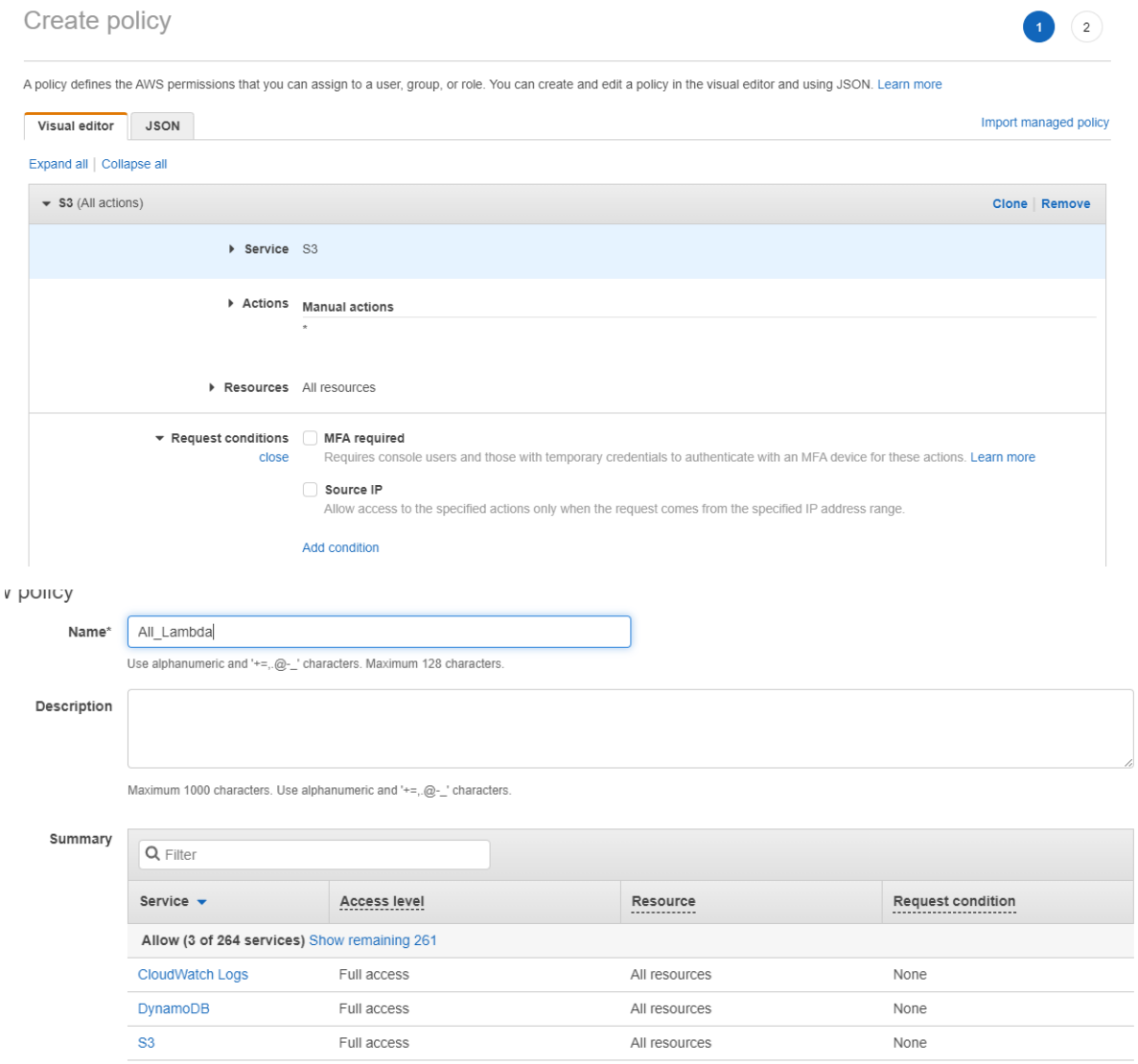
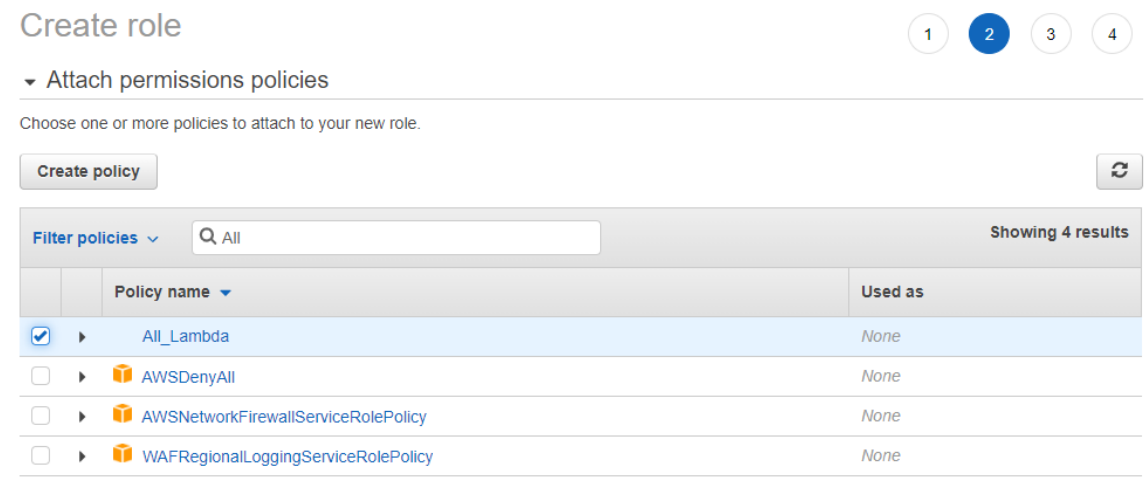
Zadnia lab 8 Przemysław Kawa

