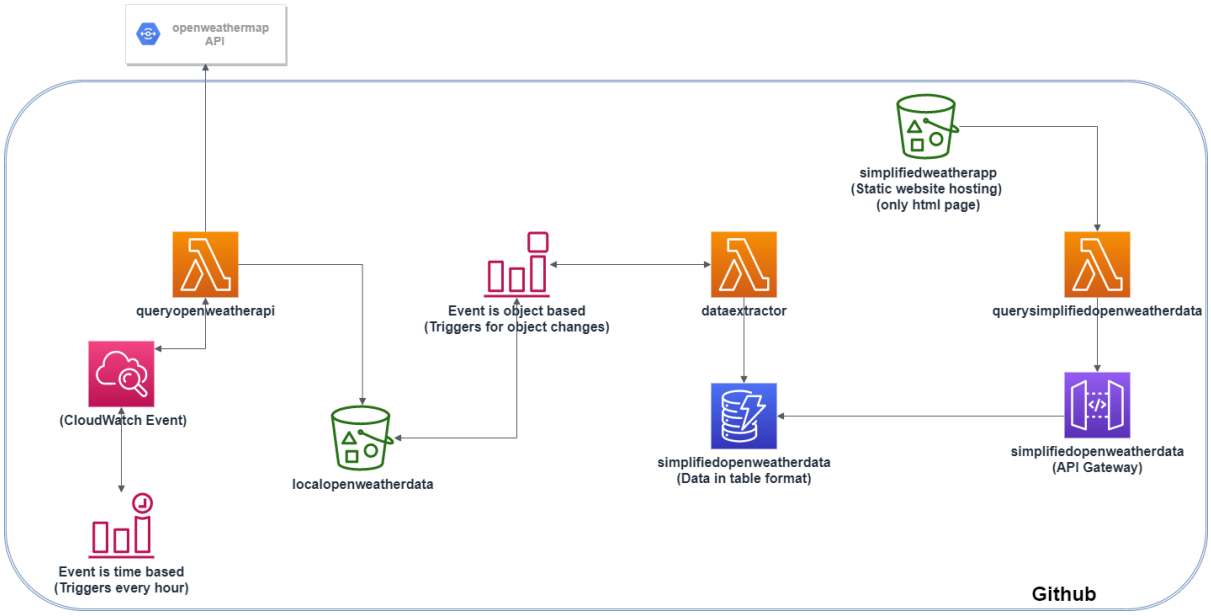
Implementation

Workflow :

Below is an brief workflow shown:



Services used:

3 Lambda functions

2 S3 Buckets

1 DynamoDB table

API Gateway

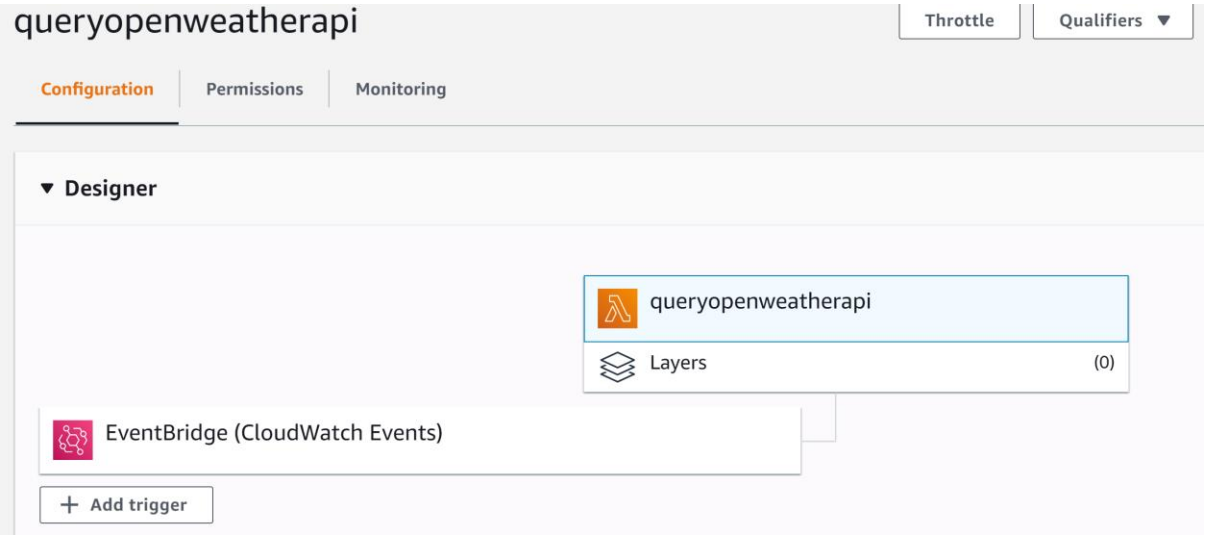
CloudWatch

1st Lambda function:

Get the data from the API of https://openweathermap.org/current which is api.openweathermap.org/data/2.5/box/city?bbox={bbox}&appid={API key}

Data is read and store in Json format in a file and upload the file in “localopenweatherdata” S3 bucket. Filename is a time stamp of that instant.

