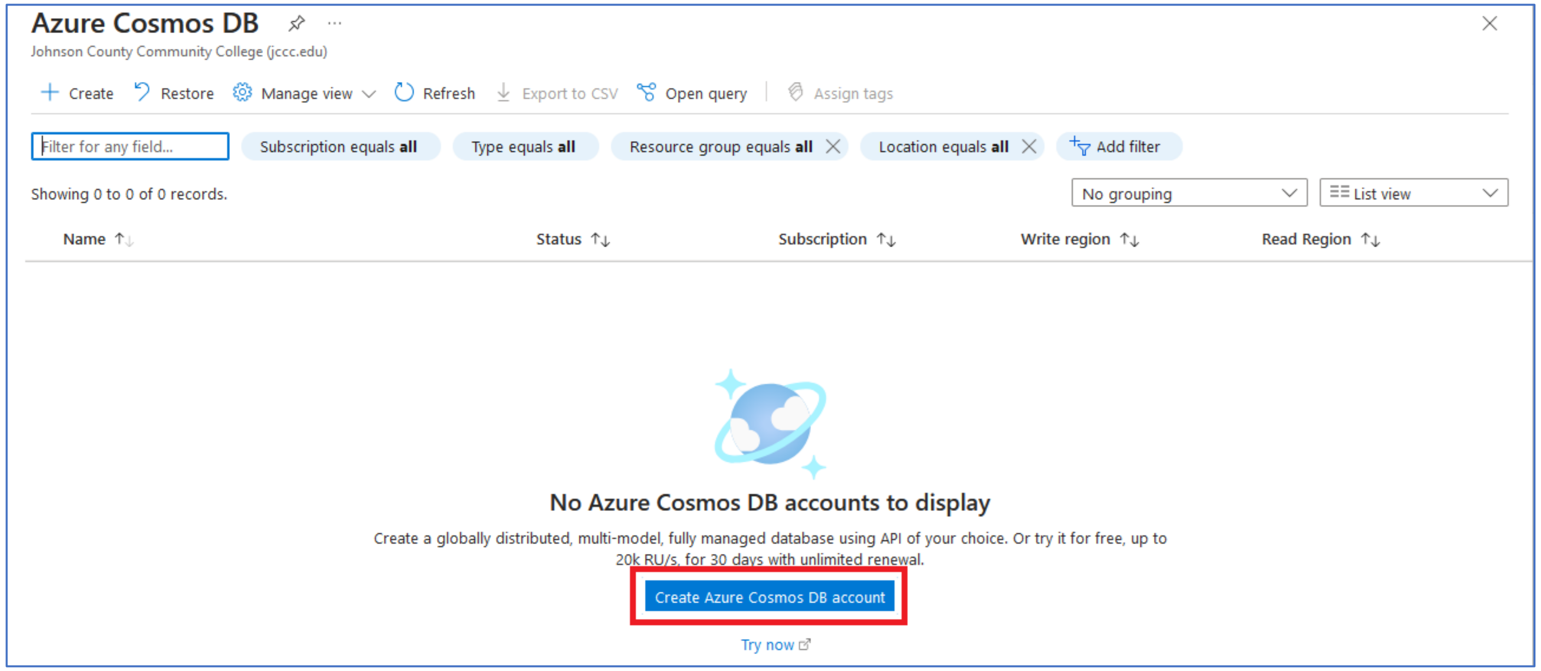
Name * containerds280

Anonymous access level: Private (no anonymous access)

The access level is set to private because anonymous access is disabled on this storage account.

Step 4 – Upload the JSON File - continue	Notes
 containerds280 Authentication method: Access key (Switch to Microsoft Entra user account Location: containerds280 Upload blob 1 file(s) selected: VolcanoData.json Drag and drop files here or Browse for files □ Overwrite if files already exist Microsoft Azure Upgrade Search resources, services, and docs (G+/) fasto@stumail.jccc.edu JOHNSON COUNTY COMMUNIT... Home > storagefrankds280 | Containers > Container Search Overview Diagnose and solve problems Access Control (IAM) Settings Upload Change access level Refresh Delete Search blobs by prefix (case-sensitive) Add filter Name Modifie No results Advanced Upload Give feedback	I click the upload icon at the top. On the right side, I click “Browse for files.” Then I click the upload button. I have just uploaded the JSON file into my container, which is in my storage account, which is in my resource group.

Step 5 – Create a Cosmos DB



Azure Cosmos DB

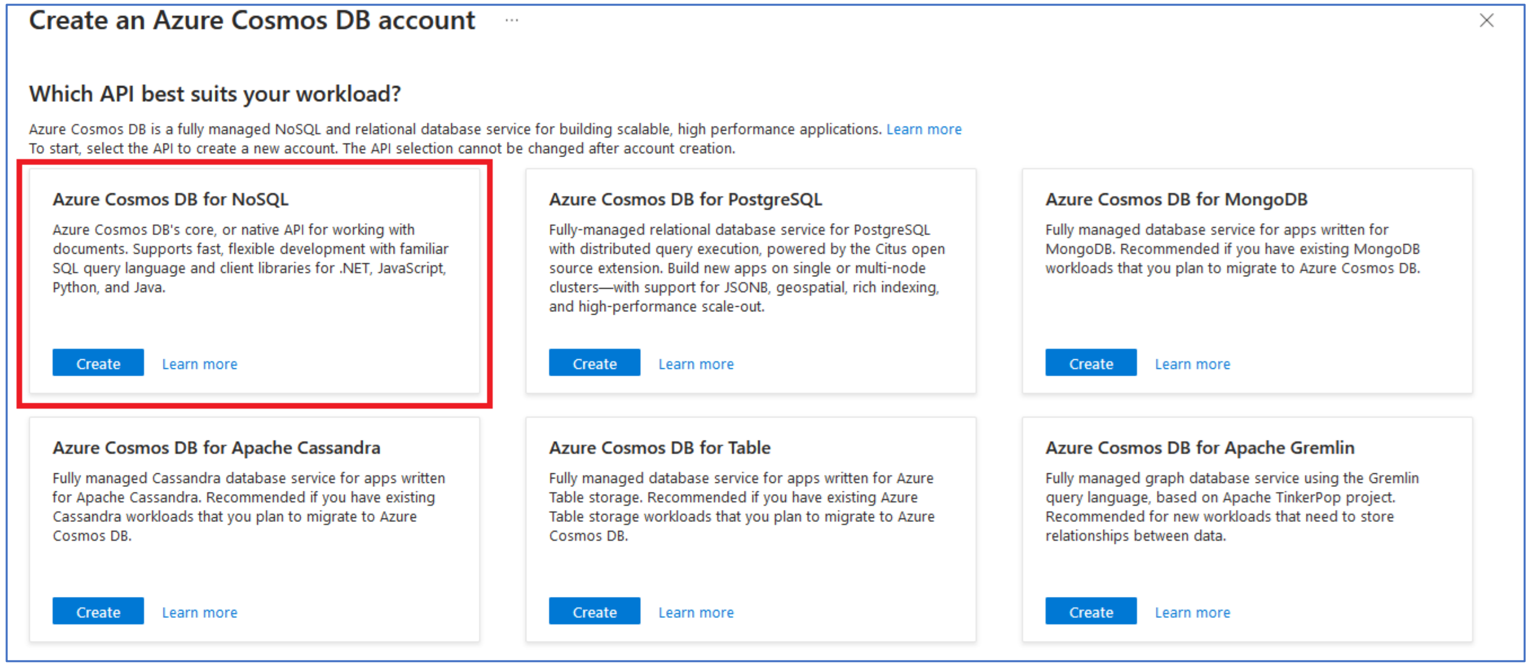
Johnson County Community College (jccc.edu)

Showing 0 to 0 of 0 records.

Name	Status	Subscription	Write region	Read Region

No Azure Cosmos DB accounts to display

Create a globally distributed, multi-model, fully managed database using API of your choice. Or try it for free, up to 20k RU/s, for 30 days with unlimited renewal.



Create an Azure Cosmos DB account

Which API best suits your workload?

Azure Cosmos DB is a fully managed NoSQL and relational database service for building scalable, high performance applications. Learn more
To start, select the API to create a new account. The API selection cannot be changed after account creation.

Azure Cosmos DB for NoSQL
Azure Cosmos DB's core, or native API for working with documents. Supports fast, flexible development with familiar SQL query language and client libraries for .NET, JavaScript, Python, and Java.

Azure Cosmos DB for PostgreSQL
Fully-managed relational database service for PostgreSQL with distributed query execution, powered by the Citus open source extension. Build new apps on single or multi-node clusters—with support for JSONB, geospatial, rich indexing, and high-performance scale-out.

Azure Cosmos DB for MongoDB
Fully managed database service for apps written for MongoDB. Recommended if you have existing MongoDB workloads that you plan to migrate to Azure Cosmos DB.

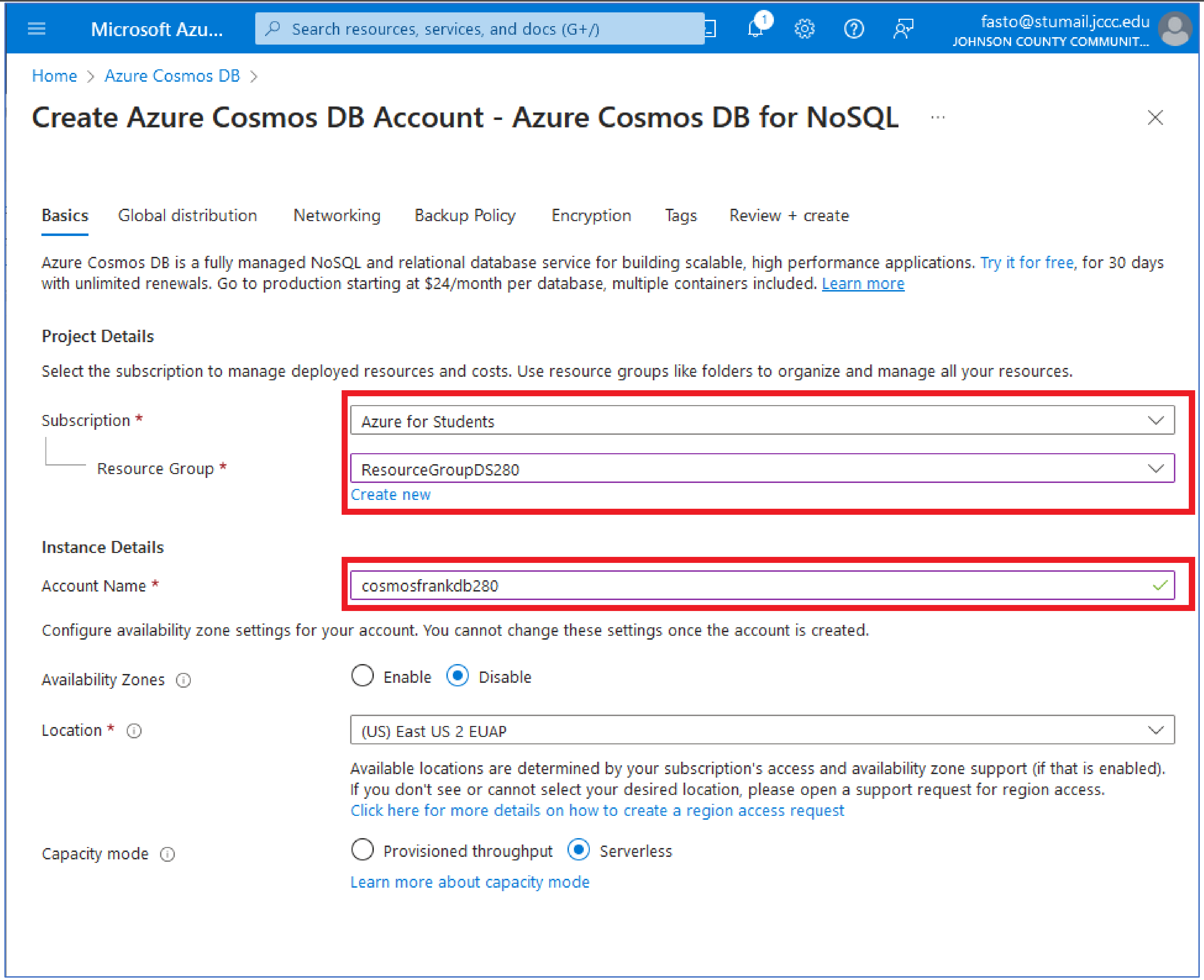
Azure Cosmos DB for Apache Cassandra
Fully managed Cassandra database service for apps written for Apache Cassandra. Recommended if you have existing Cassandra workloads that you plan to migrate to Azure Cosmos DB.

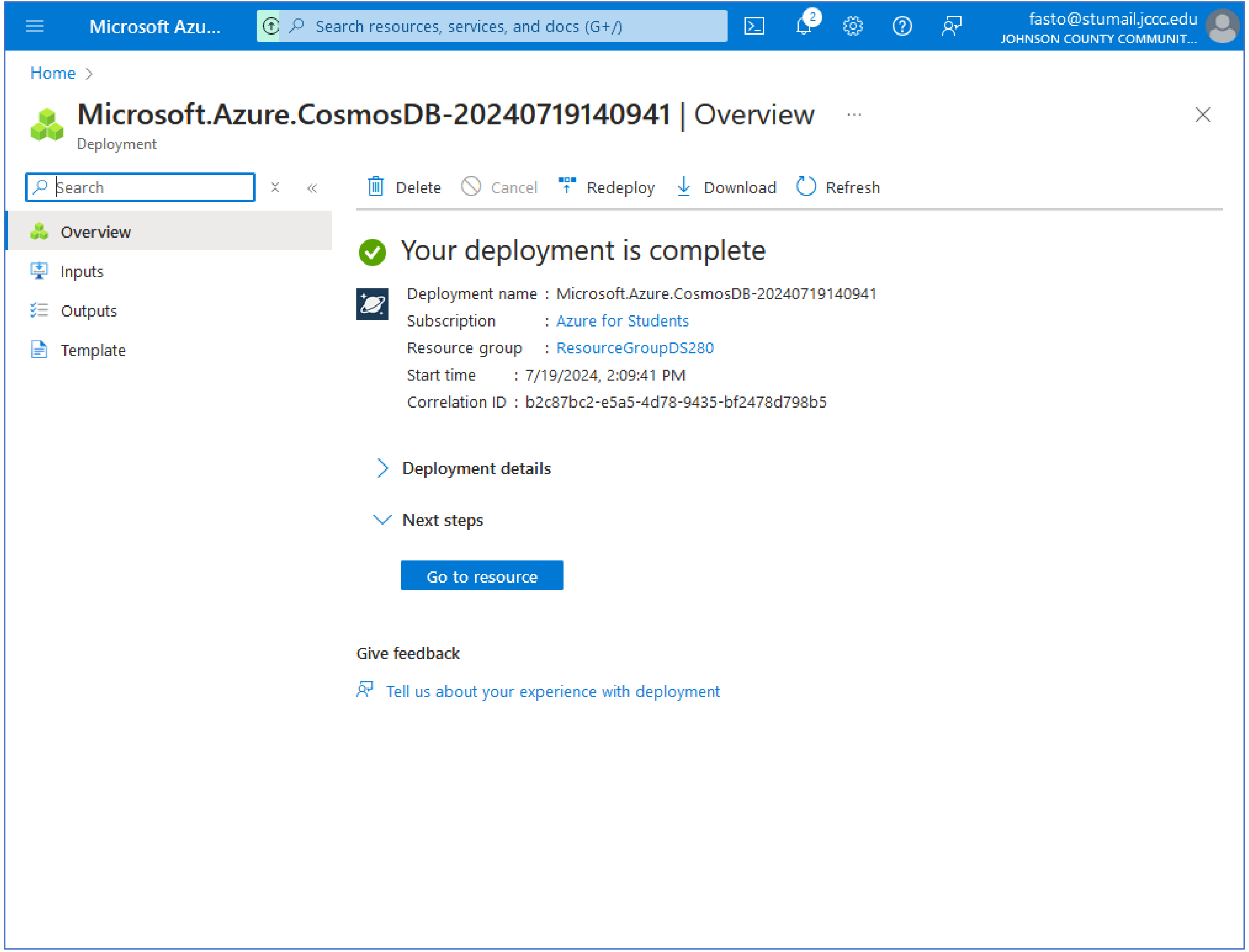
Azure Cosmos DB for Table
Fully managed database service for apps written for Azure Table storage. Recommended if you have existing Azure Table storage workloads that you plan to migrate to Azure Cosmos DB.

Azure Cosmos DB for Apache Gremlin
Fully managed graph database service using the Gremlin query language, based on Apache TinkerPop project. Recommended for new workloads that need to store relationships between data.

Notes

I click on the "+ Create a resource" icon at the top left.
Then I search for "Cosmos DB."
I click the Create Azure Cosmos DB account button.
Next, I choose Azure Cosmos DB for No SQL and click Create.