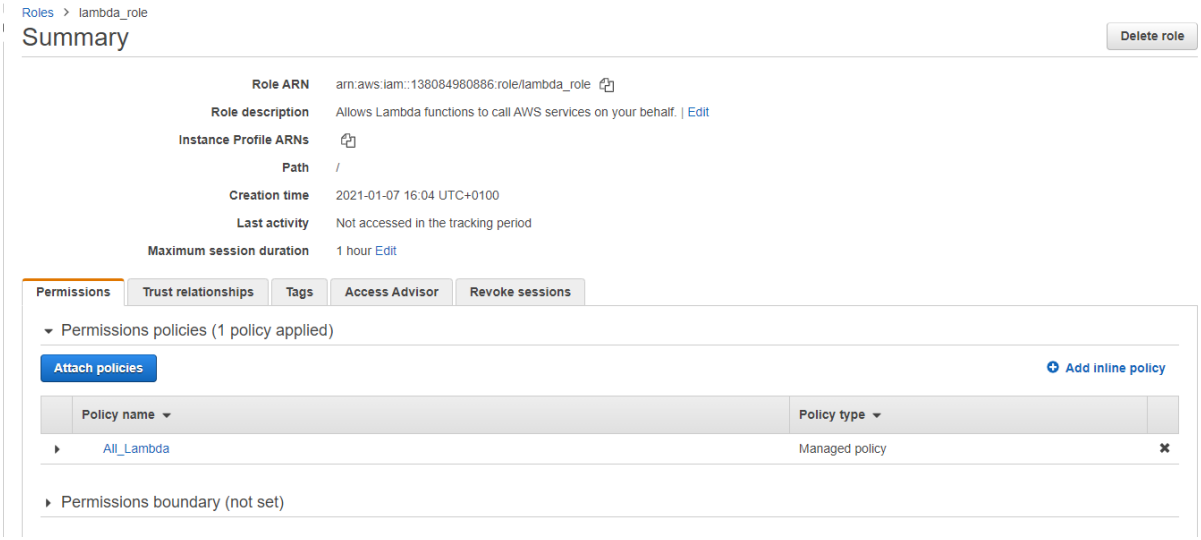
1. Zaprojektuj i zastosuj funkcję lambda, która posłuży do wczytanie danych z pliku tekstowego w formacie *.csv, *.txt do odpowiedniej tabeli w bazie danych, w reakcji na zdarzenie związane z wgraniem pliku wejściowego do zasobu S3,

Tworzymy Politykę

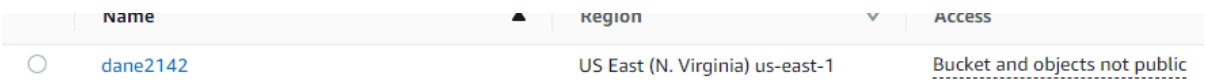


Tworzymy rolę:

