**Event Grid Triggers for ADF pipelines**

**High Level Overview of the solution to move incremental changes from S3 to Azure Blob Storage.**

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1. **When a file is added to S3, the Lambda function triggers and emits an even (with S3 Bucket name and file name) to Azure Event Grid.**
2. **Event Grid subscription passed event to Azure Data Factory**
3. **The Azure Data Factory uses the Copy pipeline and S3 connectors to pull the file from S3 to Azure Storage account.**

**Azure Data Factory Event Grid trigger setup.**

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**Posting S3 bucket and file name to Event Grid using Lambda Function**

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Lambda code to send the Changed/Added filename and bucket name as event to Event Grid Topic, which in turn triggers the Azure Data Factory copy pipeline.

import json

import uuid

import datetime

import requests

from requests.structures import CaseInsensitiveDict

def lambda\_handler(event, context):

# TODO implement

print(json.dumps(event['Records'][0]['s3']['bucket']['name']))

print(json.dumps(event['Records'][0]['s3']['object']['key']))

s3bucketname = event['Records'][0]['s3']['bucket']['name']

s3filename = event['Records'][0]['s3']['object']['key']

random\_uuid = uuid.uuid4()

print(random\_uuid)

now = datetime.datetime.now()

date\_string = now.strftime("%Y-%m-%dT%H:%M:%S%z")

print(date\_string)

url = "https://YOUR-EVENT-GRID-TOPIC.eastus-1.eventgrid.azure.net/api/events"

headers = { "Content-Type": "application/json", "aeg-sas-key": "Event-Grid-key"}

data = [ {"id": str(random\_uuid), "eventType": "s3filereceived", "subject": "copyings3data", "eventTime": date\_string, "data":{ "bucketname": s3bucketname, "filename": s3filename},"dataVersion": "1.0" , "metadataVersion": "1","topic": "/subscriptions/67d74a3b-37db-4ecf-9413-f10b2487c949/resourceGroups/ServerlessRG/providers/Microsoft.EventGrid/topics/s3event"} ]

#data = [ {"id": str(random\_uuid), "eventType": "s3filereceived", "subject": "copyings3data"}]

#headers = []

#headers["Content-Type"] = "application/json"

print(headers)

print(data)

print(url)

response = requests.post(url,headers=headers,data=json.dumps(data))

print(response.status\_code)

return {

'statusCode': 200,

'body': json.dumps('Hello from Lambda!')

}

**Following screenshot showing the Event Grid receiving above data and triggering ADF Pipeline. The endpoint shown on lower right hand corner point to the ADF trigger.**

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**The following screenshot shows the COPY pipeline running for the S3 file that was sent as event data.**

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**The following screenshot shows that the highlighted file was successfully copied from S3 bucket to ADFS.**

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