Step 5 – Create a Cosmos DB - continue	Notes
 Microsoft Azu... Search resources, services, and docs (G+/) fasto@stumail.jccc.edu JOHNSON COUNTY COMMUNIT... Home > Azure Cosmos DB > Create Azure Cosmos DB Account - Azure Cosmos DB for NoSQL ... Basics Global distribution Networking Backup Policy Encryption Tags Review + create Azure Cosmos DB is a fully managed NoSQL and relational database service for building scalable, high performance applications. Try it for free, for 30 days with unlimited renewals. Go to production starting at $24/month per database, multiple containers included. 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 * Azure for Students Resource Group * ResourceGroupDS280 Create new **Instance Details** Account Name * cosmosfrankdb280 ✓ Configure availability zone settings for your account. You cannot change these settings once the account is created. Availability Zones ⓘ ○ Enable ● Disable Location * ⓘ (US) East US 2 EUAP Available locations are determined by your subscription's access and availability zone support (if that is enabled). If you don't see or cannot select your desired location, please open a support request for region access. Click here for more details on how to create a region access request Capacity mode ⓘ ○ Provisioned throughput ● Serverless Learn more about capacity mode	I choose my subscription. I choose my resource group. I enter a name in Account Name. I select the default location. I choose Serverless for Capacity mode. I keep the default settings for: - Global distribution - Networking - Backup Policy - Encryption - Tags Then I click the Create button.

Step 5 – Create a Cosmos DB - continue	Notes
	I created a Cosmos DB account.

Microsoft.Azure.CosmosDB-20240719140941 | Overview

Deployment

Your deployment is complete

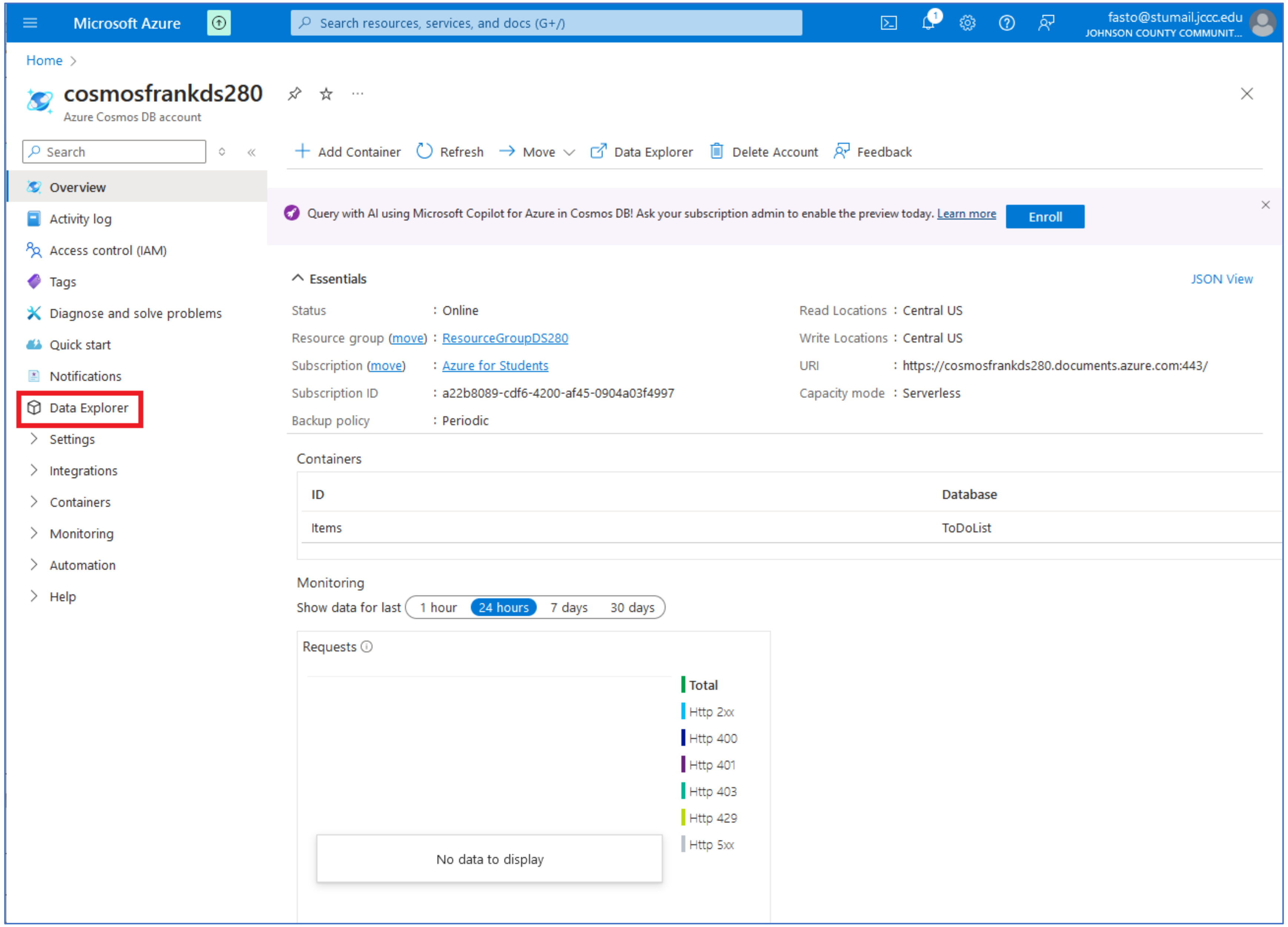
Deployment name : Microsoft.Azure.CosmosDB-20240719140941
Subscription : Azure for Students
Resource group : ResourceGroupDS280
Start time : 7/19/2024, 2:09:41 PM
Correlation ID : b2c87bc2-e5a5-4d78-9435-bf2478d798b5

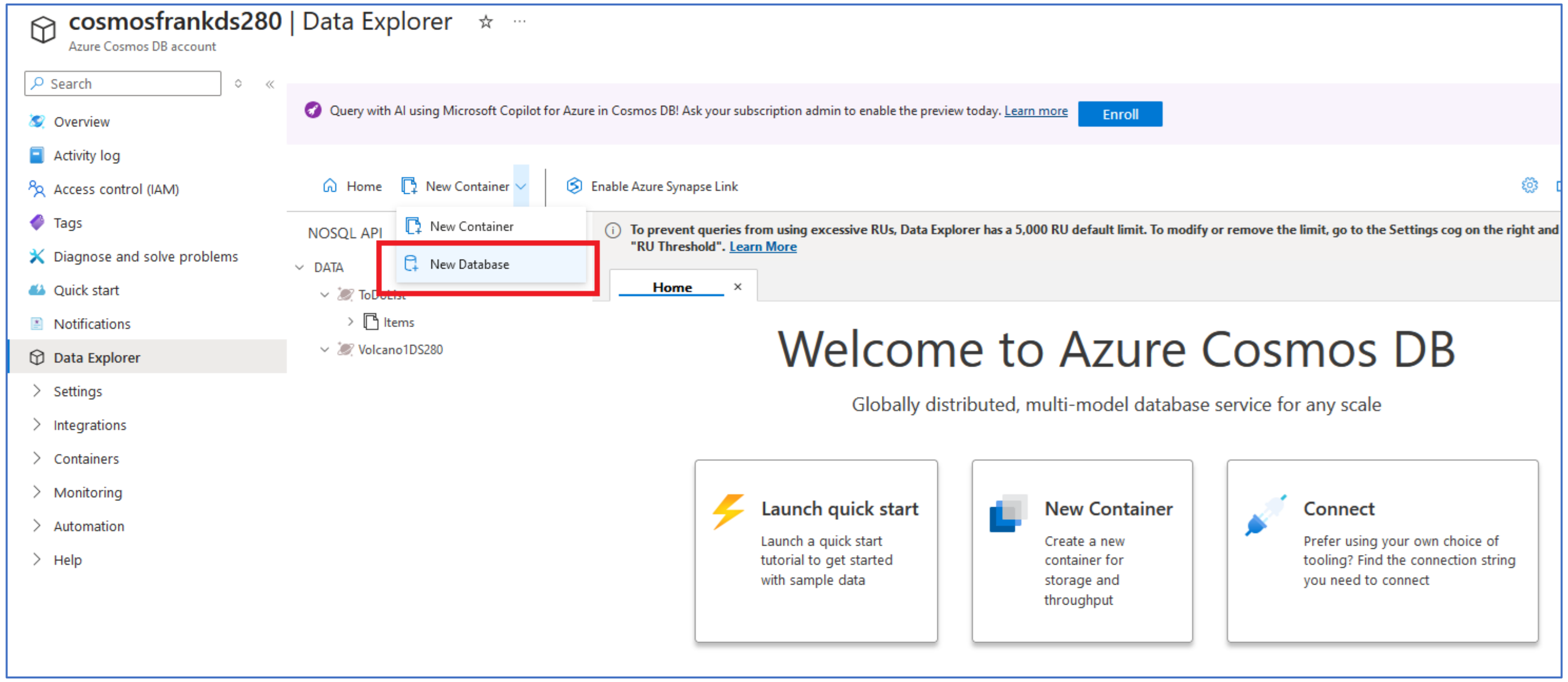
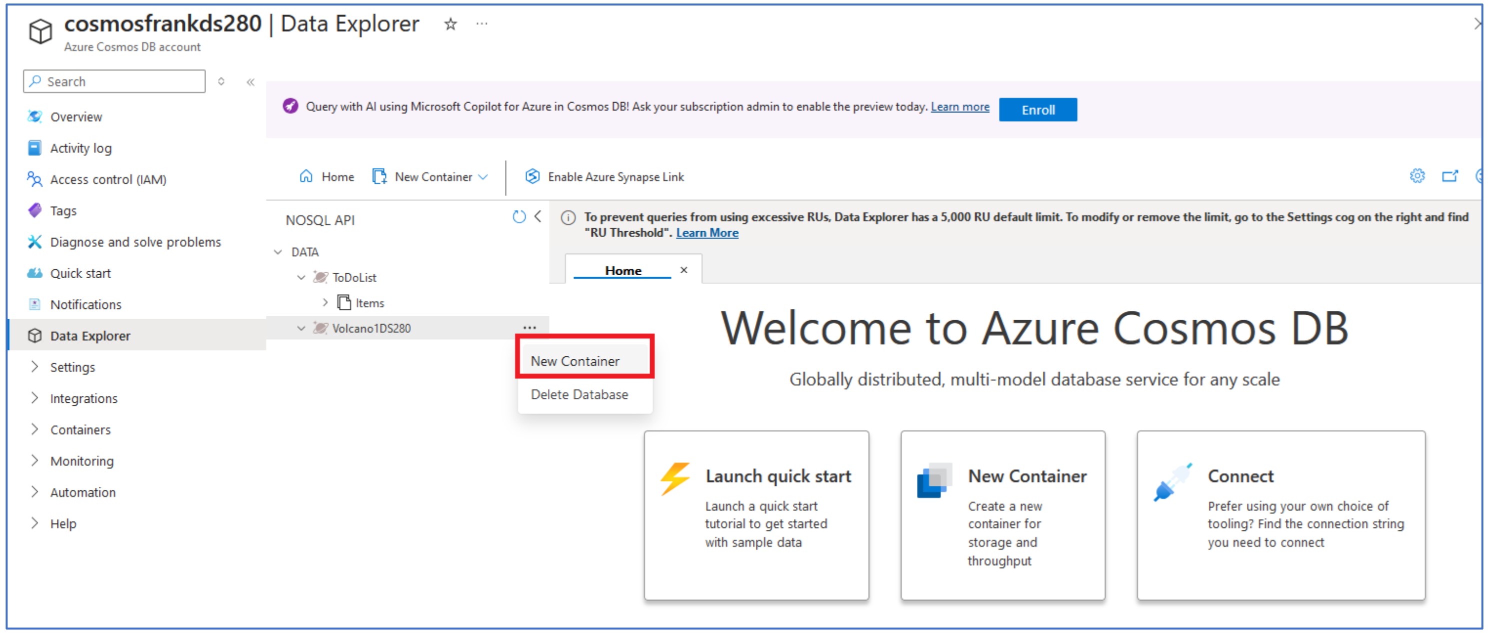
Deployment details

Next steps

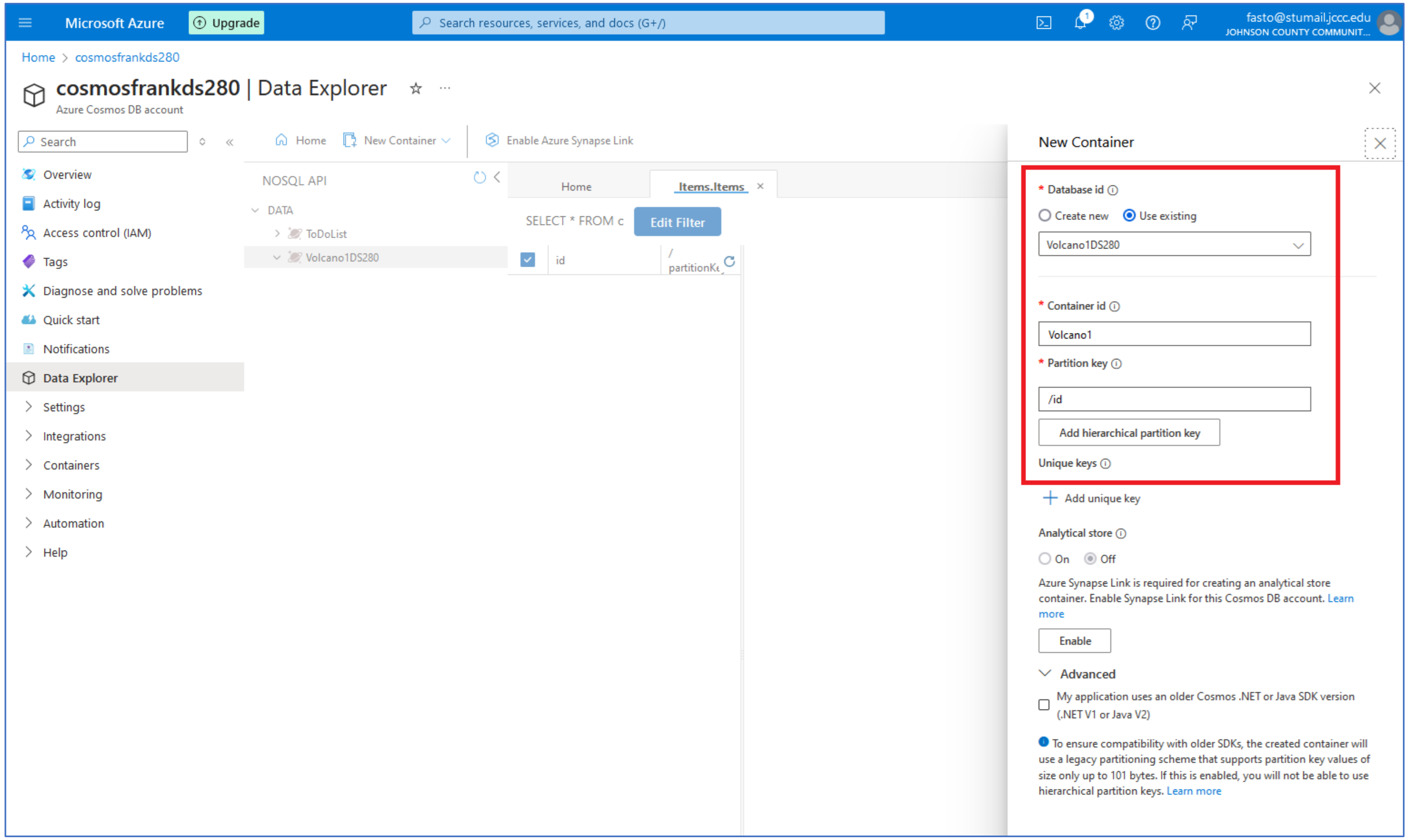
Give feedback

Tell us about your experience with deployment

Step 5 – Create a Cosmos DB - continue	Notes
 Microsoft Azure Search resources, services, and docs (G+/) fasto@stumail.jccc.edu JOHNSON COUNTY COMMUNIT... Home > Search + Add Container Refresh Move Data Explorer Delete Account Feedback Overview Activity log Access control (IAM) Tags Diagnose and solve problems Quick start Notifications Data Explorer Settings Integrations Containers Monitoring Automation Help Enroll JSON View Show data for last 1 hour 24 hours 7 days 30 days Requests Total Http 2xx Http 400 Http 401 Http 403 Http 429 Http 5xx **cosmosfrankds280** Azure Cosmos DB account Query with AI using Microsoft Copilot for Azure in Cosmos DB! Ask your subscription admin to enable the preview today. Learn more Essentials Status : Online Resource group (move) : ResourceGroupDS280 Subscription (move) : Azure for Students Subscription ID : a22b8089-cdf6-4200-af45-0904a03f4997 Backup policy : Periodic Read Locations : Central US Write Locations : Central US URI : https://cosmosfrankds280.documents.azure.com:443/ Capacity mode : Serverless Containers ID Database Items ToDoList Monitoring No data to display	Then, I go back to my Cosmos DB account. I click on “Data Explorer” on the left.

