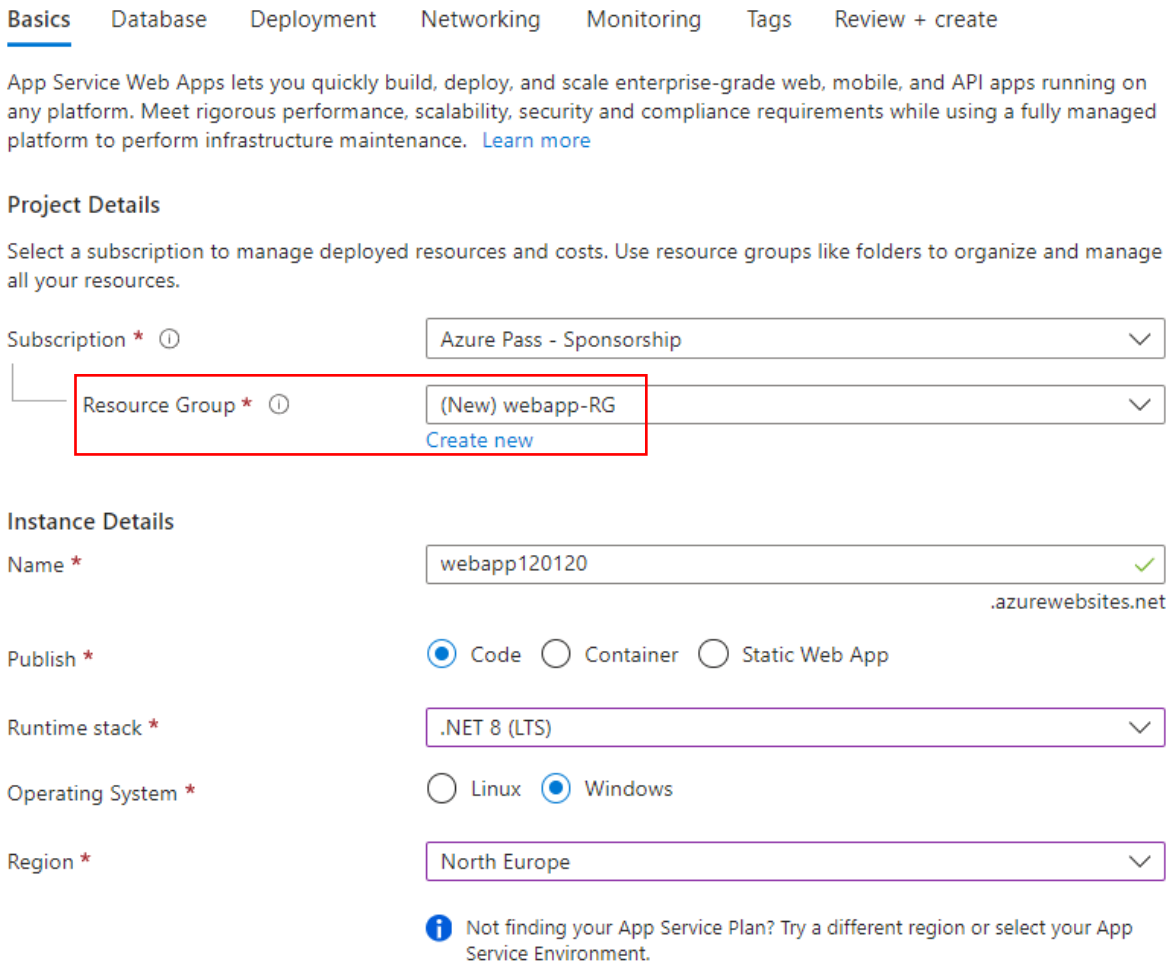
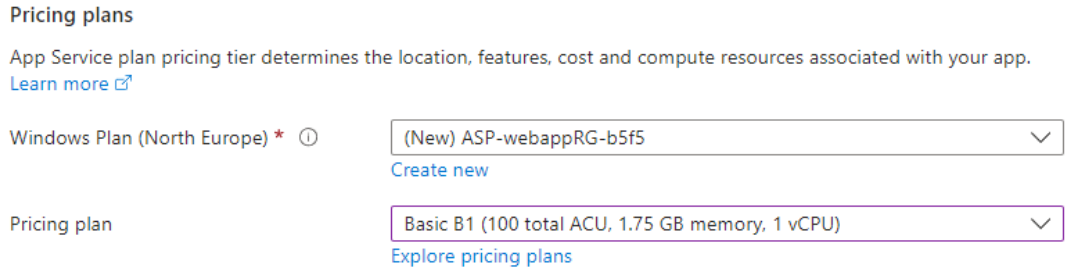
😊 Azure Web app Diagnostic setting

In this scenario, we are setting up diagnostic logging for an Azure web app and processing the logged data using Stream Analytics. The end goal is to monitor and analyze various metrics and logs generated by the web app, such as performance metrics, errors, and usage patterns. By processing this data, we aim to gain insights into the behavior of the web app, identify any issues or bottlenecks, and make informed decisions for optimization and troubleshooting. Ultimately, this setup helps in ensuring the smooth operation and optimal performance of the web application.

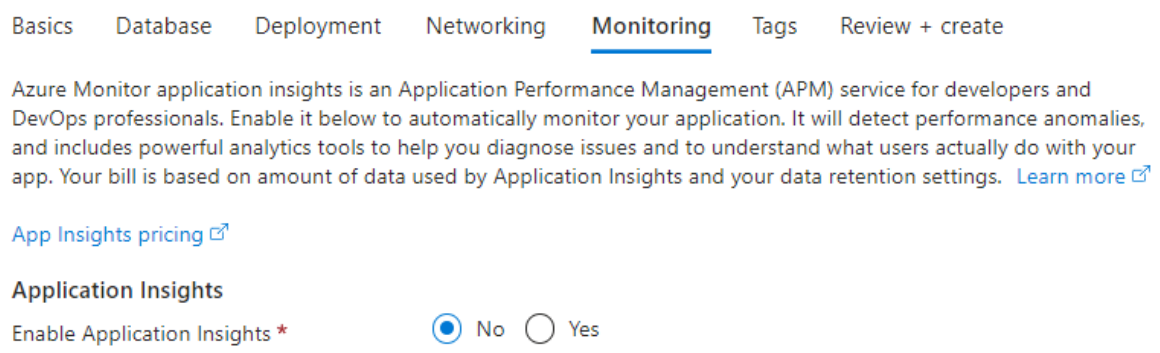
1. In this lab first we will create a web app and then enable the diagnostic settings on it.
2. Now you need to search the web app and start creating one.
3. First you have to create a new resource group for it. Then give your web app a name and choose the runtime stack, OS, and region.



