

ST10029788

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CLDV6212

POE

A. Azure components utilised thus far in the POE

Component	Technology Choice	Hosting Model
Http Trigger(Part 1)	Compute	Serverless
Queue trigger(Part 2)	Compute	Serverless
Message Queue/Azure Queue Storage	Data Storage	PaaS
Azure SQL Database	Data storage	PaaS

B. Motivation for needed change

The main reason for the changes implemented is to increase the retrieval speed of vaccine information, accommodate multiple different data formats, and minimize operational costs. This will be achieved through **Blob Storage**, and this will aid Aweh Productions in advancing business goals through scalability and efficiency.

a. Enhancing retrieval speed of vaccine records

Azure Blob Storage is optimized for storing and retrieving large amounts of unstructured data quickly (akashdubey-ms, 2023). Blob Storage allows for efficient retrieval, especially when dealing with large files or multiple data types.

b. Accommodate data formats.

Azure Blob Storage is versatile and can store a variety of data formats, including text, images, and videos. It doesn't impose structure on data, making it suitable for handling the diverse data formats provided by different manufacturers that may work with Aweh Productions (Cloudflare, 2023). This flexibility is necessary for accommodating various types of vaccination information, which would be needed should the business need to upscale their program.

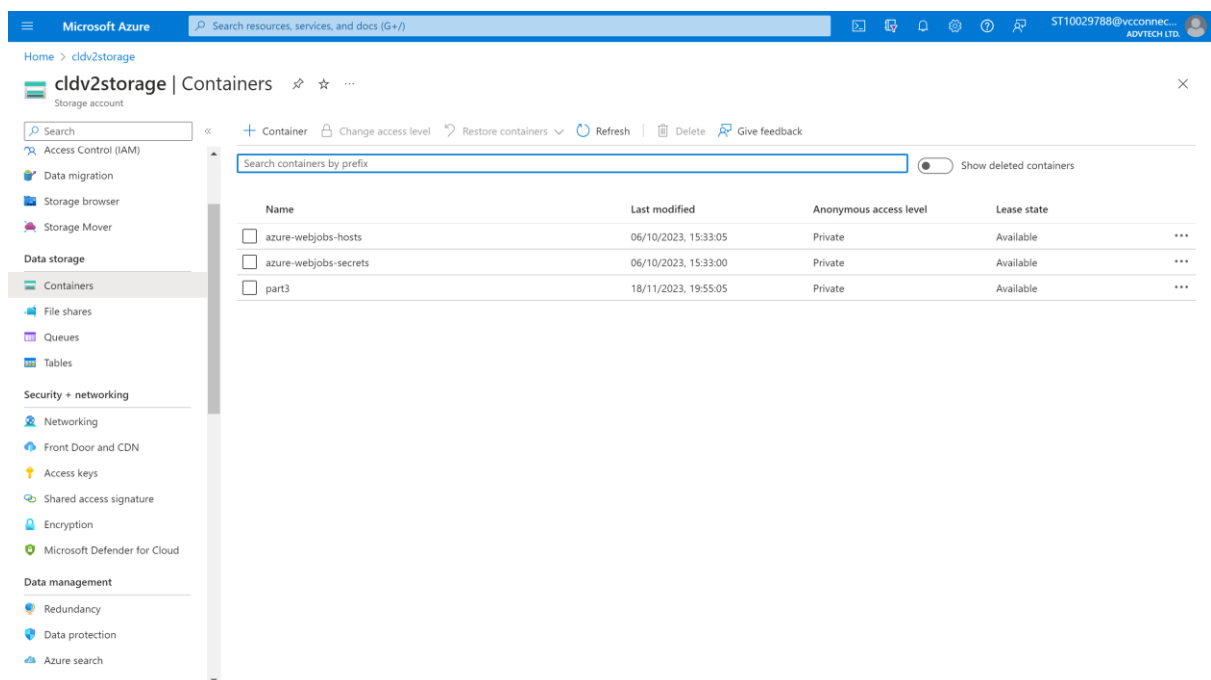
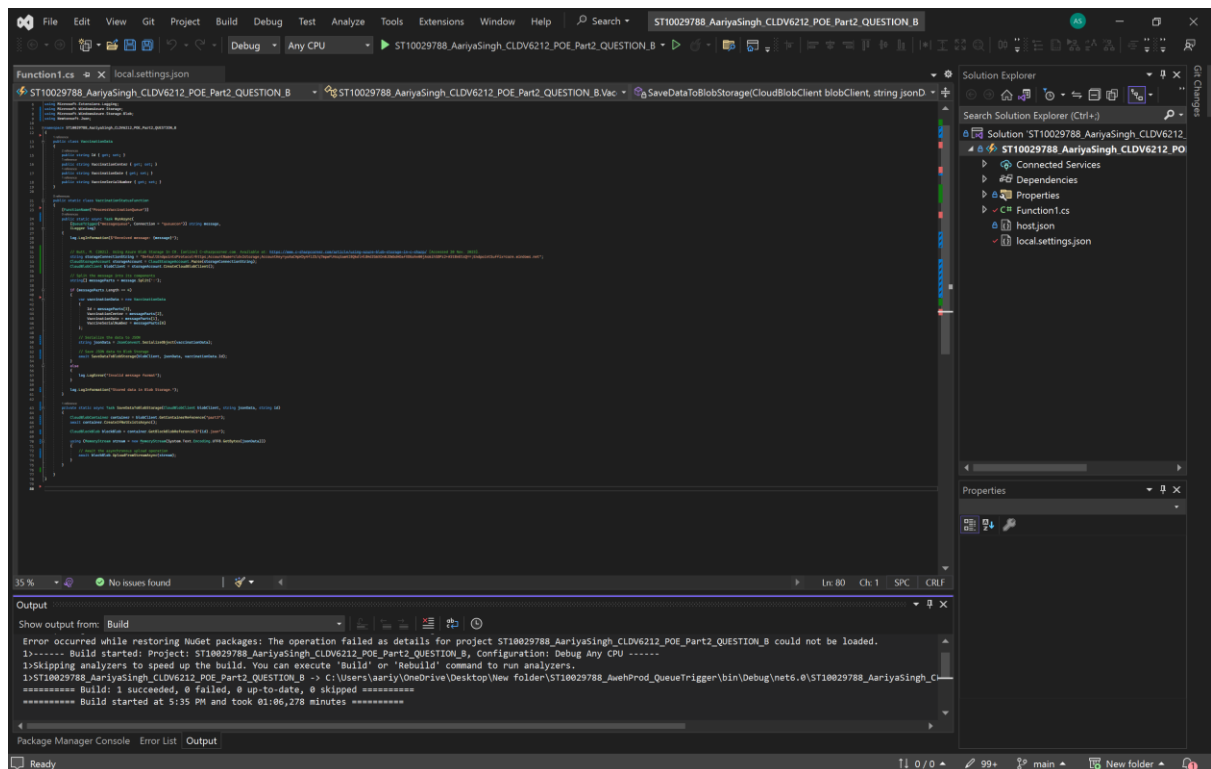
c. Minimize costs

Blob Storage is cost-effective, especially for when you need to store large amounts of unstructured data.

It also offers tiered storage options, allowing the business to optimize costs based on access patterns. This can contribute to keeping the operational costs of the vaccine program as low as possible compared to a relational database like Azure SQL Database.