Step 5 – Create a Cosmos DB - continue	Notes
 cosmosfrankds280 | Data Explorer Azure Cosmos DB account Search Overview Activity log Access control (IAM) Tags Diagnose and solve problems Quick start Notifications Data Explorer Settings Integrations Containers Monitoring Automation Help Enroll Home New Container Enable Azure Synapse Link New Container New Database NOSQL API DATA ToDoList Items Volcano1DS280 Home Launch quick start New Container Connect Query with AI using Microsoft Copilot for Azure in Cosmos DB! Ask your subscription admin to enable the preview today. Learn more To prevent queries from using excessive RUs, Data Explorer has a 5,000 RU default limit. To modify or remove the limit, go to the Settings cog on the right and "RU Threshold". Learn More Welcome to Azure Cosmos DB Globally distributed, multi-model database service for any scale Launch a quick start tutorial to get started with sample data Create a new container for storage and throughput Prefer using your own choice of tooling? Find the connection string you need to connect  cosmosfrankds280 | Data Explorer Azure Cosmos DB account Search Overview Activity log Access control (IAM) Tags Diagnose and solve problems Quick start Notifications Data Explorer Settings Integrations Containers Monitoring Automation Help Enroll Home New Container Enable Azure Synapse Link NOSQL API DATA ToDoList Items Volcano1DS280 New Container Delete Database Home Launch quick start New Container Connect Query with AI using Microsoft Copilot for Azure in Cosmos DB! Ask your subscription admin to enable the preview today. Learn more To prevent queries from using excessive RUs, Data Explorer has a 5,000 RU default limit. To modify or remove the limit, go to the Settings cog on the right and find "RU Threshold". Learn More Welcome to Azure Cosmos DB Globally distributed, multi-model database service for any scale Launch a quick start tutorial to get started with sample data Create a new container for storage and throughput Prefer using your own choice of tooling? Find the connection string you need to connect	I click on “New Container” and select “New Database.” I name my new database. Then I click on my new database and choose “New Container.”

Step 5 – Create a Cosmos DB - continue



New Container

* Database id ⓘ

○ Create new ● Use existing

Volcano1DS280

* Container id ⓘ

Volcano1

* Partition key ⓘ

/id

Add hierarchical partition key

Unique keys ⓘ

+ Add unique key

Analytical store ⓘ

○ On ● Off

Azure Synapse Link is required for creating an analytical store container. Enable Synapse Link for this Cosmos DB account. Learn more

Enable

Advanced

□ My application uses an older Cosmos .NET or Java SDK version (.NET V1 or Java V2)

To ensure compatibility with older SDKs, the created container will use a legacy partitioning scheme that supports partition key values of size only up to 101 bytes. If this is enabled, you will not be able to use hierarchical partition keys. Learn more

Notes

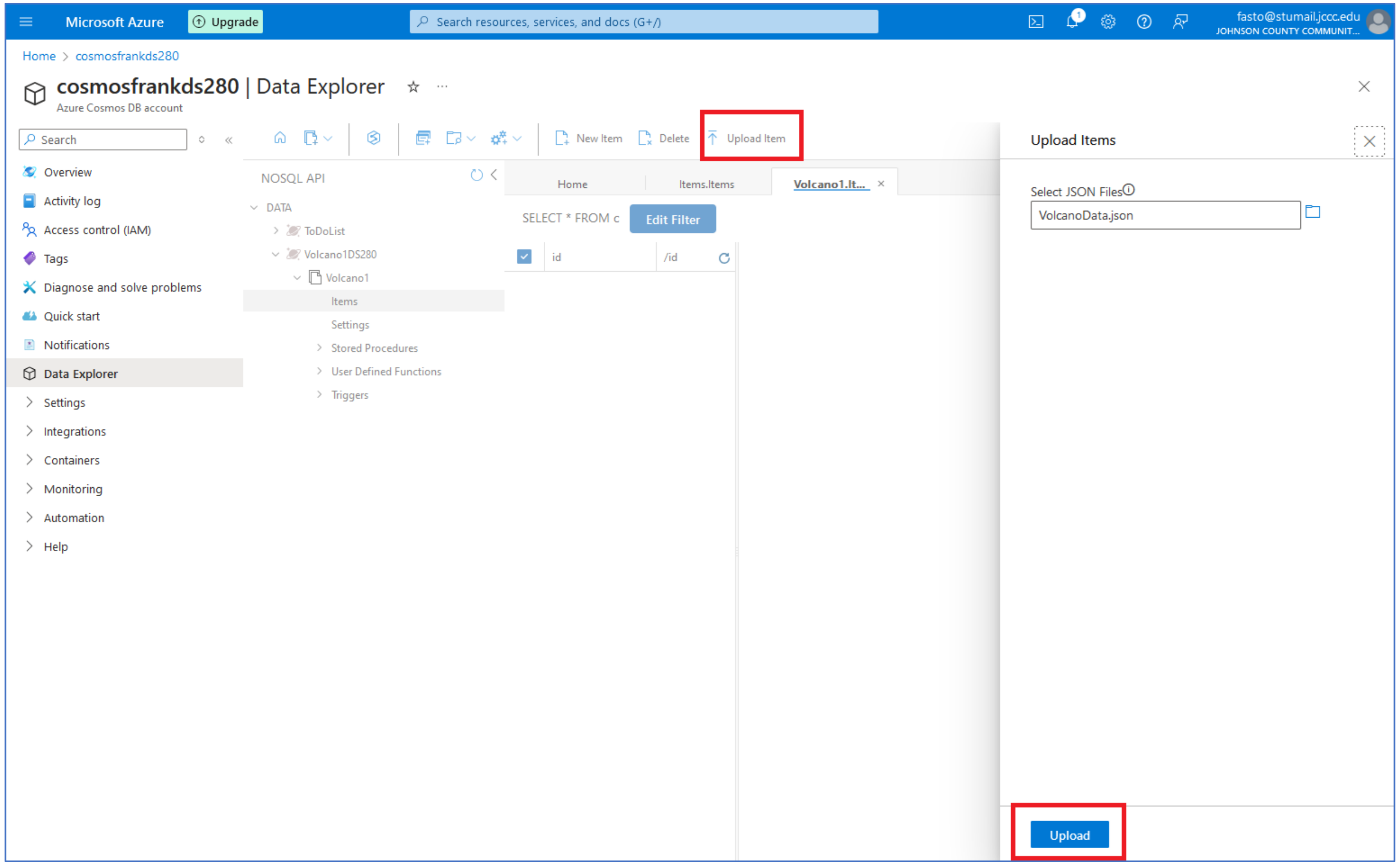
Then I use my existing database name.

I name my container.

I choose “/id” as the partition key and keep the default settings.

Then I click OK.

Step 5 – Create a Cosmos DB - continue

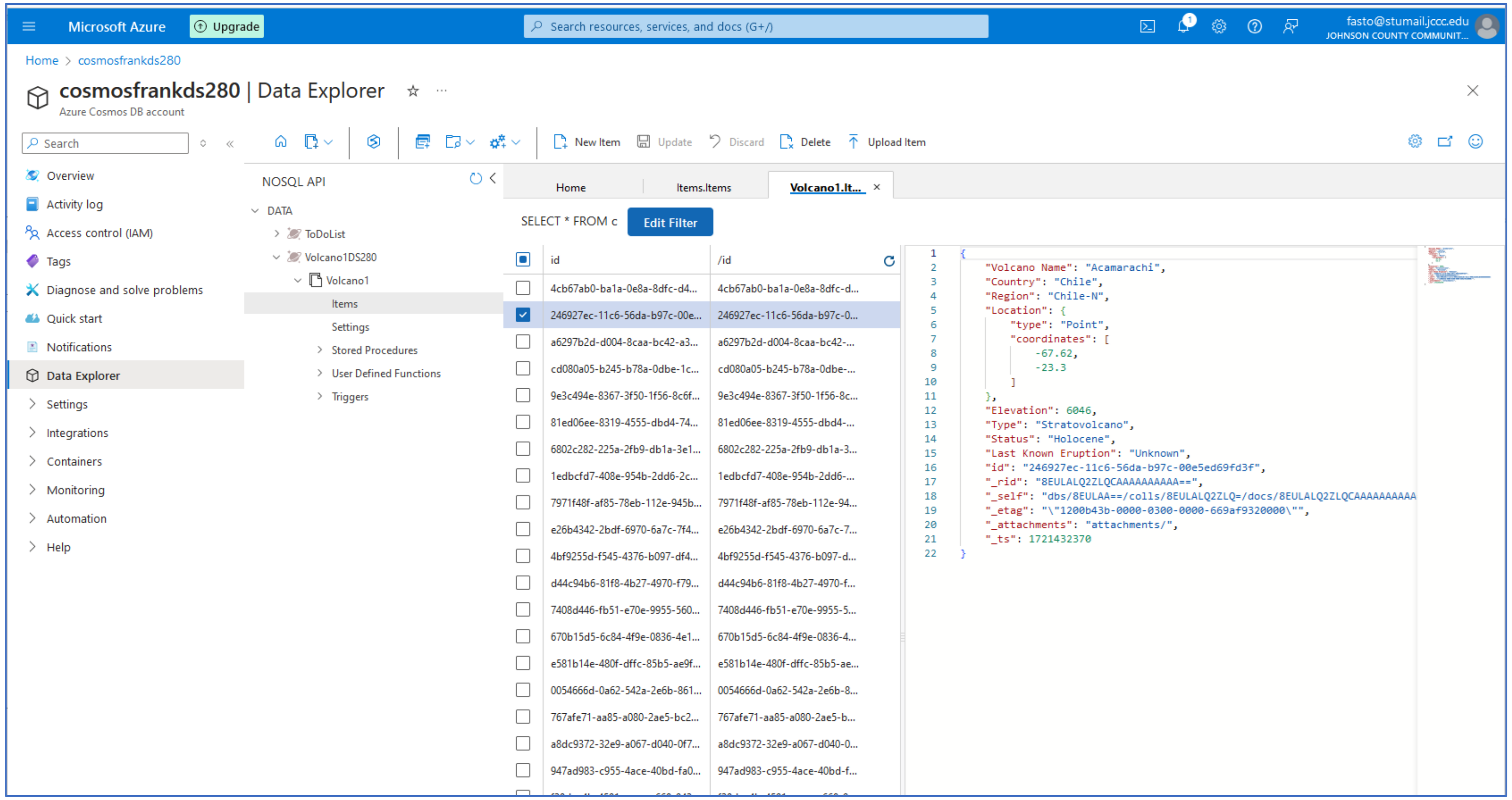


Select JSON Files: VolcanoData.json

Notes

I choose my database name on the left.
I open my container.
I click on “Items.”
Then I click on “Upload item” at the top.
I find my file and upload it.

Step 5 – Create a Cosmos DB - continue



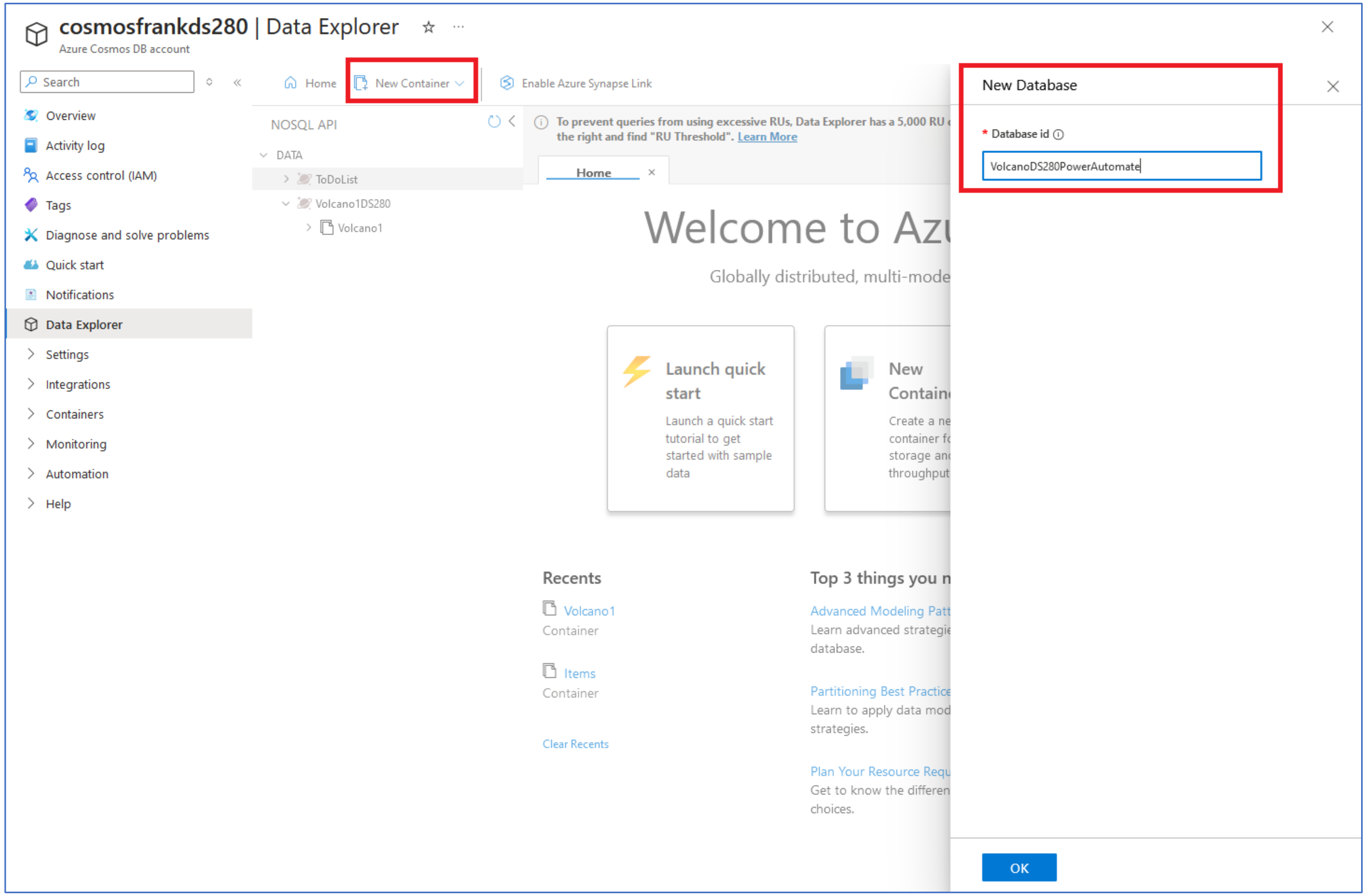
SELECT * FROM c

☑	id	/id
□	4cb67ab0-ba1a-0e8a-8dfc-d4...	4cb67ab0-ba1a-0e8a-8dfc-d...
☑	246927ec-11c6-56da-b97c-00e...	246927ec-11c6-56da-b97c-0...
□	a6297b2d-d004-8caa-bc42-a3...	a6297b2d-d004-8caa-bc42-...
□	cd080a05-b245-b78a-0dbe-1c...	cd080a05-b245-b78a-0dbe-...
□	9e3c494e-8367-3f50-1f56-8c6f...	9e3c494e-8367-3f50-1f56-8c...
□	81ed06ee-8319-4555-dbd4-74...	81ed06ee-8319-4555-dbd4-...
□	6802c282-225a-2fb9-db1a-3e1...	6802c282-225a-2fb9-db1a-3...
□	1edbcfd7-408e-954b-2dd6-2c...	1edbcfd7-408e-954b-2dd6-...
□	7971f48f-af85-78eb-112e-945b...	7971f48f-af85-78eb-112e-94...
□	e26b4342-2bdf-6970-6a7c-7f4...	e26b4342-2bdf-6970-6a7c-7...
□	4bf9255d-f545-4376-b097-df4...	4bf9255d-f545-4376-b097-d...
□	d44c94b6-81f8-4b27-4970-f79...	d44c94b6-81f8-4b27-4970-f...
□	7408d446-fb51-e70e-9955-560...	7408d446-fb51-e70e-9955-5...
□	670b15d5-6c84-4f9e-0836-4e1...	670b15d5-6c84-4f9e-0836-4...
□	e581b14e-480f-dffc-85b5-ae9f...	e581b14e-480f-dffc-85b5-ae...
□	0054666d-0a62-542a-2e6b-861...	0054666d-0a62-542a-2e6b-8...
□	767afe71-aa85-a080-2ae5-bc2...	767afe71-aa85-a080-2ae5-b...
□	a8dc9372-32e9-a067-d040-0f7...	a8dc9372-32e9-a067-d040-0...
□	947ad983-c955-4ace-40bd-fa0...	947ad983-c955-4ace-40bd-f...