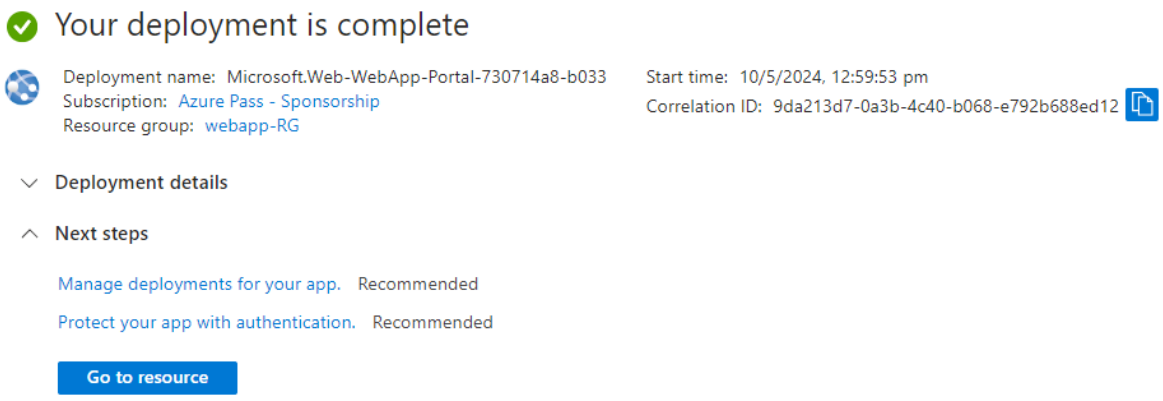
4. Then for the pricing plans you have to choose basic b1.



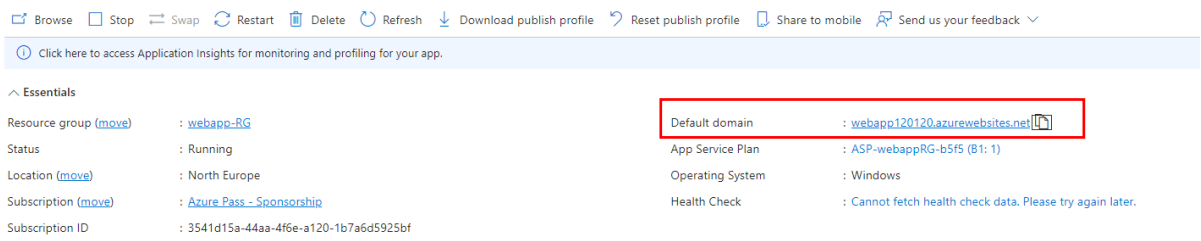
5. Then you need to go to Monitoring and turn off application insights.
6. Then go to the review page and create your web app.



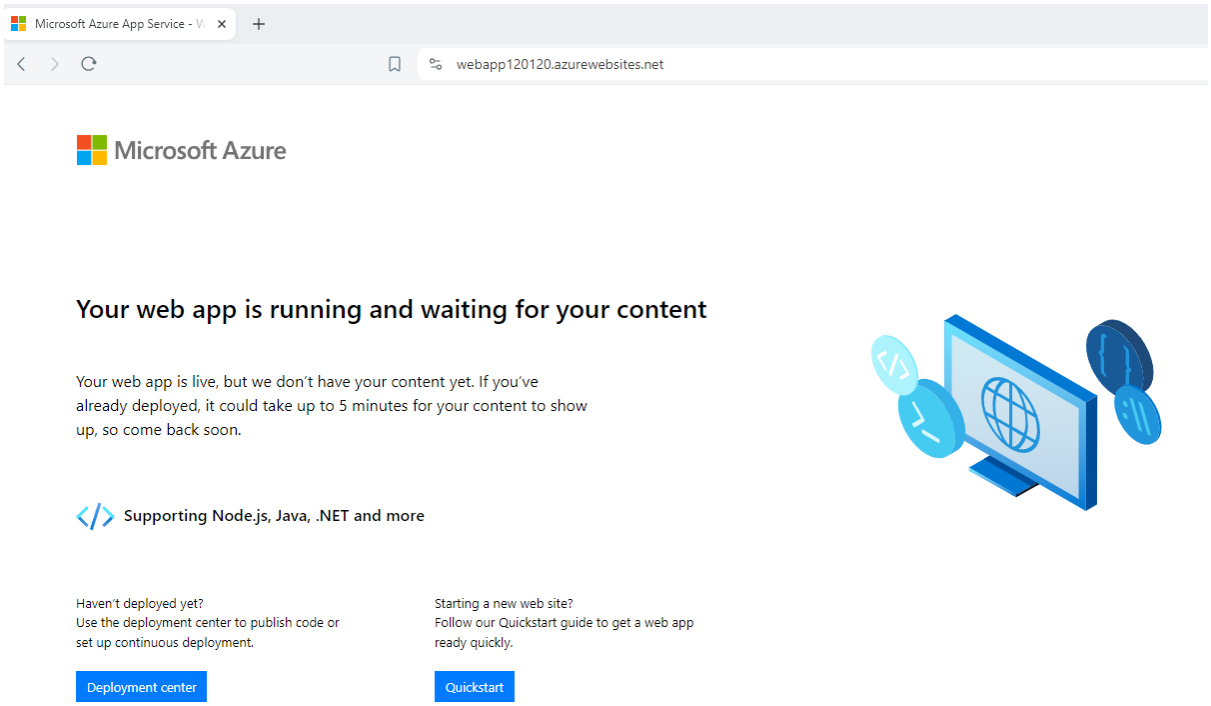
7. Once your deployment is completed then go to resources.



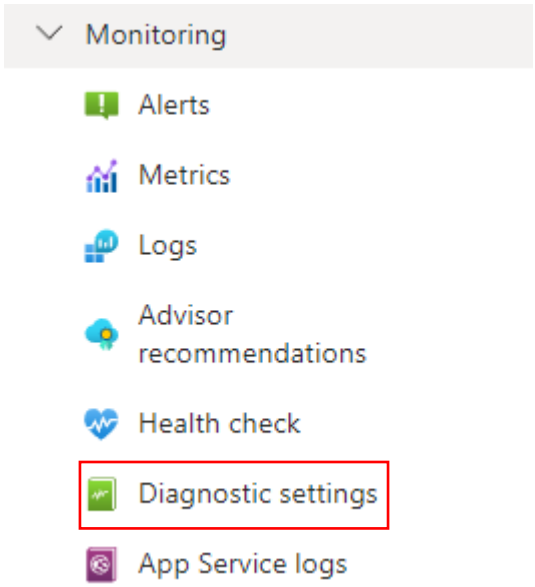
8. Inside it you will see that your web app is running, and it has a domain name.



