AZURE - REPORT

Azure Function Listening to a Queue

Submitted By

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1. Abstract:

The project will mainly explain about Azure. Azure is a public cloud service providing platform. Storage is one of the services provided by Azure. Within the storage account there are many more services could be utilized. One among those is queue storage. In this project utilizing queue storage and performing triggering operations is explained. In turn, function get executed when message inside queue get triggered.

2. Problem Statement:

The InGen Soft decided to bring serverless functionality into their application workload using the Azure function and Storage queue. The idea behind this is that the appearance of the message inside a Queue shall trigger the Function execution. The main task of developer is to create a queue storage and to input a queue. Need to create a function app and a function, such that, the message in queue will trigger the function. The function app needs to be deployed using Visual Studio.

3. Software Requirement:

a. Visual Studio
   - ✓ With Azure development workload enabled
b. Microsoft Azure account → https://portal.azure.com
   - ✓ With active subscription (I used simplilearn pass for subscription)

4. Project Design and Description:

- Login to the Azure portal using https://portal.azure.com. Create a resource group called **ingensoft-rg**. Create a storage account named as **ingensoftcompstorage**. Input a queue named as myqueue-items.
- Open the visual studio. Select to create new project and select template for Azure functions. Name the project as **AzureFuncApp1.** Select for Queue Trigger and give queue name as myqueue-items for storage emulator. Click on create button to create project.
- It will generate in built template for azure function. Run the function for the visualization. For the storage emulator, to connect to azure account, install a package using NuGet manager **"Microsoft.Azure.WebJobs.Extensions.Storage".**
- Initially, storage emulator inside cloud explorer of our local machine does not contains any queues output messages as the default template would not have output binding and messages.
- To set the output binding with message to local machine, need to add queue name, storage account connection string (for local) and with message. Run the project. Provide queue message in the myqueue-

items. can see the <mark>output</mark> queue message was successfully inserted inside storage emulator of our local machine. Since this is only for local machine, it will not reflect in the azure portal.

- Instead of just displaying executed result in the console, I created a <mark>output</mark> queue, so that needed message will be stored in the output queue.
- Customized the code as I desired for the execution. For simplicity, I added a function called <mark>Add()</mark> to add 2 numbers provided by default.
- Now on words, if any message enters to the queue, the function gets triggered, and gets executed.
- Now, its time to publish the function app to the azure account. Right click on project and select as publish. Create new function app with the name provided and click on publish button. This process will submit the function app created to my azure account.
- Now, to upload the function to the azure, click on manage azure app settings in publish page, and copy the connection string of azure account and paste it to the local storage, so it gets replaced with the <mark>connection string</mark> for storage account. Now again run the project and repeat the same steps. Now refresh the storage emulator of azure account and will be able to see the output queue message with myqueue-items.
- Go to Azure account. In the resource group, now can be able to see the function app that is deployed from visual studio. And inside the storage account output queue is also available. In output queue, the message triggered in VS will be displayed.
- To test the correctness, go to function app and then to function, provide the queue message as input and run the function. The function gets executed. Mean that, the queue message will trigger the function execution.
- Again, check in output queue, for the confirmation. The executed result will be displayed.

5. Conclusion:

From the project, I was able to learn more about Azure. I got to know the concept of storage account and its type. I was able to learn about queues, bindings, triggers, function apps and many more. In total, the project was very useful, and I was made to learn many things.