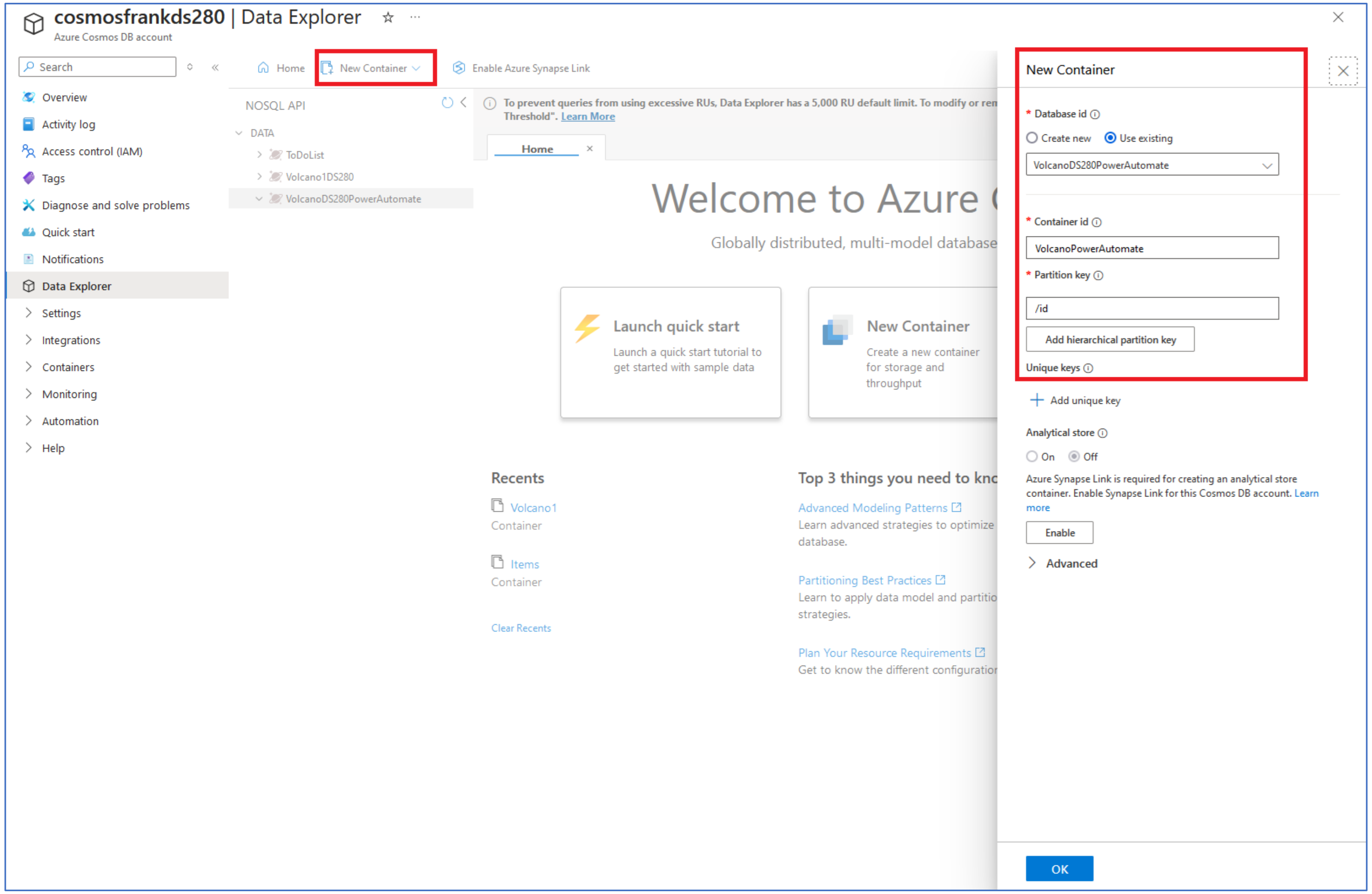
```
{
    "Volcano Name": "Acamarachi",
    "Country": "Chile",
    "Region": "Chile-N",
    "Location": {
        "type": "Point",
        "coordinates": [
            -67.62,
            -23.3
        ]
    },
    "Elevation": 6046,
    "Type": "Stratovolcano",
    "Status": "Holocene",
    "Last Known Eruption": "Unknown",
    "id": "246927ec-11c6-56da-b97c-00e5ed69fd3f",
    "_rid": "8EULALQ2ZLQCAAAAAAAAAA==",
    "_self": "dbs/8EULAA==/colls/8EULALQ2ZLQ=/docs/8EULALQ2ZLQCAAAAAAAAAA
    "_etag": "\"1200b43b-0000-0300-0000-669af9320000\"",
    "_attachments": "attachments/",
    "_ts": 1721432370
}
```

Notes

I click the refresh icon under “Edit Filter.”
Then I see my data displayed in an organized way.

Step 5 – Create a Cosmos DB - continue	Notes
 New Database * Database id ⓘ VolcanoDS280PowerAutomate OK	First I click on “New Database” I give it a name to my new database.

cosmosfrankds280 | Data Explorer
Azure Cosmos DB account
Search
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Quick start
Notifications
Data Explorer
Settings
Integrations
Containers
Monitoring
Automation
Help
Home
New Container
Enable Azure Synapse Link
NOSQL API
DATA
ToDoList
Volcano1DS280
Volcano1
To prevent queries from using excessive RUs, Data Explorer has a 5,000 RU
the right and find "RU Threshold". Learn More
Home
Welcome to Azu
Globally distributed, multi-mode
Launch quick start
Launch a quick start tutorial to get started with sample data
New Contain
Create a ne container fo storage and throughput
Recents
Volcano1
Container
Items
Container
Clear Recents
Top 3 things you n
Advanced Modeling Patt
Learn advanced strategie database.
Partitioning Best Practice
Learn to apply data mod strategies.
Plan Your Resource Requ
Get to know the differen choices.

Step 5 – Create a Cosmos DB - continue	Notes
	Now I create a “New Container.” I choose my database. I give a name in “Container id.” I set the Partition key to “/id.” I keep the default settings for the rest. Then I click OK.

cosmosfrankds280 | Data Explorer
Azure Cosmos DB account
Search
Home
New Container
Enable Azure Synapse Link
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Quick start
Notifications
Data Explorer
Settings
Integrations
Containers
Monitoring
Automation
Help
NOSQL API
DATA
ToDoList
Volcano1DS280
VolcanoDS280PowerAutomate
Home
Welcome to Azure C
Globally distributed, multi-model database
Launch quick start
Launch a quick start tutorial to get started with sample data
New Container
Create a new container for storage and throughput
Recents
Volcano1
Container
Items
Container
Clear Recents
Top 3 things you need to kno
Advanced Modeling Patterns
Learn advanced strategies to optimize database.
Partitioning Best Practices
Learn to apply data model and partitio strategies.
Plan Your Resource Requirements
Get to know the different configuratio
Add hierarchical partition key
Add unique key
Enable
Advanced
OK

To prevent queries from using excessive RUs, Data Explorer has a 5,000 RU default limit. To modify or rem Threshold". Learn More

New Container

* Database id ⓘ

○ Create new ● Use existing

VolcanoDS280PowerAutomate

* Container id ⓘ

VolcanoPowerAutomate

* Partition key ⓘ

/id

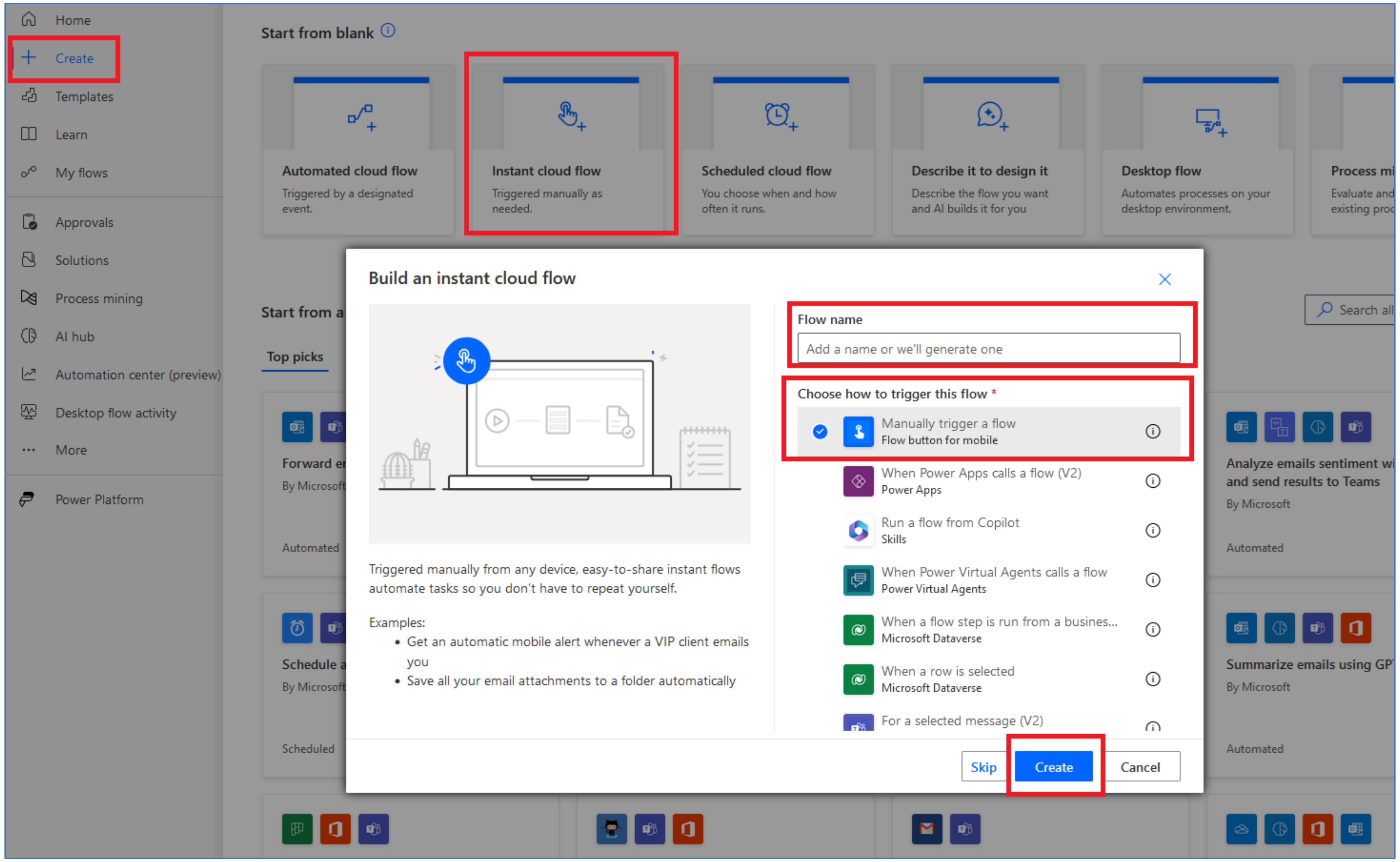
Unique keys ⓘ

Analytical store ⓘ

○ On ● Off

Azure Synapse Link is required for creating an analytical store container. Enable Synapse Link for this Cosmos DB account. Learn more

Step 6 – Create a Power Automate Flow



Build an instant cloud flow

Triggered manually from any device, easy-to-share instant flows automate tasks so you don't have to repeat yourself.

Examples:

- Get an automatic mobile alert whenever a VIP client emails you
- Save all your email attachments to a folder automatically

Flow name

Add a name or we'll generate one

Choose how to trigger this flow *

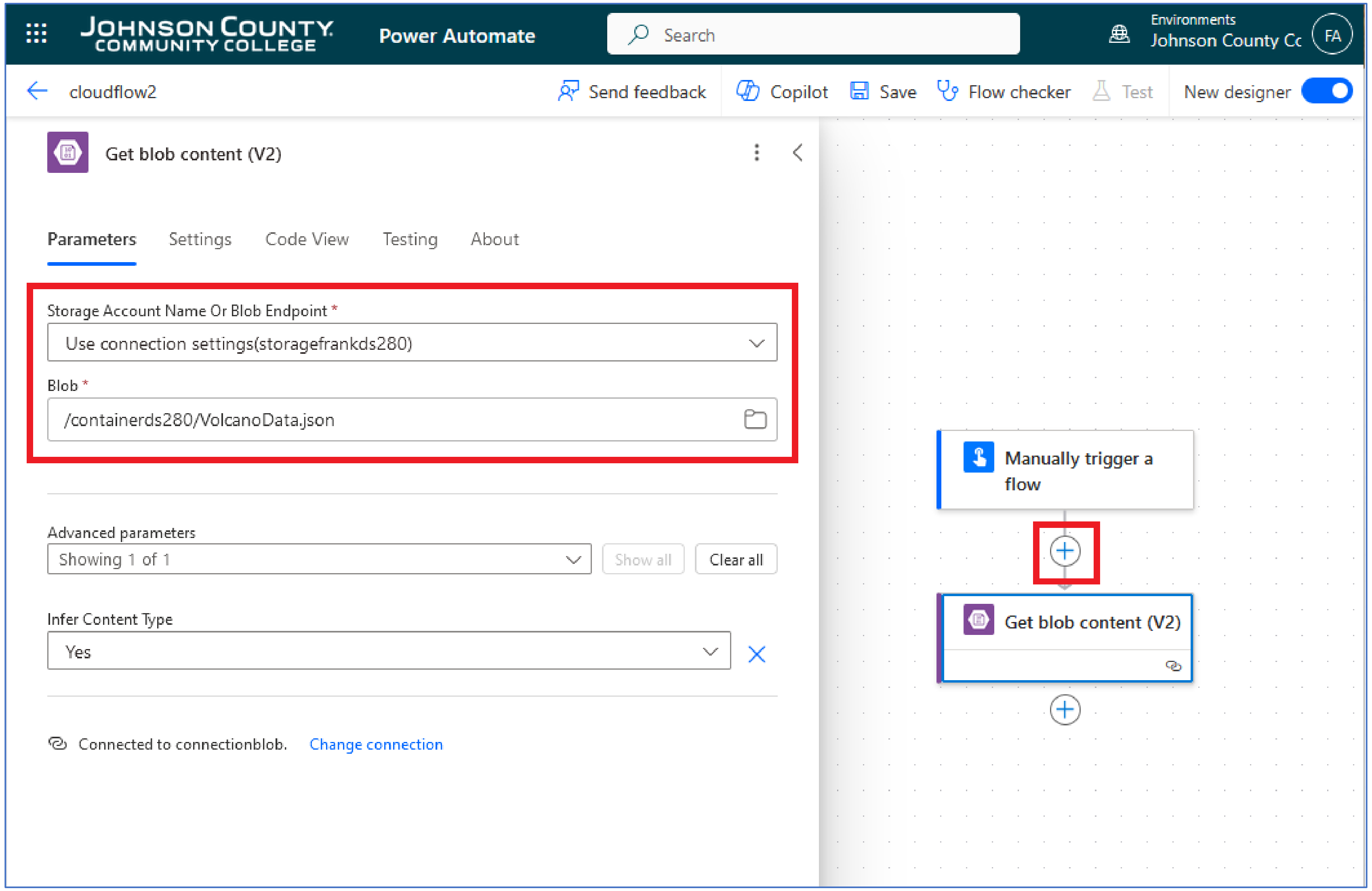
● Manually trigger a flow — Flow button for mobile

When Power Apps calls a flow (V2)
Power Apps
Run a flow from Copilot
Skills
When Power Virtual Agents calls a flow
Power Virtual Agents
When a flow step is run from a busines...
Microsoft Dataverse
When a row is selected
Microsoft Dataverse
For a selected message (V2)
Skip
Create
Cancel

Notes

First, I go to the Microsoft Power Automate website.
I sign in with my student account.
I click "+ Create" on the left.
I select "Instant cloud flow."
I click "Manually trigger a flow."
I enter a name in the flow name field.
Then I click the Create button.

Step 6 – Create a Power Automate Flow - continue



Storage Account Name Or Blob Endpoint *
Use connection settings(storagefrankds280)