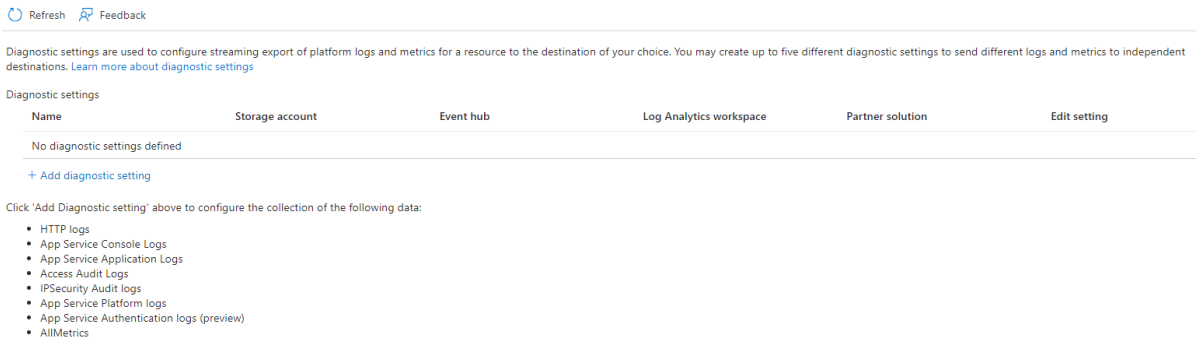
9. Now copy this domain name and paste it into a new tab and you will get this web page saying that your web app is running.



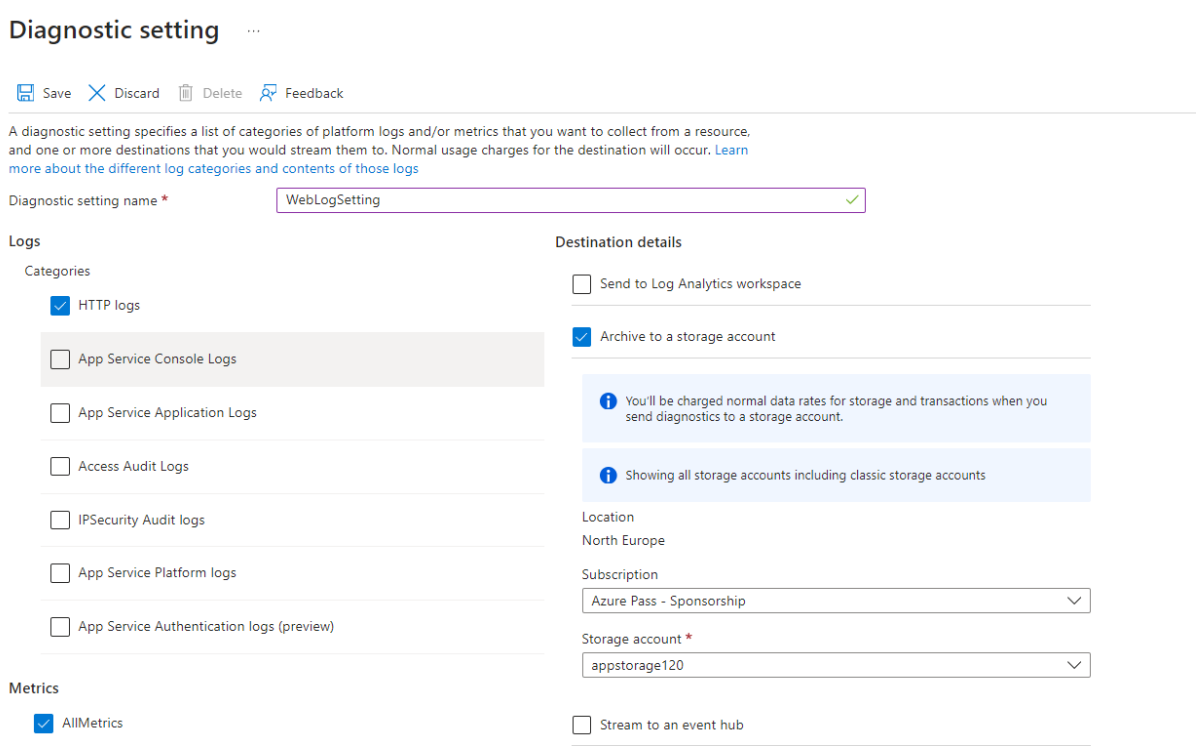
10. Then in your web app from the left pane scroll down to monitoring, expand it, and choose diagnostic settings.



11. Then you need to add the diagnostic settings.

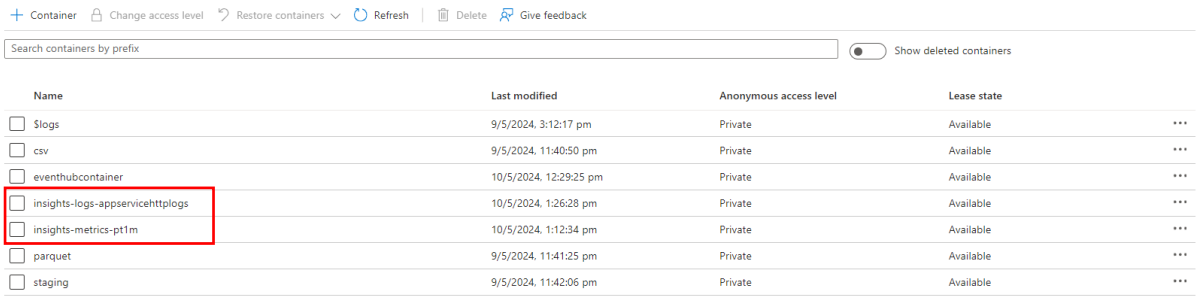


12. Now here first you are going to name it. After that you need to choose the storage account, and then you need to choose the logs as shown below.
13. Click on save, now you have to wait for at least one hour so that the data gets into your storage account.

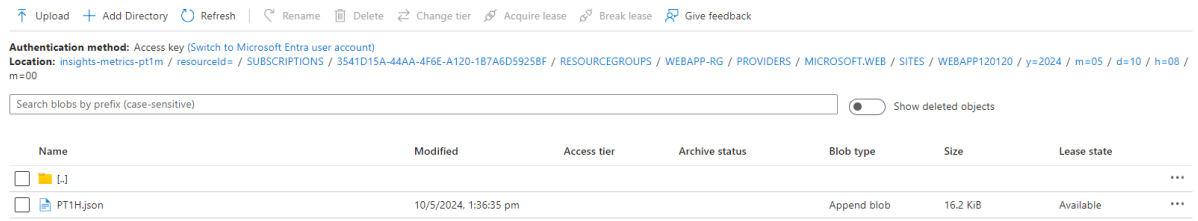


😄 Formulating the Query

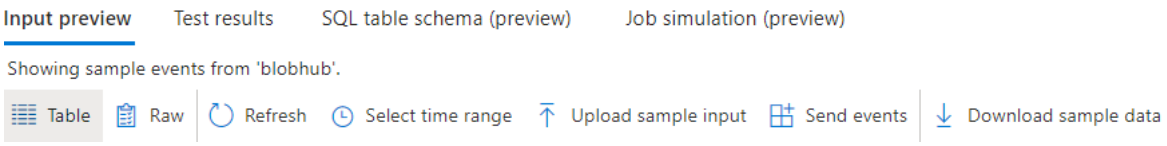
1. So, after 50 minutes we checked for the new containers in our storage account and they were there.