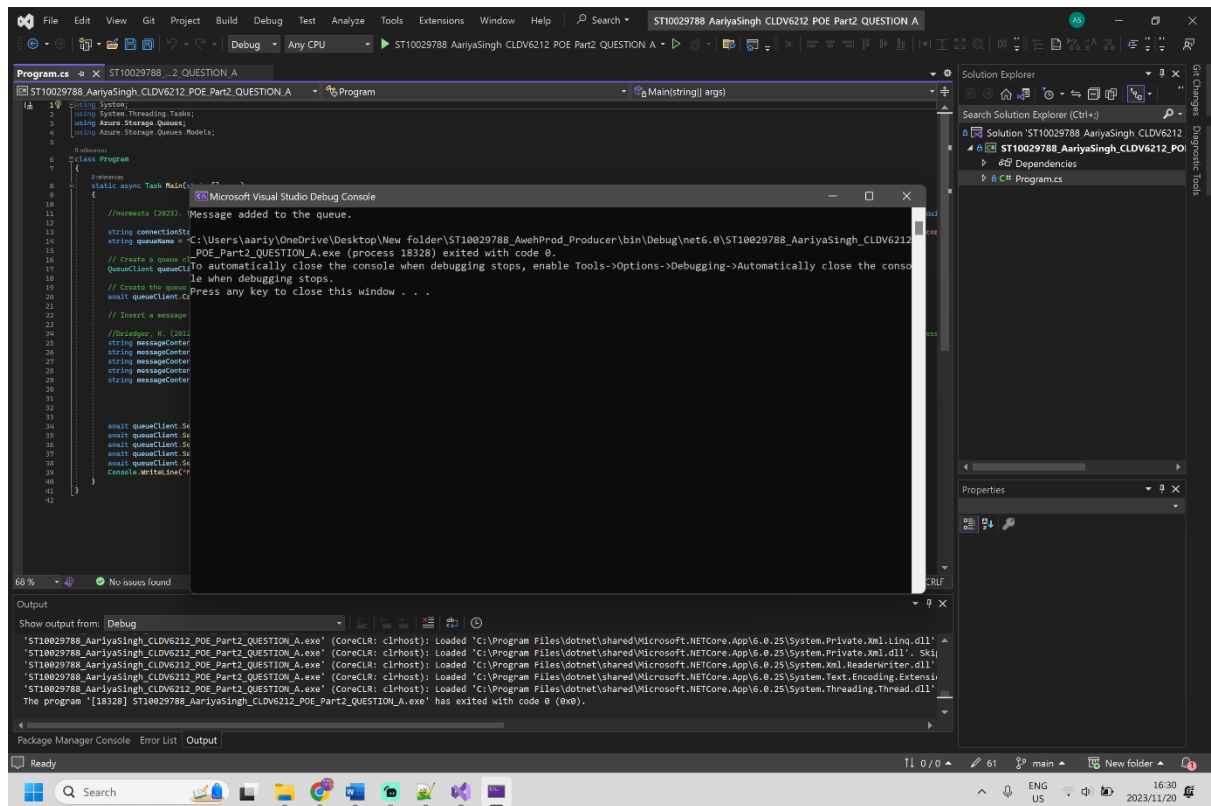
C. Changes/Improvements to code

Part A was changed to upload data into the blob instead of a database.