Blob *
/containerds280/VolcanoData.json

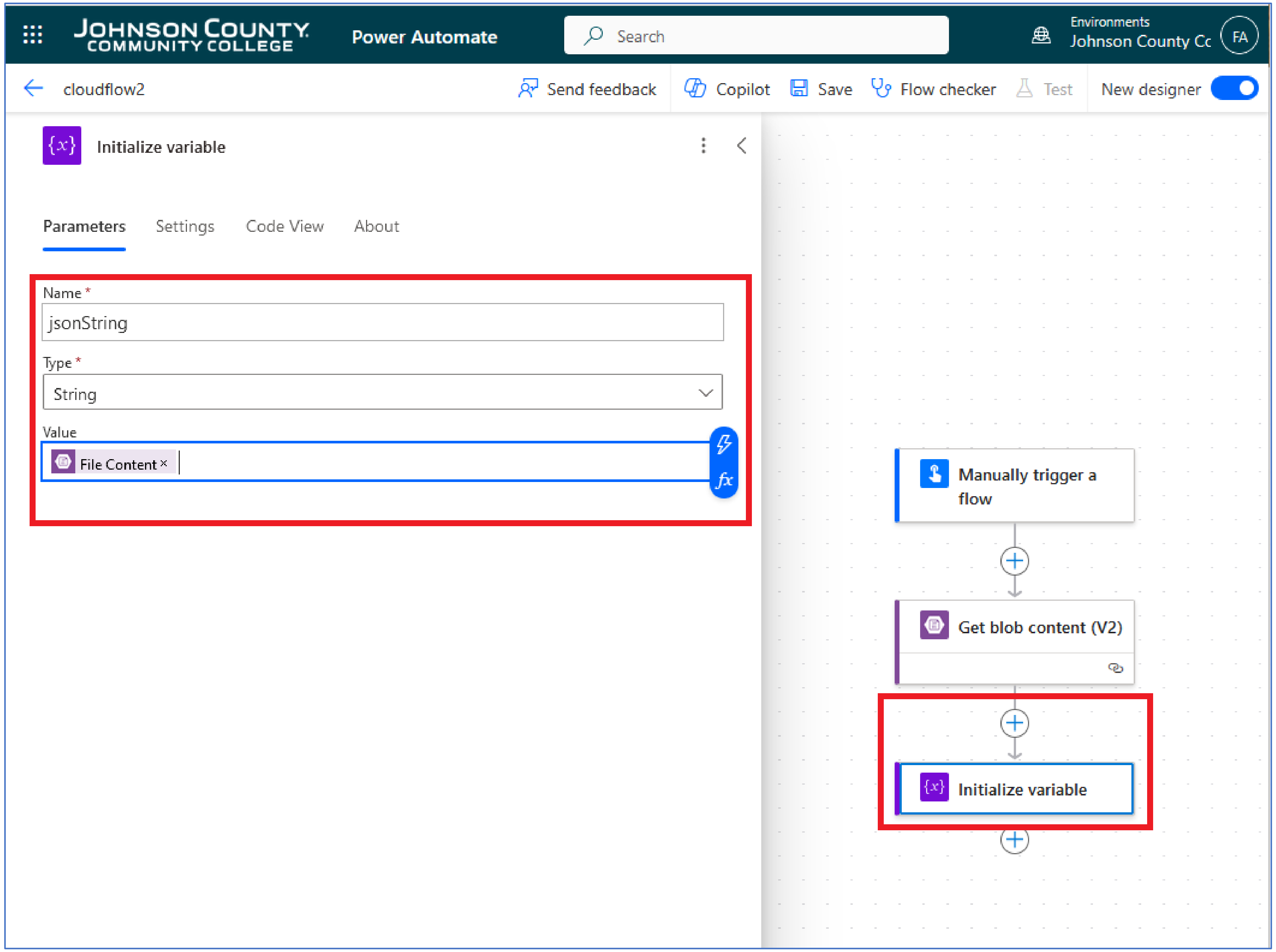
Advanced parameters
Showing 1 of 1

Infer Content Type
Yes

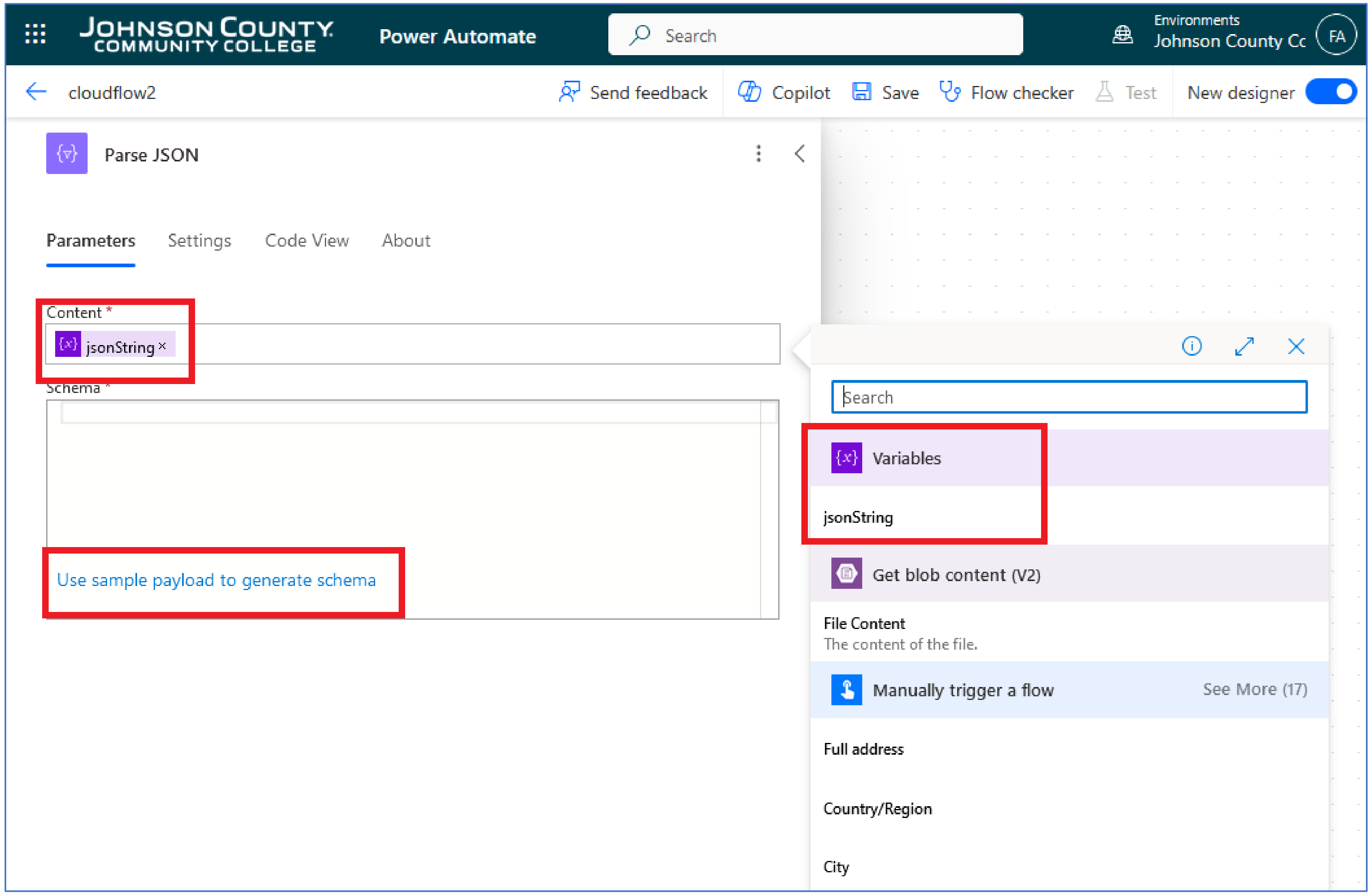
Connected to connectionblob. Change connection

Notes

I click on the “+” to add an action.
I search for Blob Storage and select “Get blob content (V2).”
I choose my storage account.
I select the data inside my container.
Then I click “Save” at the top.

Step 6 – Create a Power Automate Flow - continue	Notes
 JOHNSON COUNTY COMMUNITY COLLEGE Power Automate Search Environments Johnson County Cc FA cloudflow2 Send feedback Copilot Save Flow checker Test New designer Initialize variable Parameters Settings Code View About Manually trigger a flow Get blob content (V2) Initialize variable Name * jsonString Type * String Value File Content ×	I click on the “+” to add an action. I search for “variable” and choose “Initialize variable.” I give it a name. I set the Type to “String.” I set the Value to “File Content.” Then I click “Save” at the top.

Step 6 – Create a Power Automate Flow - continue

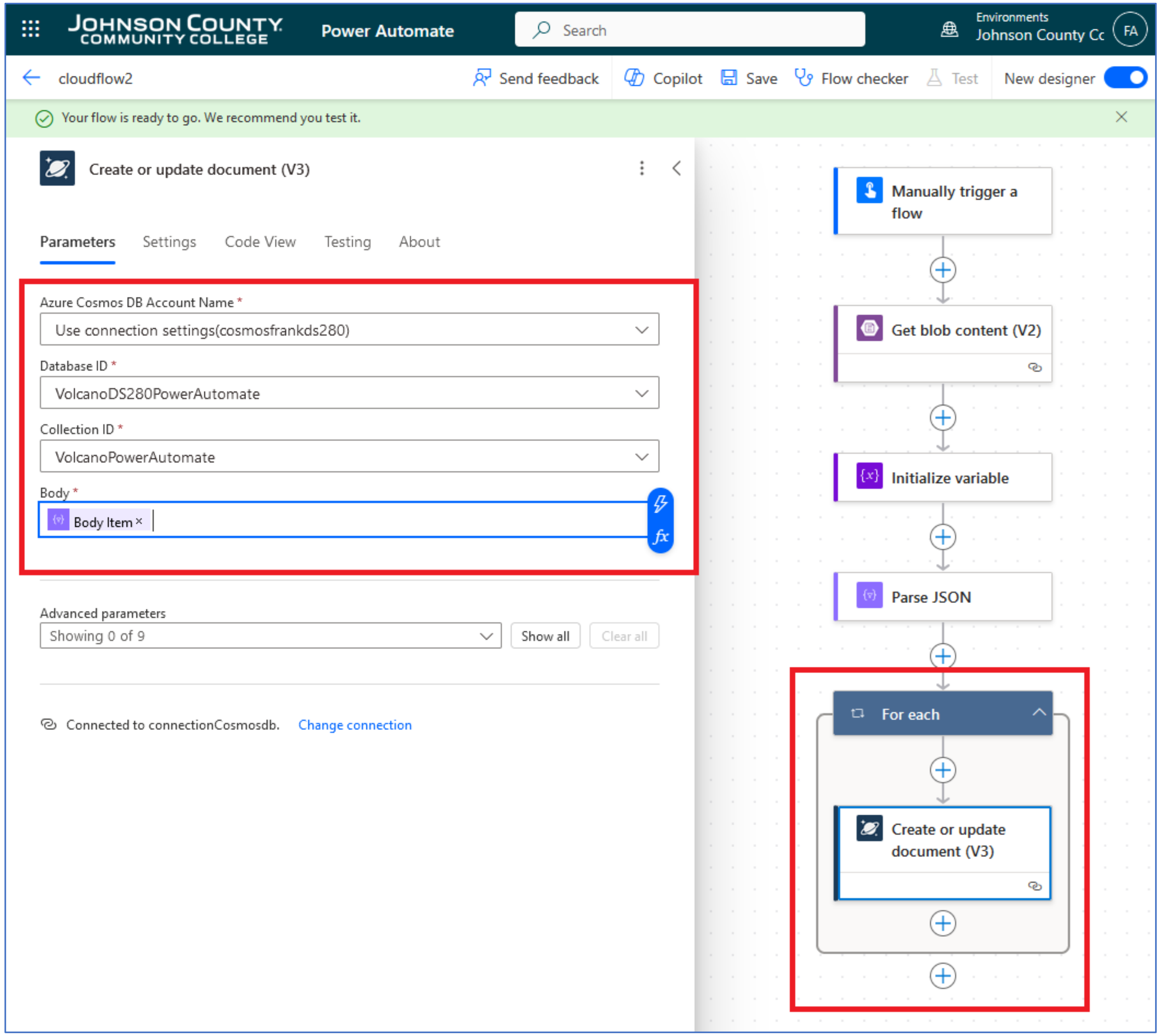


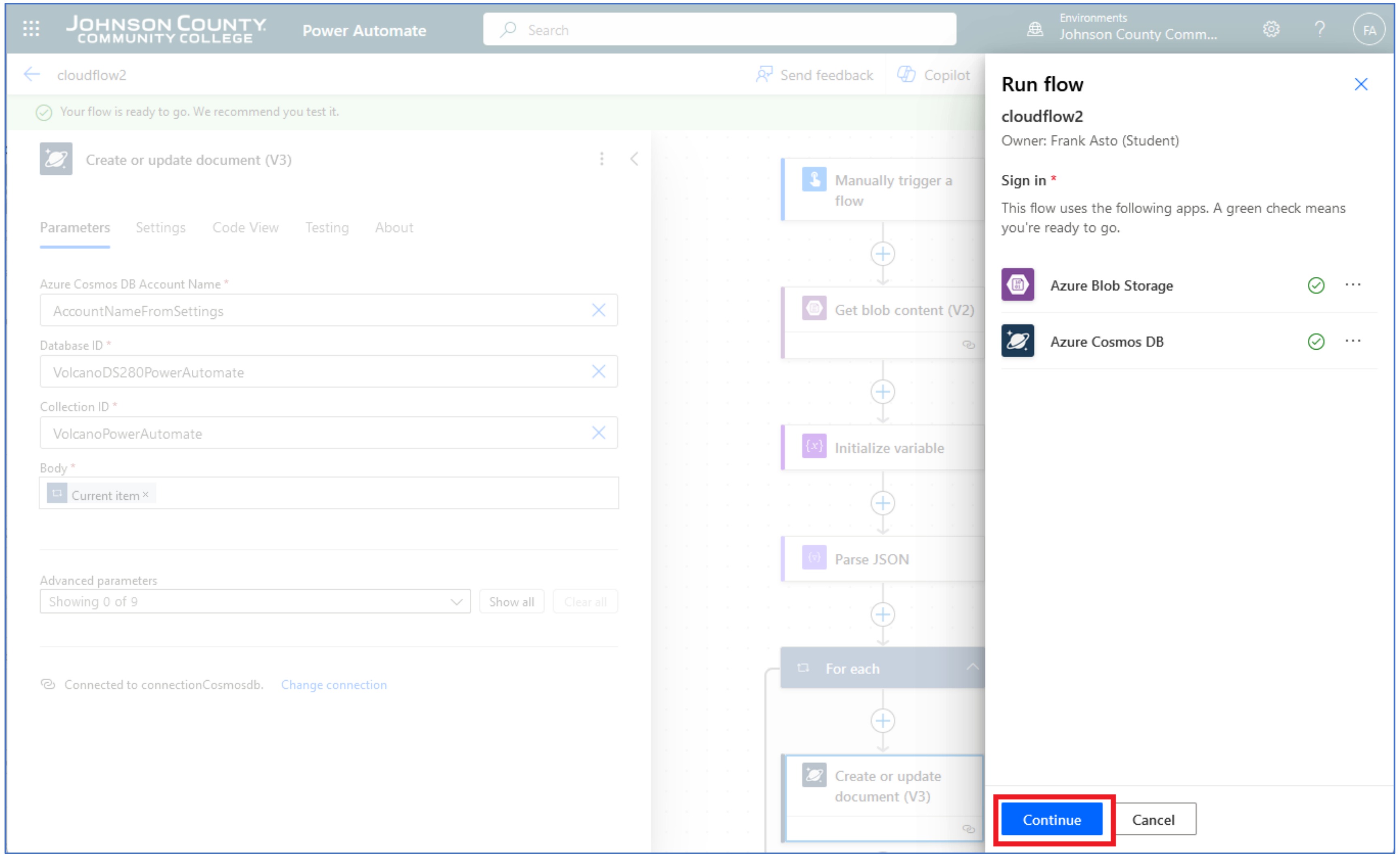
Notes

I click on the “+” to add an action.
I search for “Data Operation” and choose “Parse JSON.”
In Content, I select “jsonString.”
I click on “Use sample payload to generate schema” and add some of my JSON data.
I click “Done.”
In the Schema, I modify “Elevation” to:

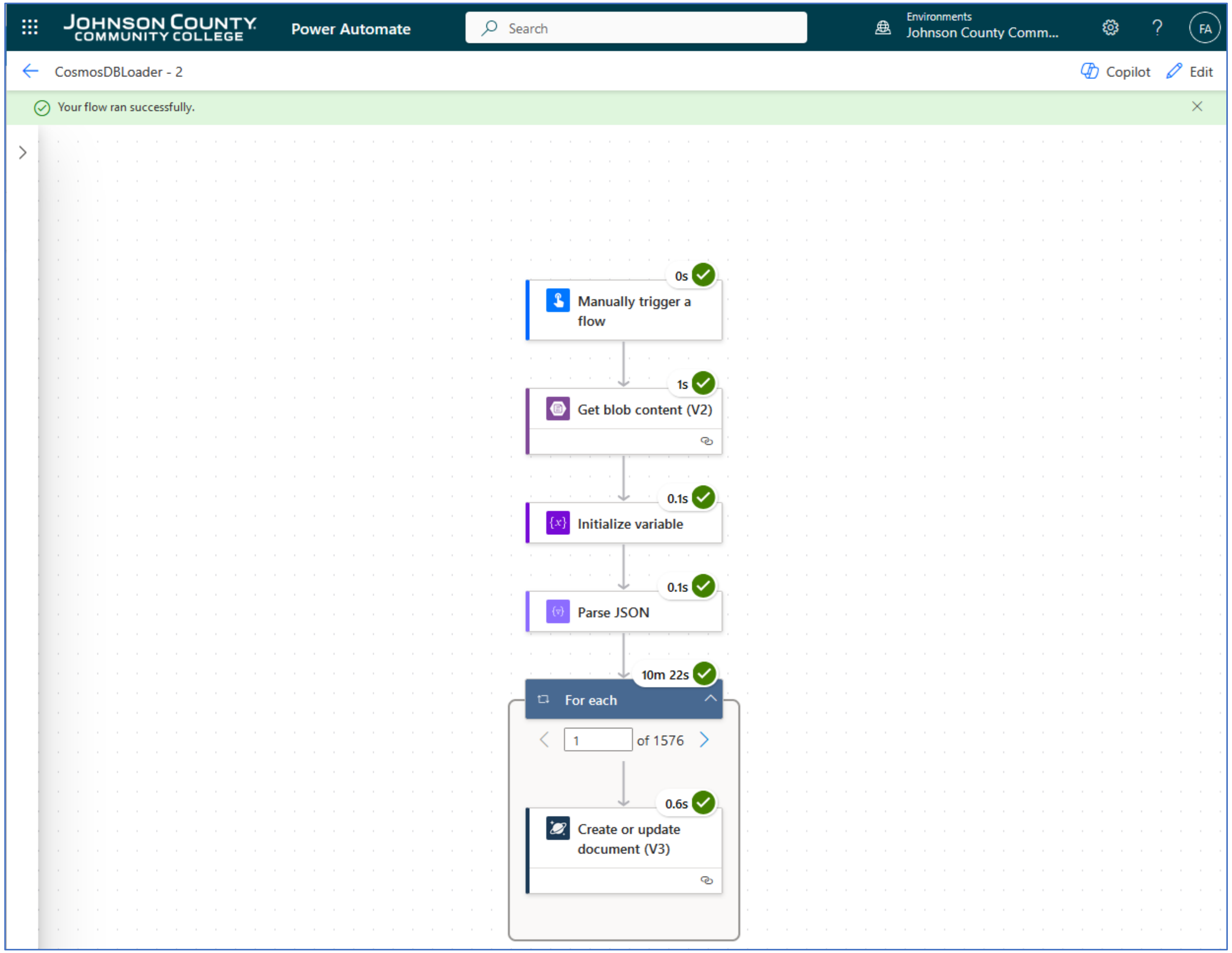
```
    "Elevation": {
        "type": [
            "integer",
            "null"
        ]
    },
```

I click “Save” at the top.