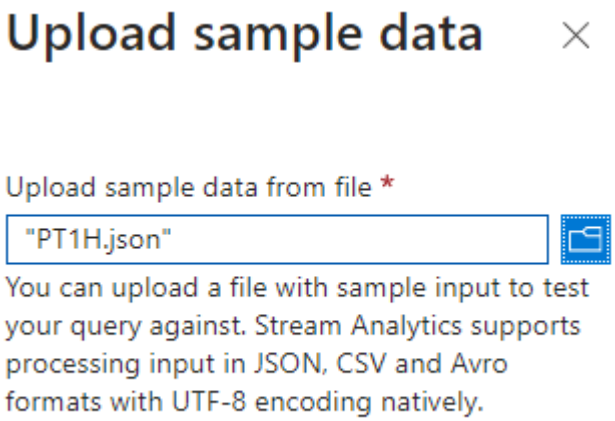
2. We are interested in our metrics container. So, open it.
3. After multiple layers of folders, we found our JSON file. Now you need to download it.



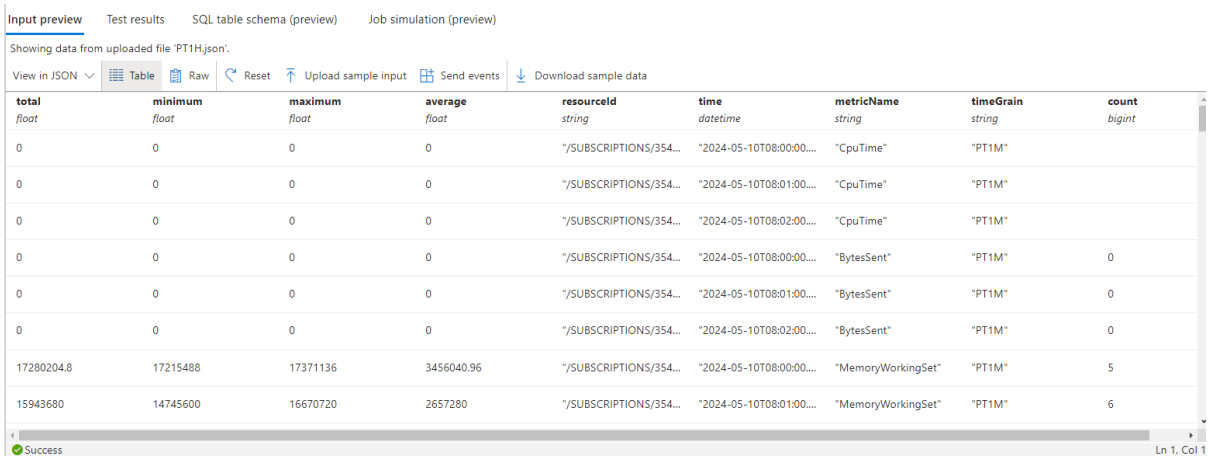
4. Now we need to understand what the structure of our data is. For that, we need to navigate to Stream analytics and open queries from there.
5. There you will see that we have an option to upload our data.



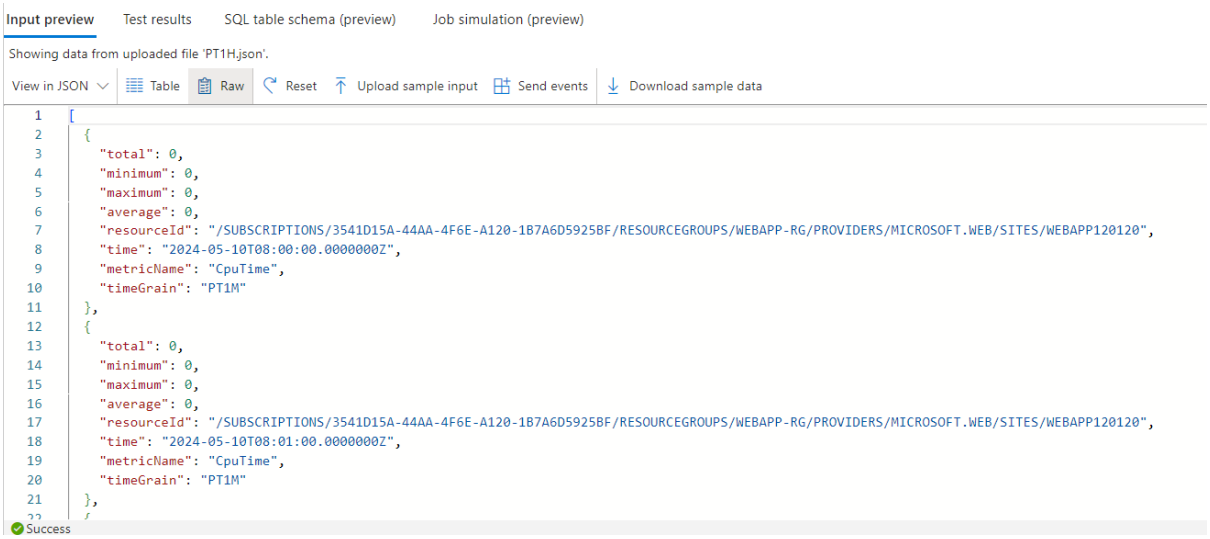
6. Click on upload and then choose your file then click on save.