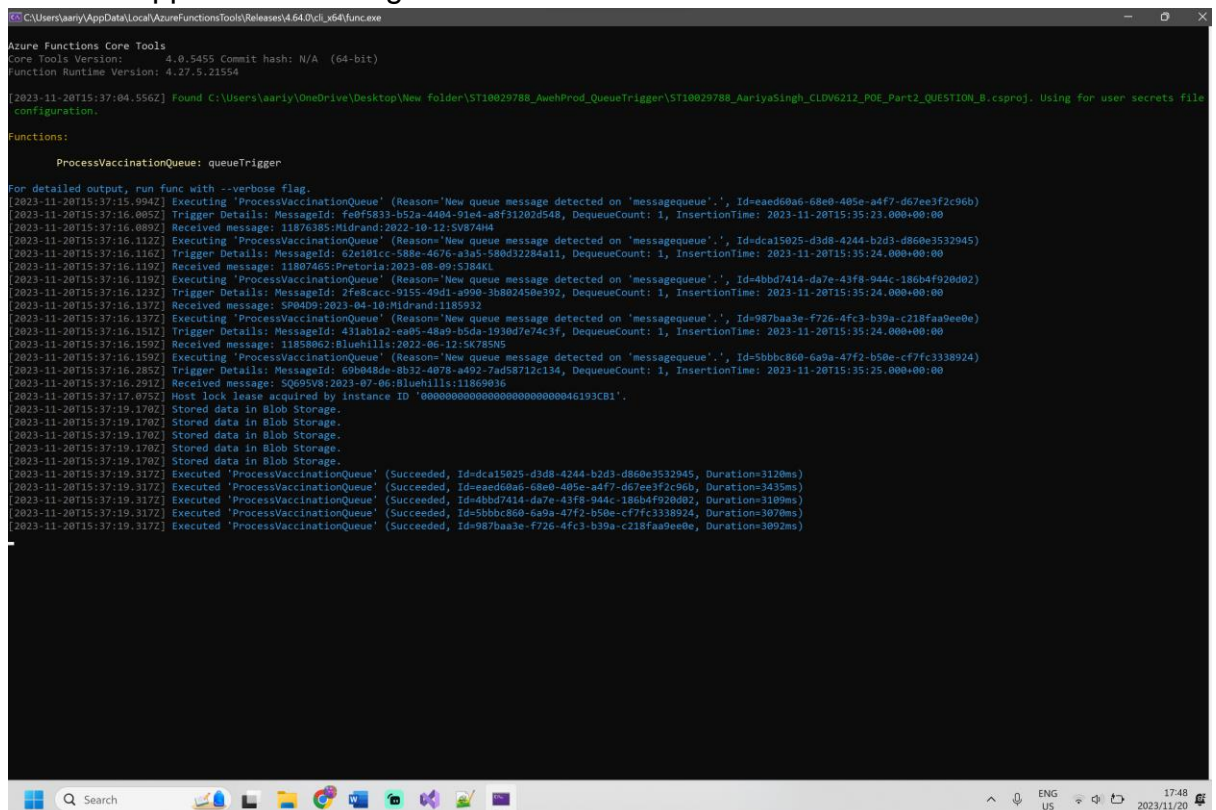


D. Testing

1. Messages added to queue



2. Console application running



3. Messages in container

Microsoft Azure

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part3

Container

Search

Upload Change access level Refresh Delete Change tier Acquire lease Break lease View snapshots Create snapshot Give feedback

Overview

Diagnose and solve problems

Access Control (IAM)

Settings

Shared access tokens

Access policy

Properties

Metadata

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

Location: part3

Search blobs by prefix (case-sensitive)

Show deleted blobs

Name	Modified	Access tier	Archive status	Blob type	Size	Lease state
1185932.json	20/11/2023, 17:37:15			Block blob	108 B	Available ***
11869036.json	20/11/2023, 17:37:15			Block blob	112 B	Available ***
SI84KL.json	20/11/2023, 17:37:15			Block blob	110 B	Available ***
SK785N5.json	20/11/2023, 17:37:15			Block blob	112 B	Available ***
SV874H4.json	20/11/2023, 17:37:15			Block blob	110 B	Available ***

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Search blobs by prefix (case-sensitive)

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1185932.json

Blob

Save Discard Download Refresh Delete

Overview Snapshots Edit Generate SAS

```
1 [{"Id": "1185932", "VaccinationCenter": "Midrand", "VaccinationDate": "2023-04-10", "VaccineSerialNumber": "SP01"}]
```

Json Preview

References

akashdubey-ms (2023). *Introduction to Azure Storage - Cloud storage on Azure*. [online] Microsoft.com. Available at: <https://learn.microsoft.com/en-us/azure/storage/common/storage-introduction> [Accessed 18 Nov. 2023].

Cloudflare. (2023). *What is blob storage?* [online] Available at: <https://www.cloudflare.com/en-gb/learning/cloud/what-is-blob-storage/> [Accessed 19 Nov. 2023].