Step 6 – Create a Power Automate Flow - continue	Notes
 Azure Cosmos DB Account Name *: Use connection settings(cosmosfrankds280) Database ID *: VolcanoDS280PowerAutomate Collection ID *: VolcanoPowerAutomate Body *: Body Item Advanced parameters: Showing 0 of 9 Connected to connectionCosmosdb. Change connection	I click on the "+" to add an action. I search for "Cosmos DB" and choose "Create or update document (V3)." I select my Cosmos account. I choose my Cosmos database ID. I select my Cosmos container "Collection ID." I choose "Body Item" in Body. Then I click "Save" at the top.

Step 6 – Create a Power Automate Flow - continue	Notes
 Johnson County Community College · Power Automate · Search · Environments Johnson County Comm... · FA cloudflow2 · Send feedback · Copilot Your flow is ready to go. We recommend you test it. Create or update document (V3) Parameters · Settings · Code View · Testing · About Azure Cosmos DB Account Name * : AccountNameFromSettings Database ID * : VolcanoDS280PowerAutomate Collection ID * : VolcanoPowerAutomate Body * : Current item Advanced parameters : Showing 0 of 9 · Show all · Clear all Connected to connectionCosmosdb. Change connection Manually trigger a flow → Get blob content (V2) → Initialize variable → Parse JSON → For each → Create or update document (V3) Run flow cloudflow2 Owner: Frank Asto (Student) Sign in * This flow uses the following apps. A green check means you're ready to go. Azure Blob Storage ✓ Azure Cosmos DB ✓ Continue · Cancel	I click “Test” at the top. I select “Manually” at the top. I click the Test button at the bottom. I click “Continue.” I click on “Run flow.”

Step 6 – Create a Power Automate Flow - continue

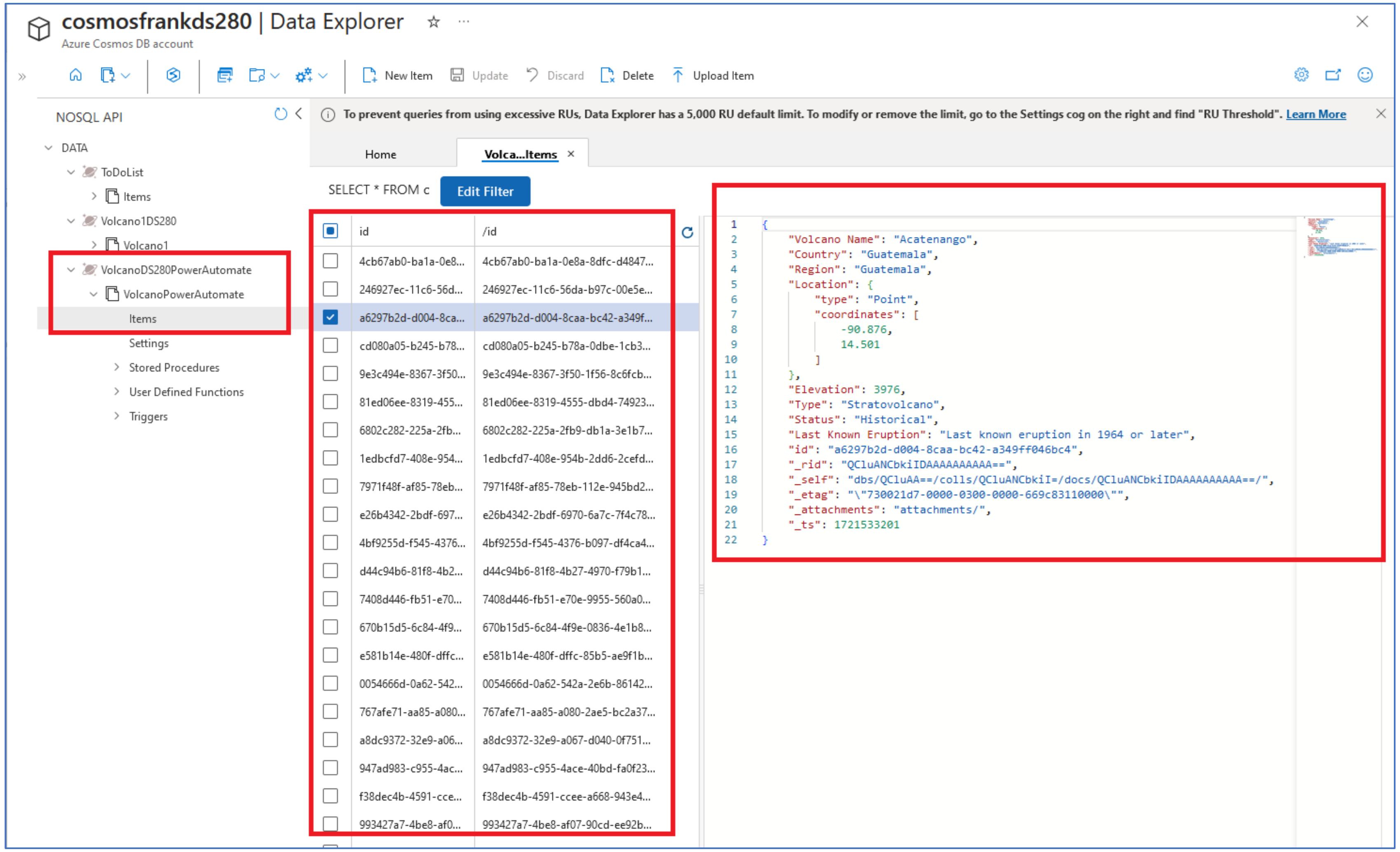


Your flow ran successfully.

Notes

After I run the test, I go back to Azure.
I open my Cosmos DB container and check if my new data is there.

Step 6 – Create a Power Automate Flow - continue



To prevent queries from using excessive RUs, Data Explorer has a 5,000 RU default limit. To modify or remove the limit, go to the Settings cog on the right and find "RU Threshold". Learn More

```
SELECT * FROM c
```

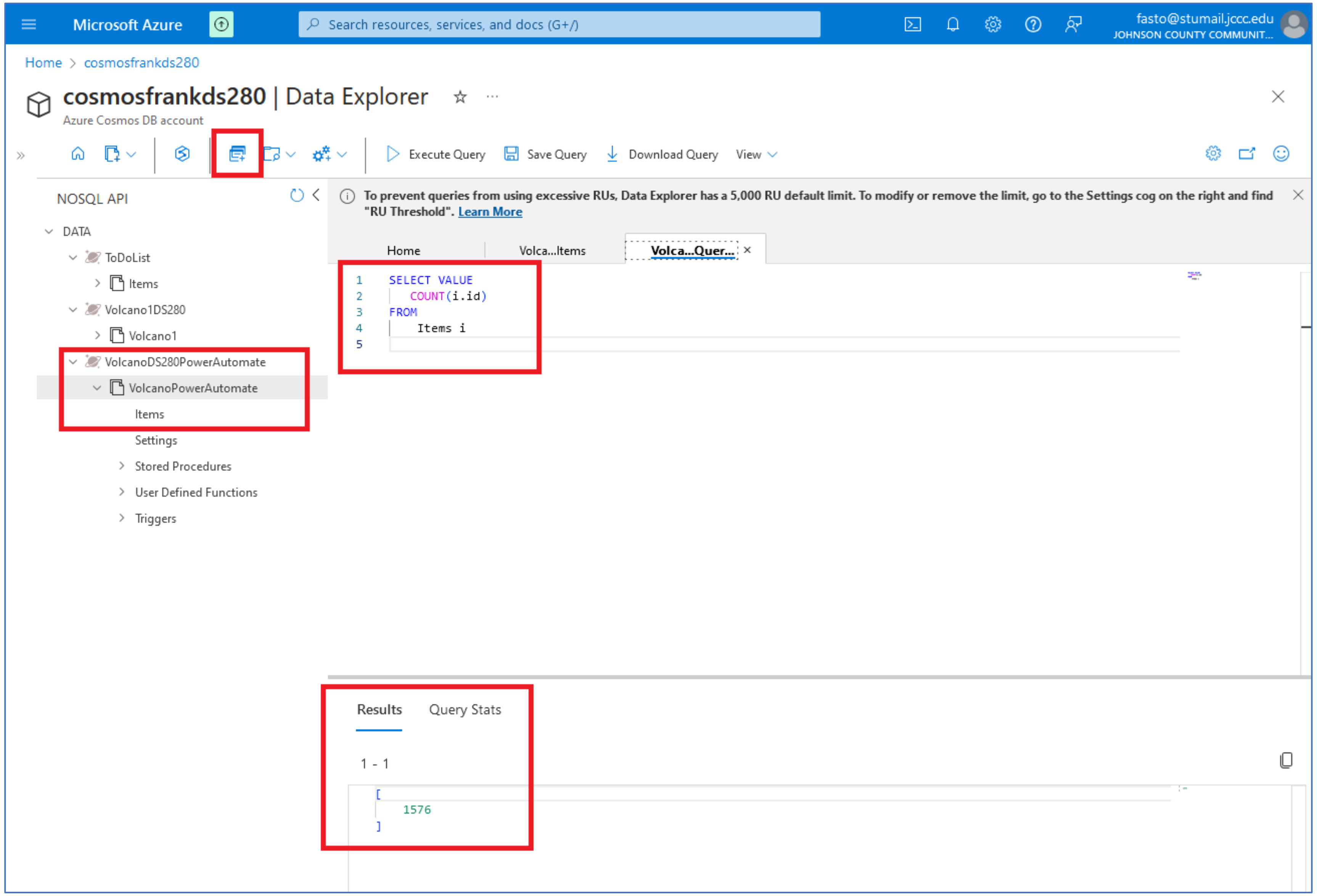
■	id	/id
☐	4cb67ab0-ba1a-0e8...	4cb67ab0-ba1a-0e8a-8dfc-d4847...
☐	246927ec-11c6-56d...	246927ec-11c6-56da-b97c-00e5e...
☑	a6297b2d-d004-8ca...	a6297b2d-d004-8caa-bc42-a349f...
☐	cd080a05-b245-b78...	cd080a05-b245-b78a-0dbe-1cb3...
☐	9e3c494e-8367-3f50...	9e3c494e-8367-3f50-1f56-8c6fcb...
☐	81ed06ee-8319-455...	81ed06ee-8319-4555-dbd4-74923...
☐	6802c282-225a-2fb...	6802c282-225a-2fb9-db1a-3e1b7...
☐	1edbcfd7-408e-954...	1edbcfd7-408e-954b-2dd6-2cefd...
☐	7971f48f-af85-78eb...	7971f48f-af85-78eb-112e-945bd2...
☐	e26b4342-2bdf-697...	e26b4342-2bdf-6970-6a7c-7f4c78...
☐	4bf9255d-f545-4376...	4bf9255d-f545-4376-b097-df4ca4...
☐	d44c94b6-81f8-4b2...	d44c94b6-81f8-4b27-4970-f79b1...
☐	7408d446-fb51-e70...	7408d446-fb51-e70e-9955-560a0...
☐	670b15d5-6c84-4f9...	670b15d5-6c84-4f9e-0836-4e1b8...
☐	e581b14e-480f-dffc...	e581b14e-480f-dffc-85b5-ae9f1b...
☐	0054666d-0a62-542...	0054666d-0a62-542a-2e6b-86142...
☐	767afe71-aa85-a080...	767afe71-aa85-a080-2ae5-bc2a37...
☐	a8dc9372-32e9-a06...	a8dc9372-32e9-a067-d040-0f751...
☐	947ad983-c955-4ac...	947ad983-c955-4ace-40bd-fa0f23...
☐	f38dec4b-4591-cce...	f38dec4b-4591-ccee-a668-943e4...
☐	993427a7-4be8-af0...	993427a7-4be8-af07-90cd-ee92b...

```
{
    "Volcano Name": "Acatenango",
    "Country": "Guatemala",
    "Region": "Guatemala",
    "Location": {
        "type": "Point",
        "coordinates": [
            -90.876,
            14.501
        ]
    },
    "Elevation": 3976,
    "Type": "Stratovolcano",
    "Status": "Historical",
    "Last Known Eruption": "Last known eruption in 1964 or later",
    "id": "a6297b2d-d004-8caa-bc42-a349ff046bc4",
    "_rid": "QCluANCbkiIDAAAAAAAAAA==",
    "_self": "dbs/QCluAA==/colls/QCluANCbkiI=/docs/QCluANCbkiIDAAAAAAAAAA==/",
    "_etag": "\"730021d7-0000-0300-0000-669c83110000\"",
    "_attachments": "attachments/",
    "_ts": 1721533201
}
```

Notes

I see the JSON file in my container in Cosmos DB.
I check my database.

Step 6 – Create a Power Automate Flow - continue



To prevent queries from using excessive RUs, Data Explorer has a 5,000 RU default limit. To modify or remove the limit, go to the Settings cog on the right and find "RU Threshold". Learn More

```
SELECT VALUE
  COUNT(i.id)
FROM
   Items i
```