7. Then you will see that we have the data in place in tabular format and we can get the idea of what it contains now.



8. If you want to check the Raw representation of your data then you can do that too.

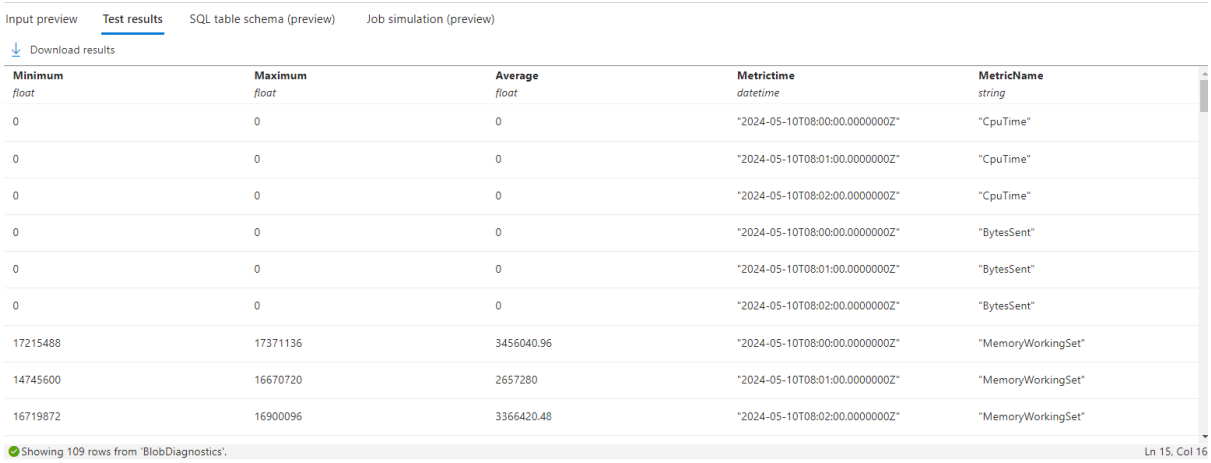


9. Now we are going to write a query as shown below and we do not care where the data is going to be written now.

```
SELECT
    minimum AS Minimum,
    maximum AS Maximum,
    average AS Average,
    time as Metrictime,
    metricName as MetricName
INTO
    [BlobDiagnostics]
FROM
    [blobhub] b
```

```
6  SELECT
7      minimum AS Minimum,
8      maximum AS Maximum,
9      average AS Average,
10     time as Metrictime,
11     metricName as MetricName
12 INTO
13     [BlobDiagnostics]
14 FROM
15     [blobhub] b
```

10. Then click on test query and we getting the data accordingly.



Input preview | Test results | SQL table schema (preview) | Job simulation (preview)

Download results

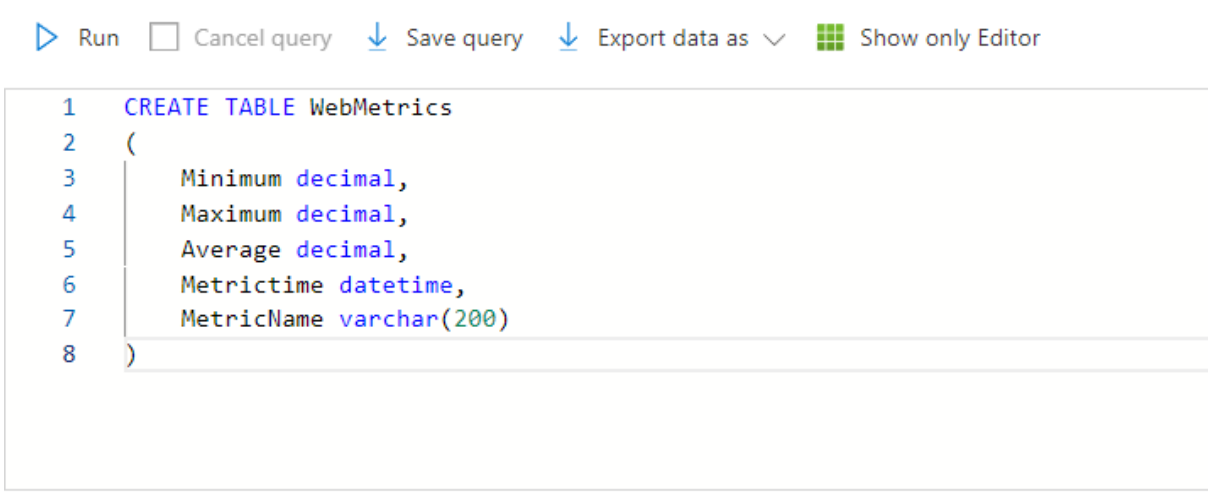
Minimum *float*	Maximum *float*	Average *float*	Metrictime *datetime*	MetricName *string*
0	0	0	"2024-05-10T08:00:00.0000000Z"	"CpuTime"
0	0	0	"2024-05-10T08:01:00.0000000Z"	"CpuTime"
0	0	0	"2024-05-10T08:02:00.0000000Z"	"CpuTime"
0	0	0	"2024-05-10T08:00:00.0000000Z"	"BytesSent"
0	0	0	"2024-05-10T08:01:00.0000000Z"	"BytesSent"
0	0	0	"2024-05-10T08:02:00.0000000Z"	"BytesSent"
17215488	17371136	3456040.96	"2024-05-10T08:00:00.0000000Z"	"MemoryWorkingSet"
14745600	16670720	2657280	"2024-05-10T08:01:00.0000000Z"	"MemoryWorkingSet"
16719872	16900096	3366420.48	"2024-05-10T08:02:00.0000000Z"	"MemoryWorkingSet"

Showing 109 rows from 'BlobDiagnostics'. Ln 15, Col 16

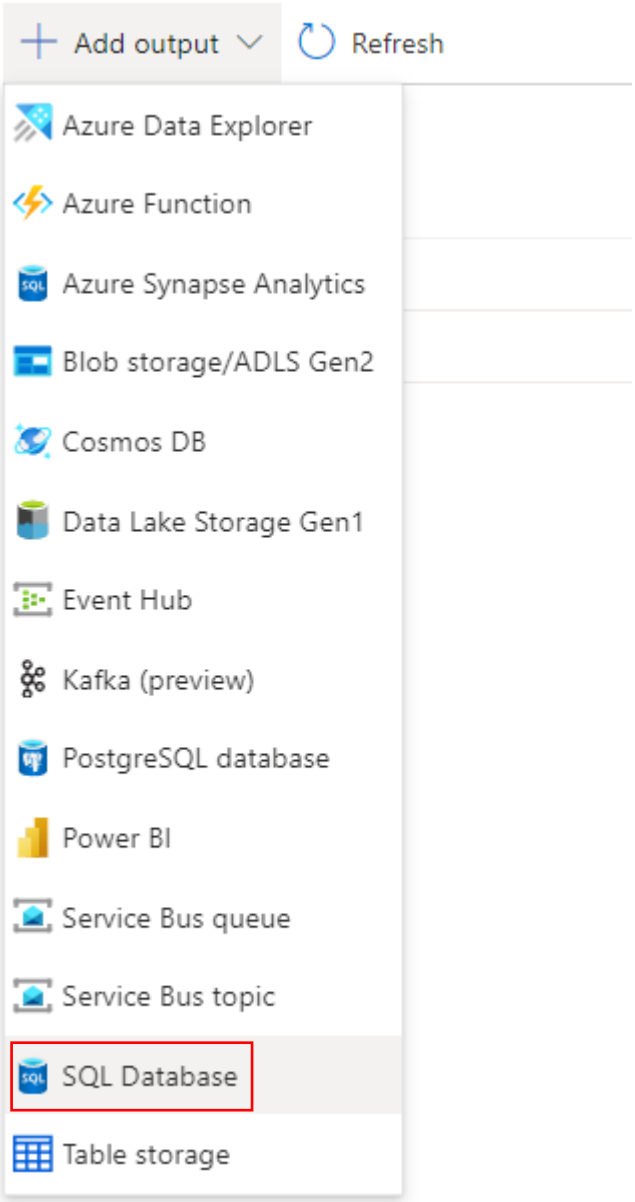
😄 Running Stream analytics Job

1. First you are going to create a table in your SQL Database so that we can send the data into that table.
2. For that either open SSMS or directly your query editor. Below you can see that we have created our table.