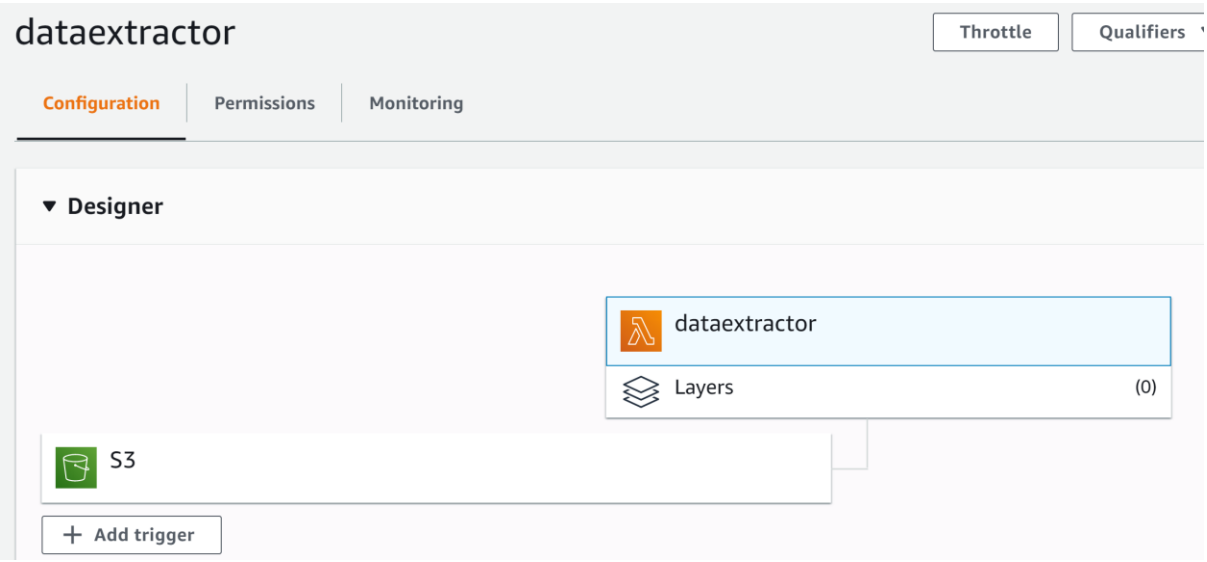
A Couldwatch event is added to trigger the API call hourly.



2nd Lambda function:

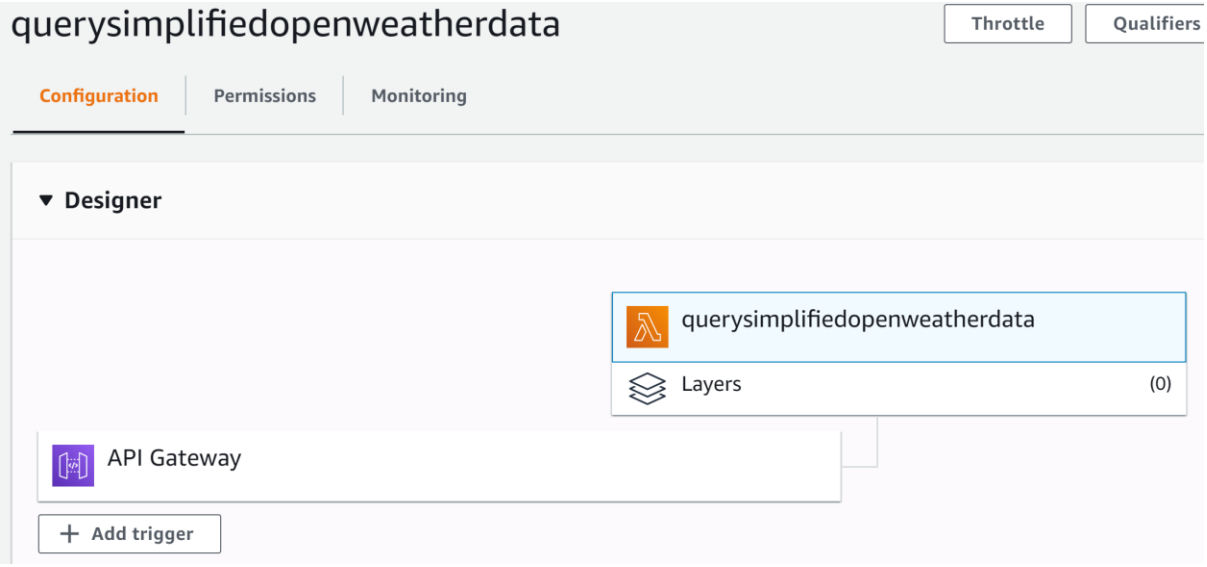
Reads the lastest file and extracts required data and stores in DynamoDB table "simplifiedopenweatherdata". S3 trigger is added, every time object is added to "localopenweatherdata" bucket lambda function is called.

Just to test, it is displayed.



3rd Lambda function:

The 3rd function scans the DynamoDB table and retrieves the contents of table. Then this content is displayed in HTML which is stored in new "Simplifiedweatherapp" S3 bucket, which is used for static website hosting.



S3 Buckets:

Localopenweatherdata → Data extracted from API is stored in file in this bucket with timestamp as file name.

Simplifiedweatherapp → Final result is addedin this bucket, HTML page. Static web hosting only.

The final enpoint http://simplifiedweatherapp.s3-website-us-east-1.amazonaws.com