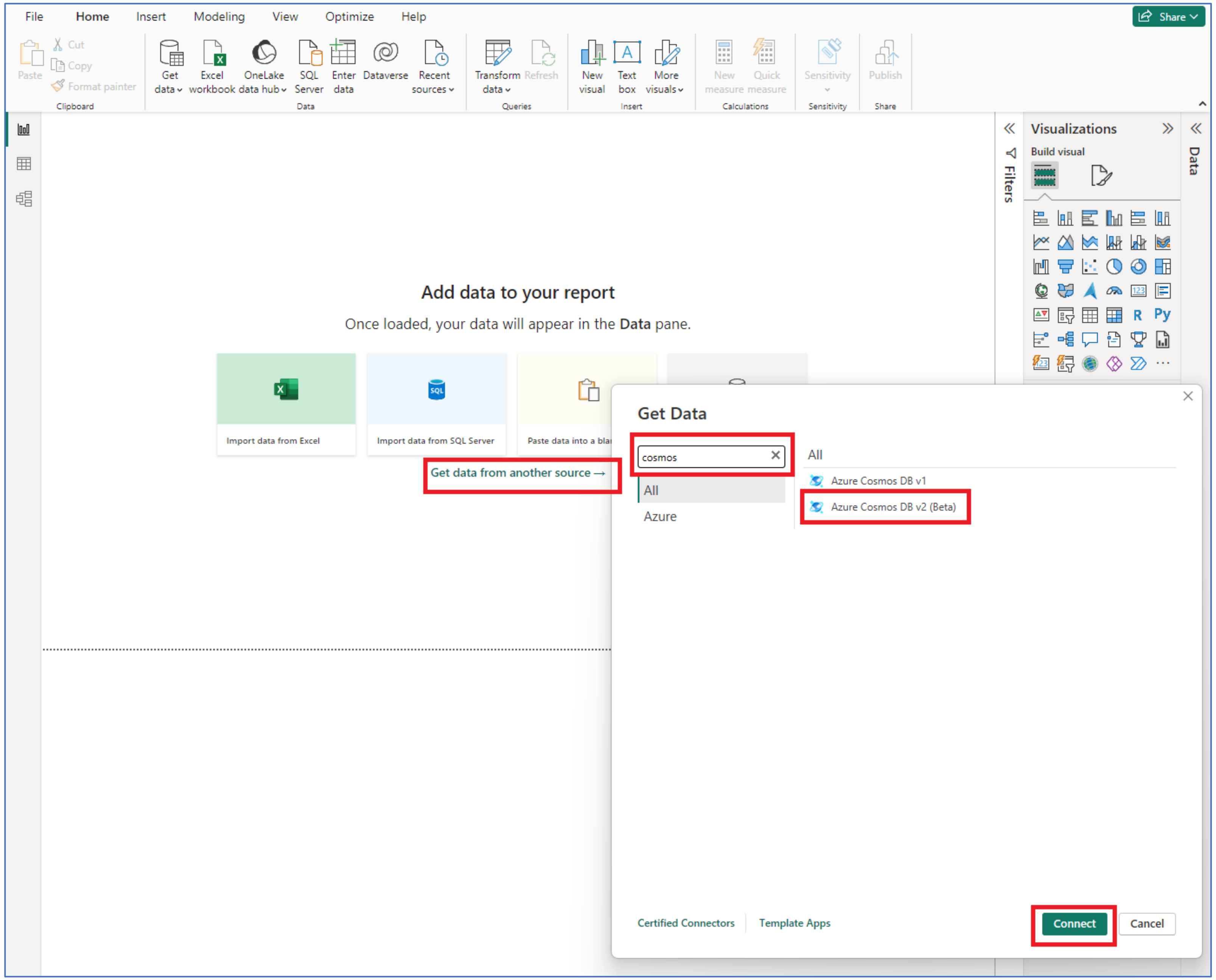
1 - 1

```
[
    1576
]
```

Notes

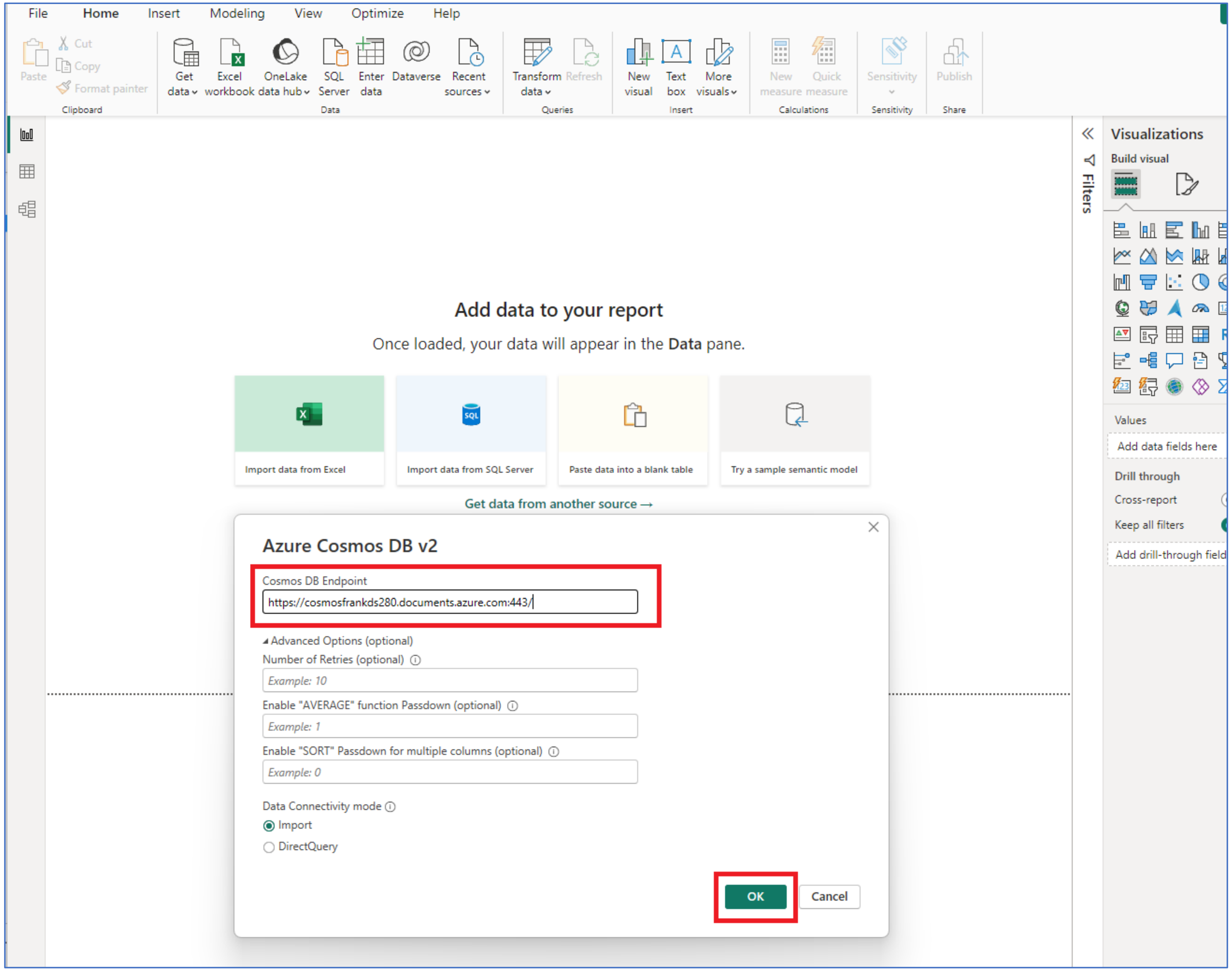
I click on the “New SQL Query” icon at the top.
I write some code to test the count of the database.
The count returns 1576, which is correct.

Step 7 – Use Power BI to connect to Cosmos DB and create a data visualization



Notes

I open Power BI Desktop.
I sign in to my account.
I click “Get data” from another source.
I search for “cosmos.”
I click on “Azure Cosmos DB v2 (Beta).”
I click “Connect.”
Then I click “Continue.”

Step 7 – Use Power BI to connect to Cosmos DB and create a data visualization - continue	Notes
	I copy the URI of my Cosmos account into the Cosmos DB Endpoint field. I click OK. I copy the Primary Key as well. I click OK.

Azure Cosmos DB v2

Cosmos DB Endpoint: https://cosmosfrankds280.documents.azure.com:443/

Advanced Options (optional)

Number of Retries (optional): Example: 10

Enable "AVERAGE" function Passdown (optional): Example: 1

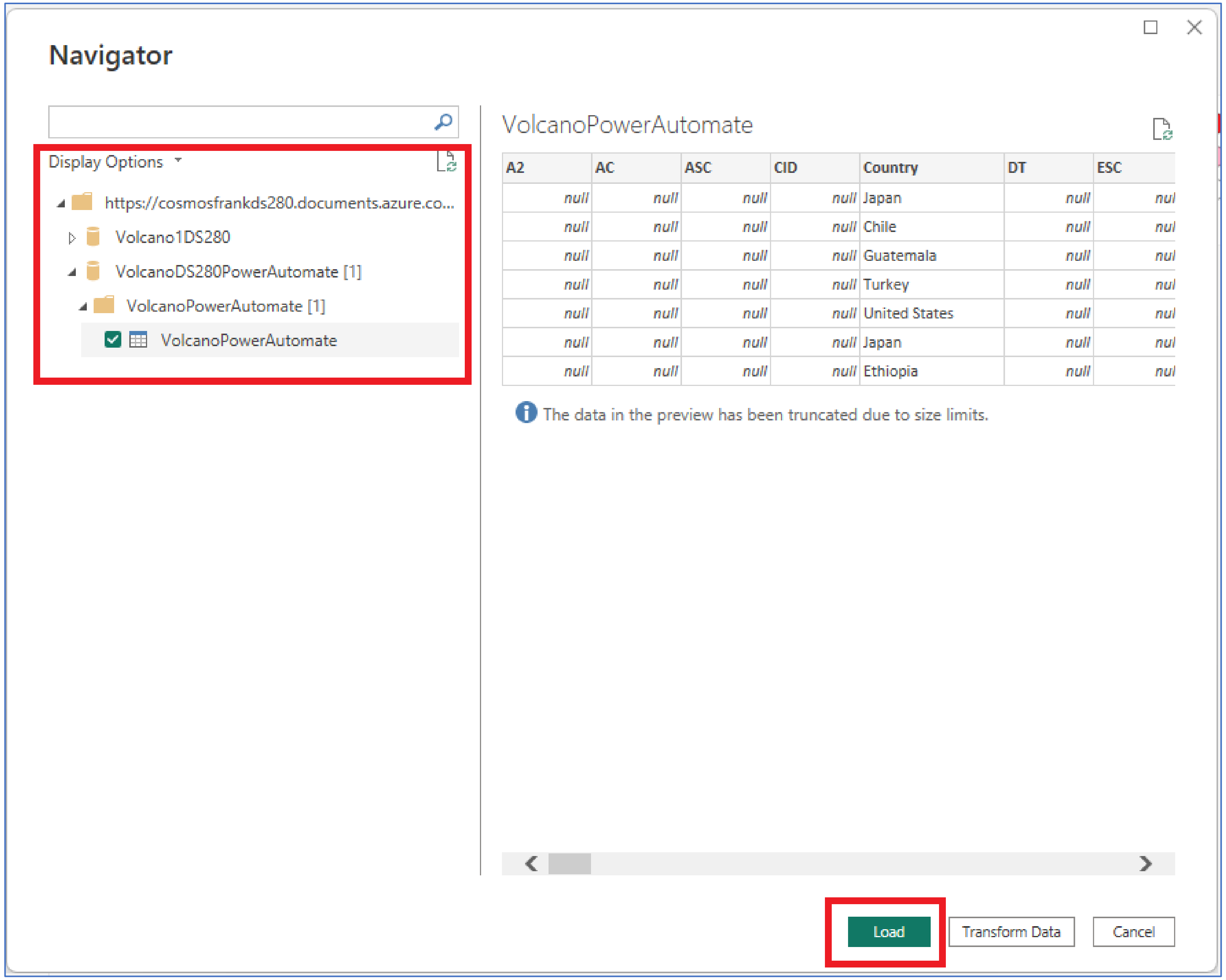
Enable "SORT" Passdown for multiple columns (optional): Example: 0

Data Connectivity mode

● Import

○ DirectQuery

OK   Cancel

Step 7 – Use Power BI to connect to Cosmos DB and create a data visualization - continue	Notes
	I choose the Cosmos data from Power Automate. I click Load.

Navigator

Display Options

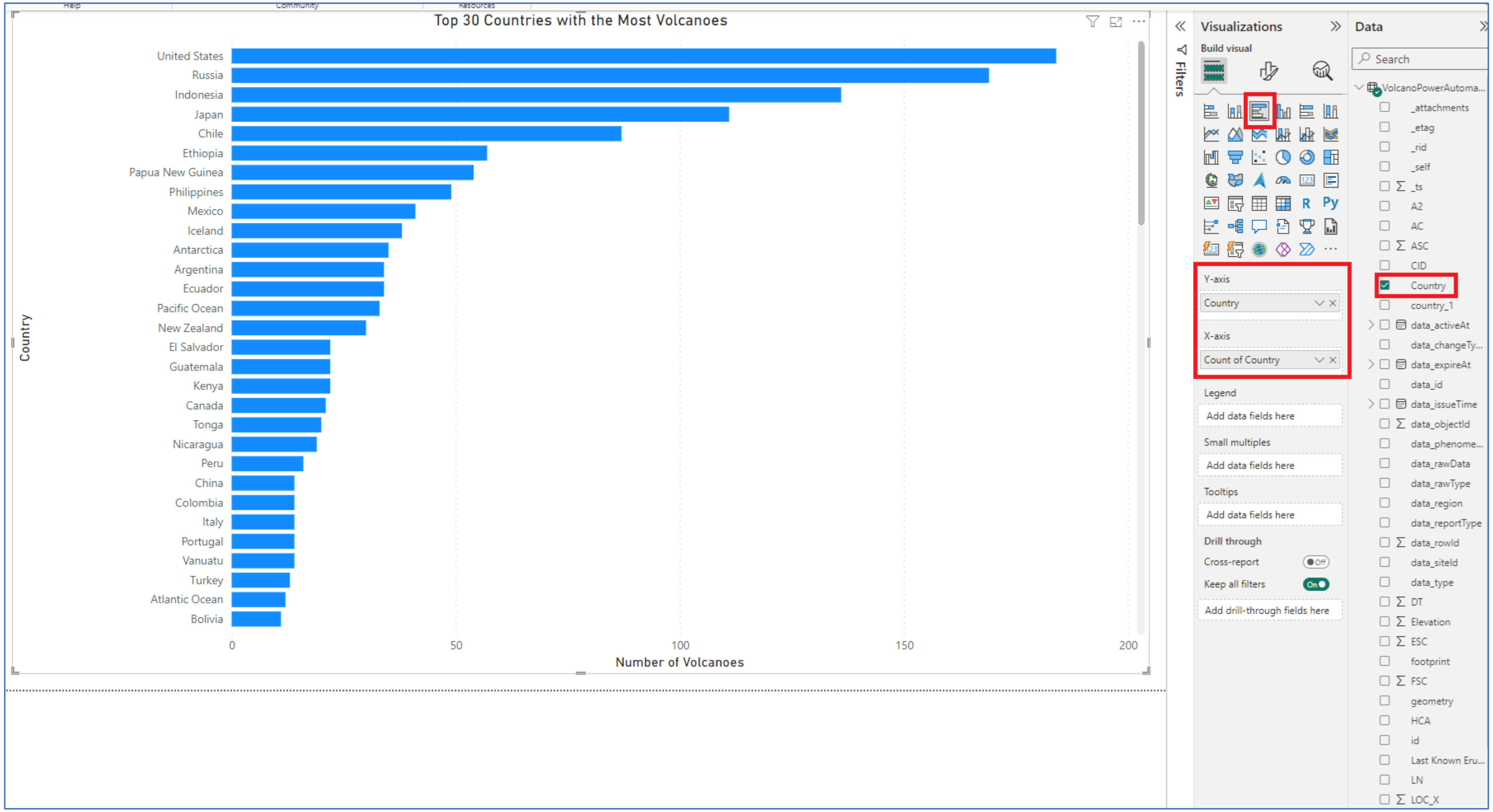
- https://cosmosfrankds280.documents.azure.co...
  - Volcano1DS280
  - VolcanoDS280PowerAutomate [1]
    - VolcanoPowerAutomate [1]
      - ☑ VolcanoPowerAutomate

VolcanoPowerAutomate

A2	AC	ASC	CID	Country	DT	ESC
null	null	null	null	Japan	null	nul
null	null	null	null	Chile	null	nul
null	null	null	null	Guatemala	null	nul
null	null	null	null	Turkey	null	nul
null	null	null	null	United States	null	nul
null	null	null	null	Japan	null	nul
null	null	null	null	Ethiopia	null	nul

The data in the preview has been truncated due to size limits.

Step 7 – Use Power BI to connect to Cosmos DB and create a data visualization - continue



Y-axis

Country

X-axis

Count of Country

Cross-report Off

Keep all filters On

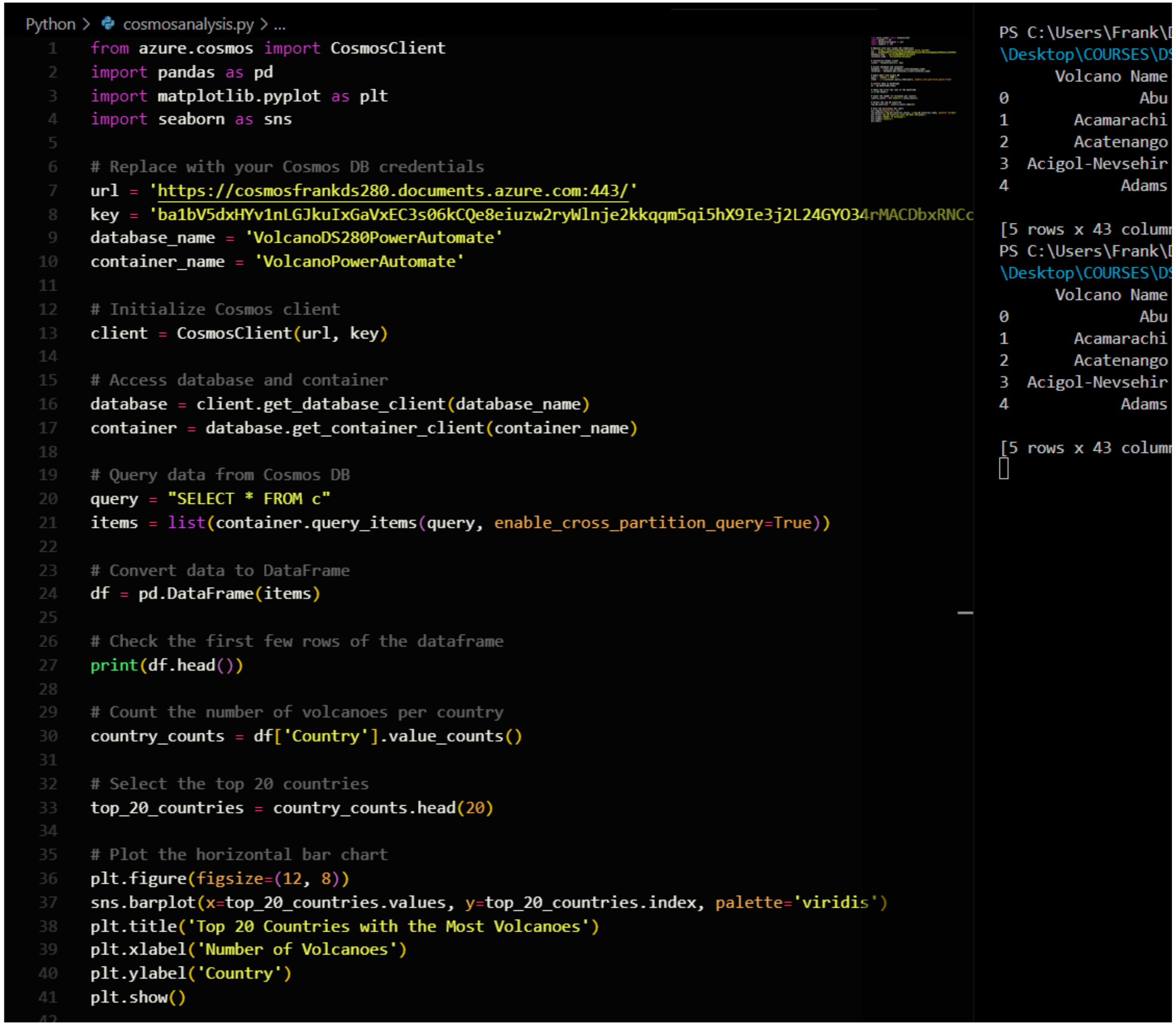
☑ Country

Notes

I was able to create a simple visualization showing the count of countries.

I added a filter with the top N (30) to display the top 30 countries with the most volcanoes.