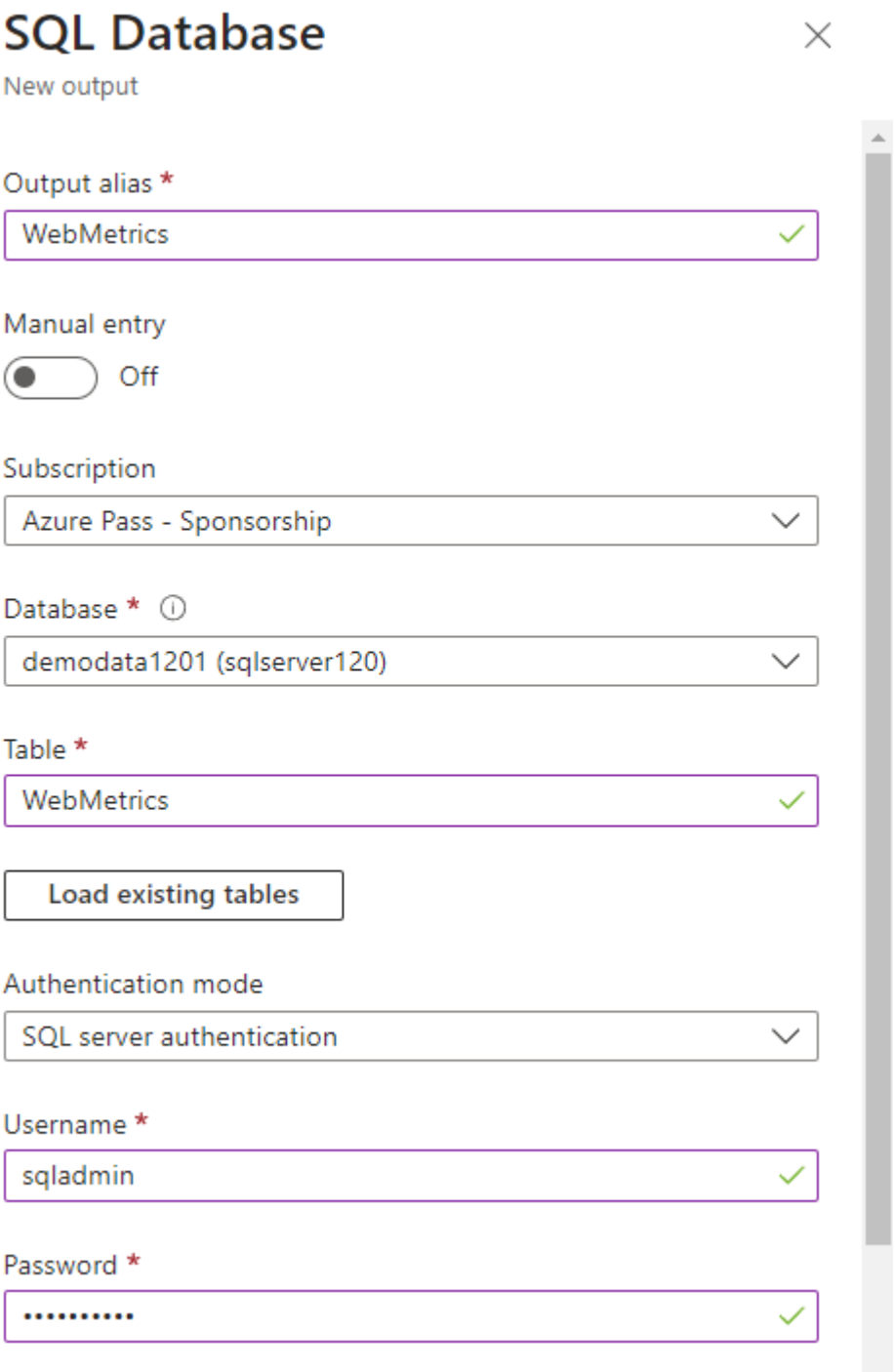
```
CREATE TABLE WebMetrics
(
   Minimum decimal,
   Maximum decimal,
   Average decimal,
   Metrictime datetime,
   MetricName varchar(200)
)
```



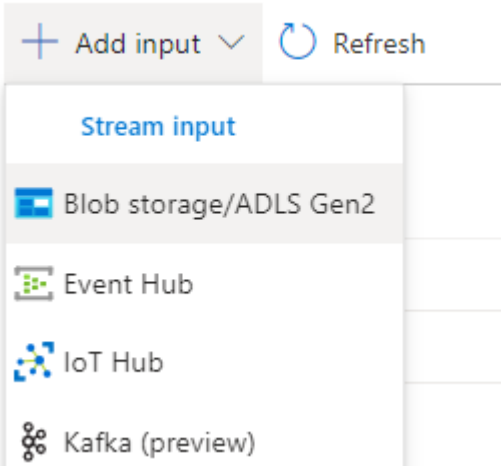
3. Then we are going to output and create an output for our table.
4. Click on add output then choose SQL Database.



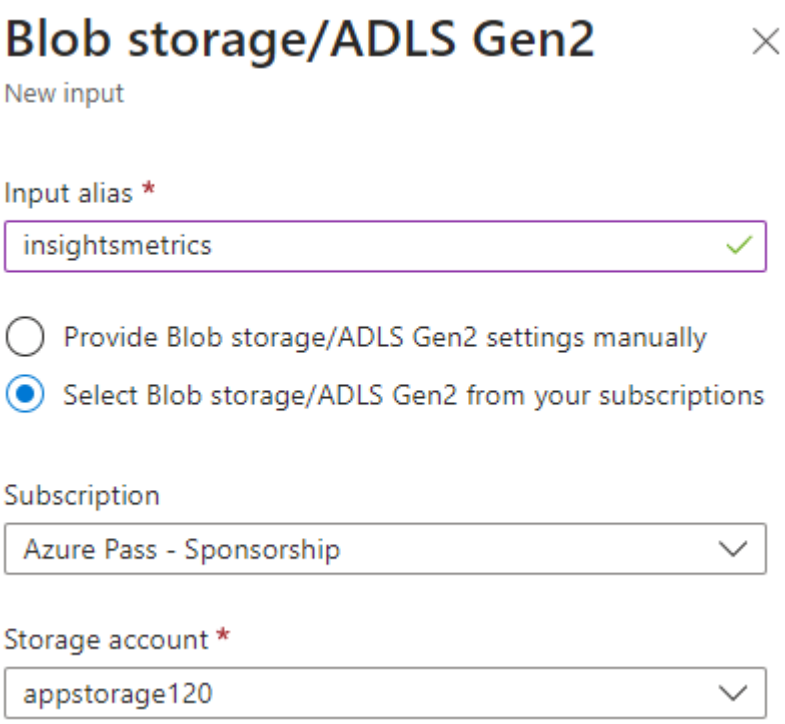
5. Then you need to give a name for your output and the table name.
6. Then give your username and password.



7. Now we need to add our input as our storage account but the thing is, so remember, we have quite a deep structure when it comes to the directories before we can reach the JSON-based file that's being recorded.
8. Go to inputs click on add input and choose blob storage.

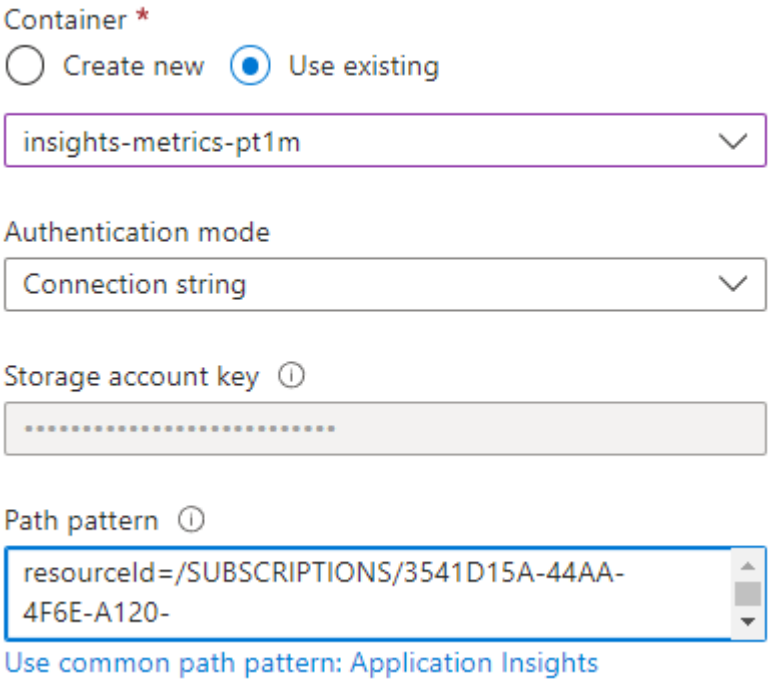


9. Now you need to give a name for your input and choose your storage account.

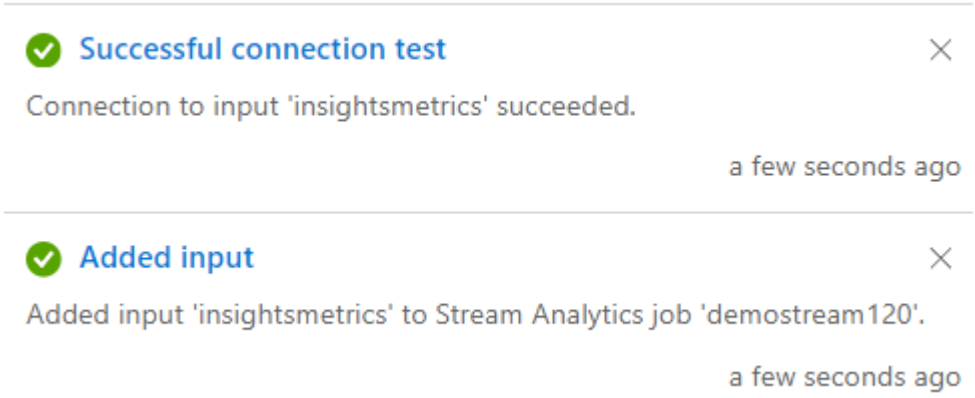


10. Then for the container choose existing, then select metrics container for the web app.
11. Now to give the path pattern first we need to copy the path of the file from our storage account then we need to paste it into our notepad.
12. After that delete all the content which exists before the resource ID and after the web app.
13. Then go back to the input and in the path, pattern click use common path pattern, you need to copy that pattern and paste it after the web app which is highlighted.

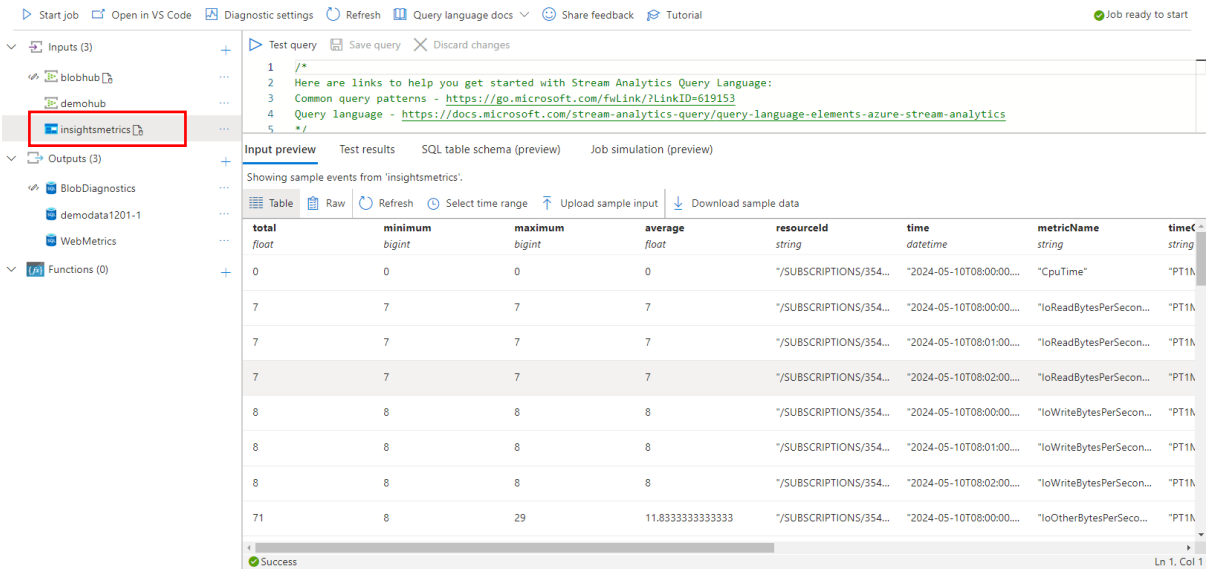
resourceId=/SUBSCRIPTIONS/3541D15A-44AA-4F6E-A120-1B7A6D5925BF/RESOURCEGROUPS/WEBAPP-RG/PROVIDERS/MICROSOFT.WEB/SITES/WEBAPP120120/y={datetime:yyyy}/m={datetime:MM}/d={datetime:dd}/h={datetime:HH}/m={datetime:mm}