Step 8 – Use Python to connect to Cosmos DB and create a data visualization



Python > cosmosanalysis.py > ...

```python
from azure.cosmos import CosmosClient
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns

# Replace with your Cosmos DB credentials
url = 'https://cosmosfrankds280.documents.azure.com:443/'
key = 'ba1bV5dxHYv1nLGJkuIxGaVxEC3s06kCQe8eiuzw2ryWlnje2kkqqm5qi5hX9Ie3j2L24GYO34rMACDbxRNCc
database_name = 'VolcanoDS280PowerAutomate'
container_name = 'VolcanoPowerAutomate'

# Initialize Cosmos client
client = CosmosClient(url, key)

# Access database and container
database = client.get_database_client(database_name)
container = database.get_container_client(container_name)

# Query data from Cosmos DB
query = "SELECT * FROM c"
items = list(container.query_items(query, enable_cross_partition_query=True))

# Convert data to DataFrame
df = pd.DataFrame(items)

# Check the first few rows of the dataframe
print(df.head())

# Count the number of volcanoes per country
country_counts = df['Country'].value_counts()

# Select the top 20 countries
top_20_countries = country_counts.head(20)

# Plot the horizontal bar chart
plt.figure(figsize=(12, 8))
sns.barplot(x=top_20_countries.values, y=top_20_countries.index, palette='viridis')
plt.title('Top 20 Countries with the Most Volcanoes')
plt.xlabel('Number of Volcanoes')
plt.ylabel('Country')
plt.show()
```

```
PS C:\Users\Frank\D
\Desktop\COURSES\DS
      Volcano Name
0              Abu
1       Acamarachi
2       Acatenango
3  Acigol-Nevsehir
4            Adams

[5 rows x 43 column
PS C:\Users\Frank\D
\Desktop\COURSES\DS
      Volcano Name
0              Abu
1       Acamarachi
2       Acatenango
3  Acigol-Nevsehir
4            Adams

[5 rows x 43 column
```

Notes

Here, I'm using **Python** to connect to **Cosmos DB** and to create a data visualization.

First I start by installing and importing some libraries.

```python
from azure.cosmos import CosmosClient
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

Then I am getting the **URL**, **Primary Key**, **my database** and **my container** to connect to Cosmos DB.

```python
url = 'https://cosmosfrankds280.documents.azure.com:443/'
key = 'ba1bV5dxHYv1nLGJkuIxGaVxEC3s06kCQe8eiuzw2ryWlnje2k
kqqm5qi5hX9Ie3j2L24GYO34rMACDbxRNCcA=='
database_name = 'VolcanoDS280PowerAutomate'
container_name = 'VolcanoPowerAutomate'
```

Then, I initialize **cosmos client**, **Access database** and **container**, **Query data** from **Cosmos DB**, and **Convert data** to **dataframe**.

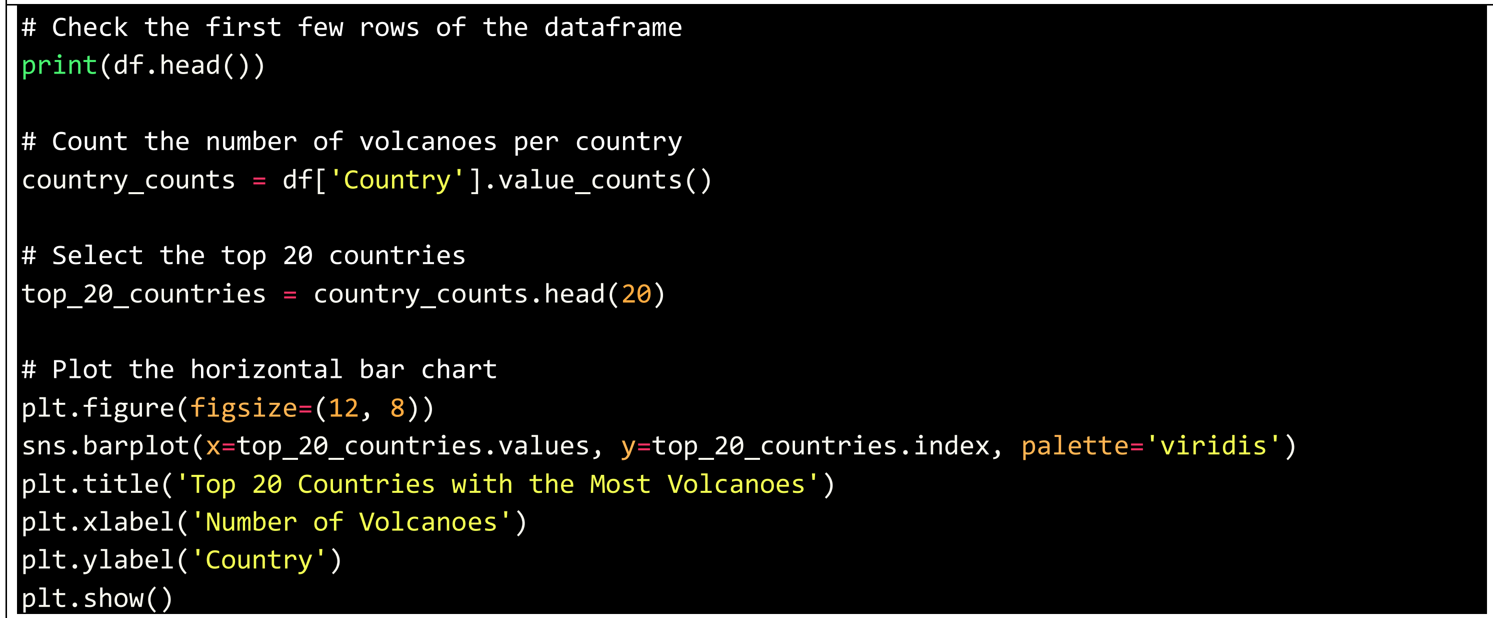
```python
# Initialize Cosmos client
client = CosmosClient(url, key)

# Access database and container
database = client.get_database_client(database_name)
container = database.get_container_client(container_name)

# Query data from Cosmos DB
query = "SELECT * FROM c"
items = list(container.query_items(query,
enable_cross_partition_query=True))

# Convert data to DataFrame
df = pd.DataFrame(items)
```

Step 8 – Use Python to connect to Cosmos DB and create a data visualization - continue

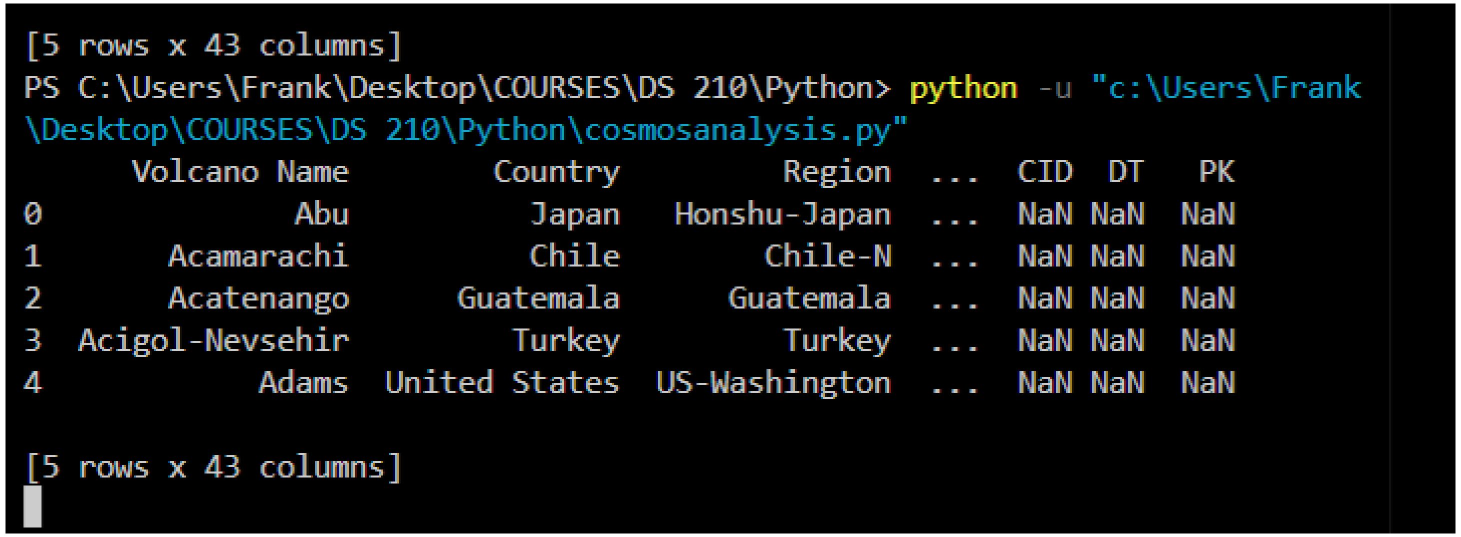


```
# Check the first few rows of the dataframe
print(df.head())

# Count the number of volcanoes per country
country_counts = df['Country'].value_counts()

# Select the top 20 countries
top_20_countries = country_counts.head(20)

# Plot the horizontal bar chart
plt.figure(figsize=(12, 8))
sns.barplot(x=top_20_countries.values, y=top_20_countries.index, palette='viridis')
plt.title('Top 20 Countries with the Most Volcanoes')
plt.xlabel('Number of Volcanoes')
plt.ylabel('Country')
plt.show()
```

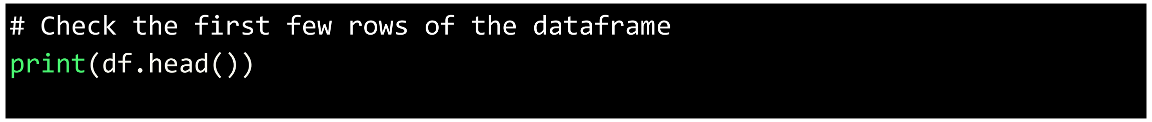


```
[5 rows x 43 columns]
PS C:\Users\Frank\Desktop\COURSES\DS 210\Python> python -u "c:\Users\Frank
\Desktop\COURSES\DS 210\Python\cosmosanalysis.py"
     Volcano Name        Country          Region  ...  CID  DT   PK
0             Abu          Japan   Honshu-Japan  ...  NaN NaN  NaN
1      Acamarachi          Chile        Chile-N  ...  NaN NaN  NaN
2      Acatenango      Guatemala      Guatemala  ...  NaN NaN  NaN
3  Acigol-Nevsehir         Turkey         Turkey  ...  NaN NaN  NaN
4           Adams  United States  US-Washington  ...  NaN NaN  NaN

[5 rows x 43 columns]
```

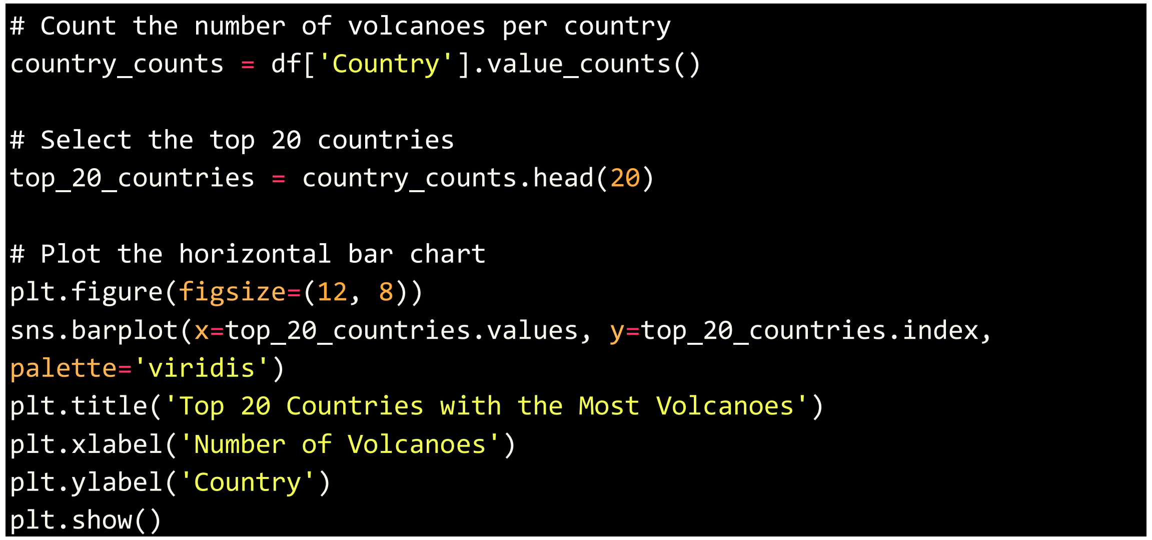
Notes

Then I print the first 5 rows of the dataframe to check.



```
# Check the first few rows of the dataframe
print(df.head())
```

Then I create a simple data visualization using the libraries.
I count the volcanoes by each country.
I display the top 20 countries with the most volcanoes.
I assign the size, x and y axes, and colors of the bars.
I add a title, x-axis title, and y-axis title.
Finally, I display the data visualization using the `plt.show()` function.

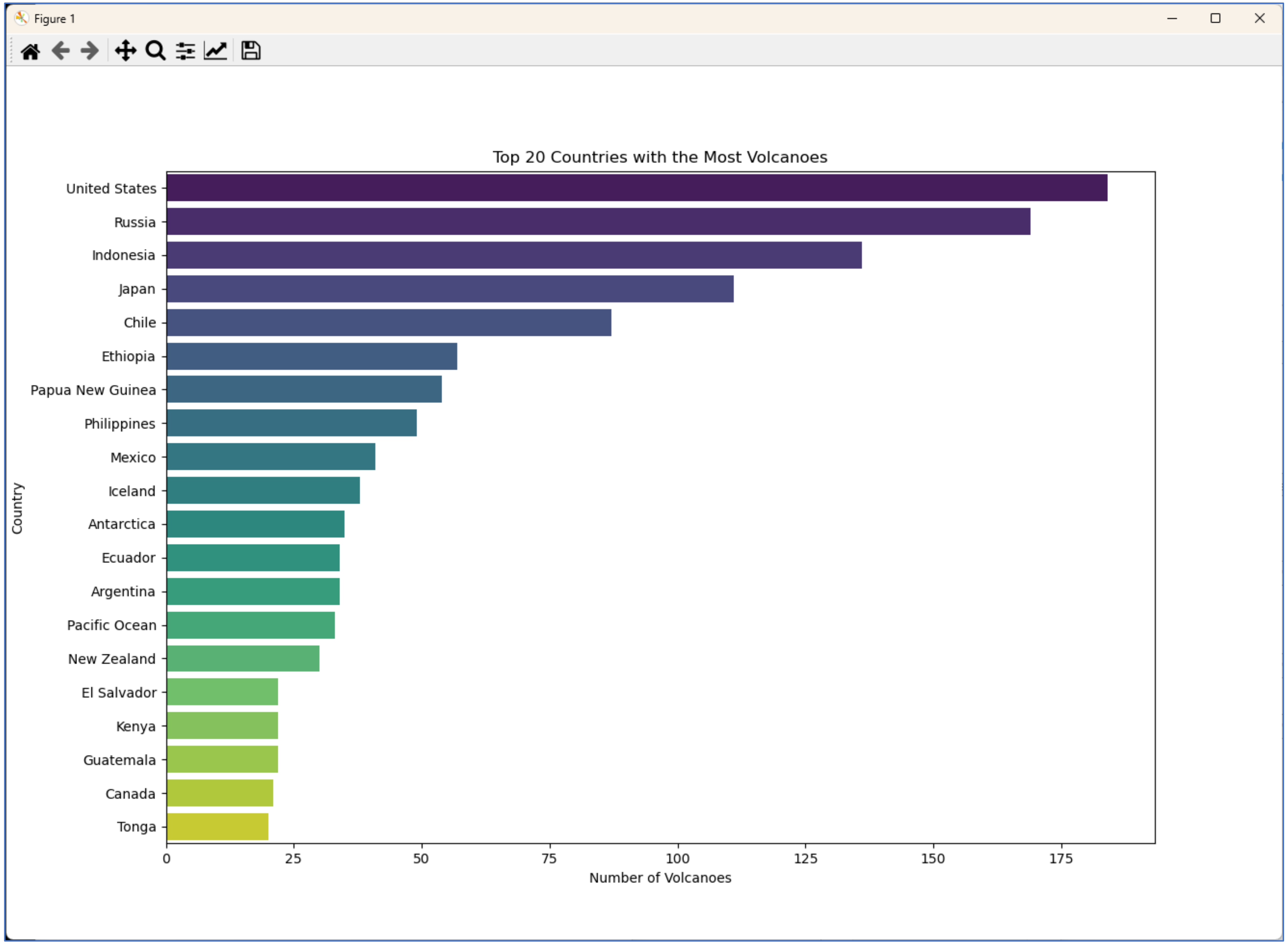


```
# Count the number of volcanoes per country
country_counts = df['Country'].value_counts()

# Select the top 20 countries
top_20_countries = country_counts.head(20)

# Plot the horizontal bar chart
plt.figure(figsize=(12, 8))
sns.barplot(x=top_20_countries.values, y=top_20_countries.index,
palette='viridis')
plt.title('Top 20 Countries with the Most Volcanoes')
plt.xlabel('Number of Volcanoes')
plt.ylabel('Country')
plt.show()
```

Step 8 – Use Python to connect to Cosmos DB and create a data visualization - continue



Notes

Here is the final result of the data visualization of the JSON volcanoes database using Python and some libraries to connect to Azure Cosmos DB. I know I didn’t have to do this last step (using Python), but I did it for fun.