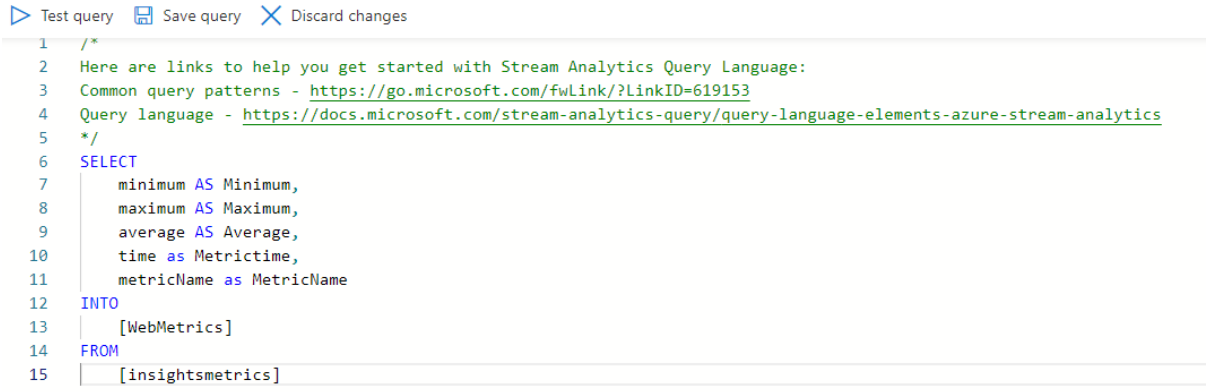
14. Then just save your input. Below you can see that our input was added and the connection test was successful.



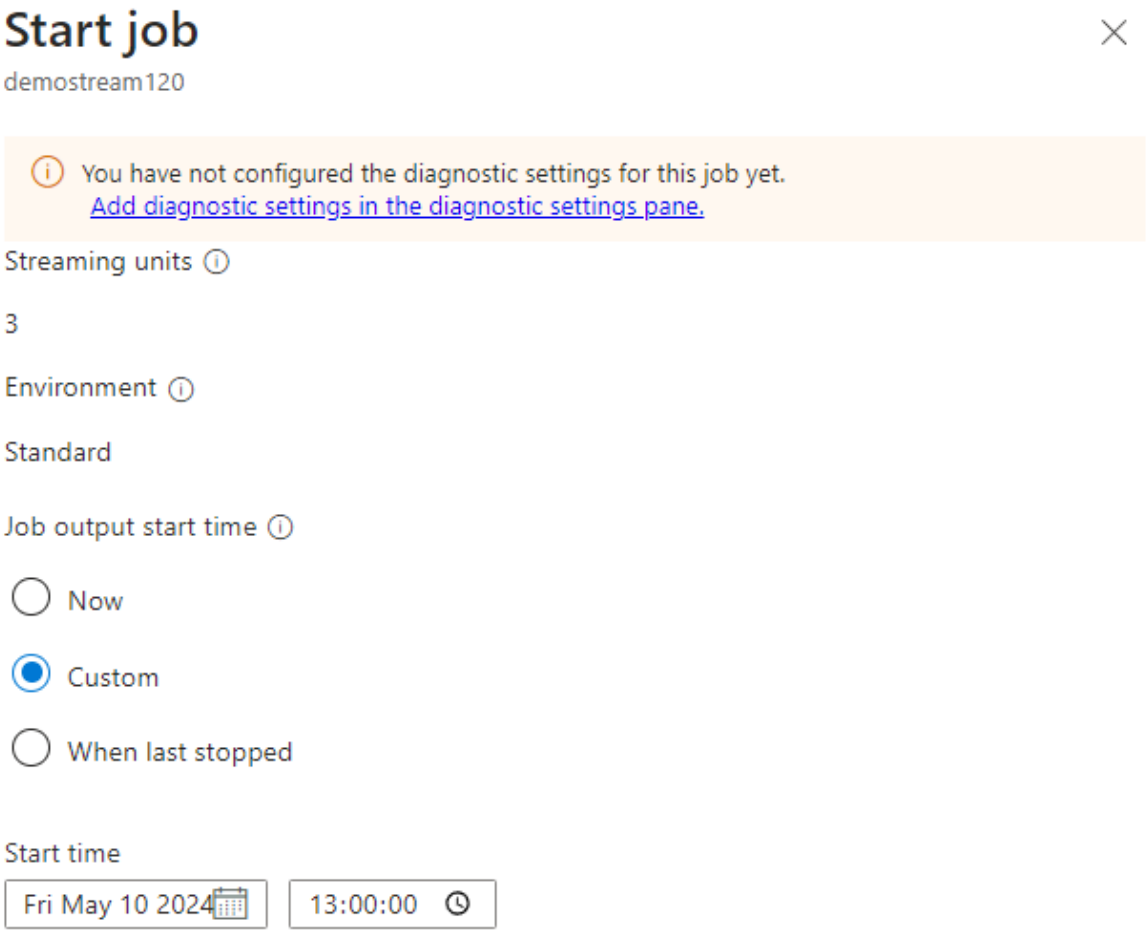
15. Now you need to go to query and select insight metrics from input if you get the data then it is good. But if you don't get the data then you have to select a different time range.



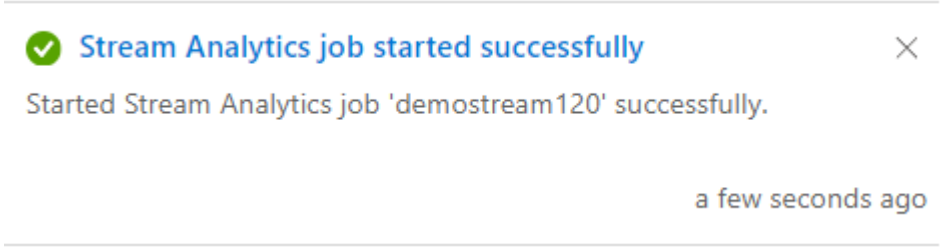
16. Now we need to write the query as shown below go to overview and start the job.



17. While starting your job choose custom and start it from the past.



18. Once your job has successfully started then go to query editor in your SQL Database or open SSMS and run the select statement to check the data.



19. Below you can see that we got the data successfully.