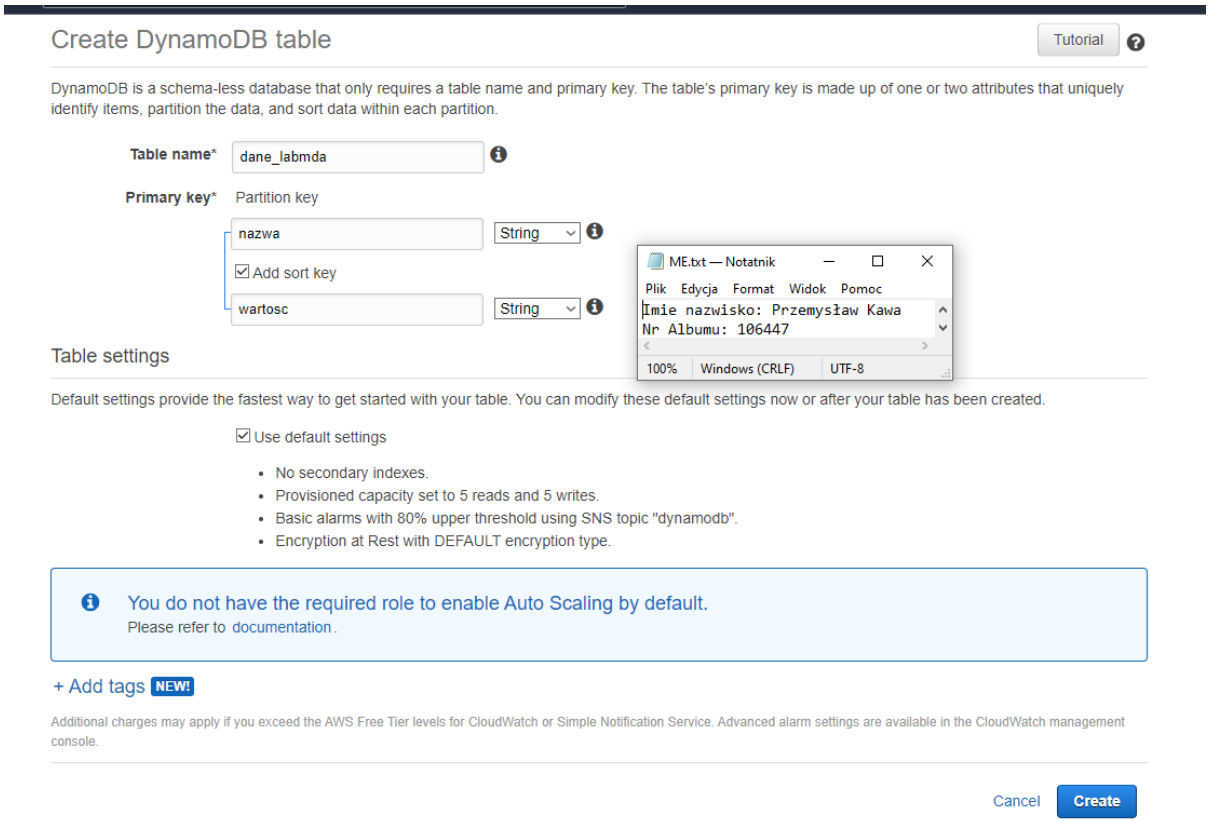


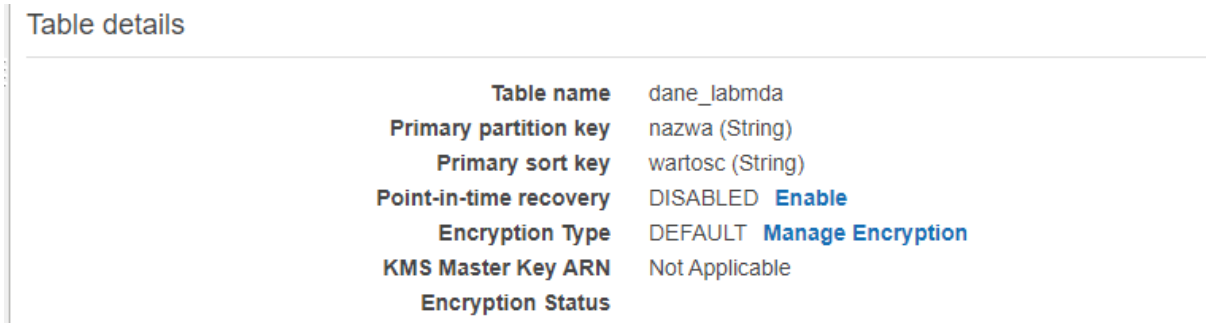


Tworzymy S3

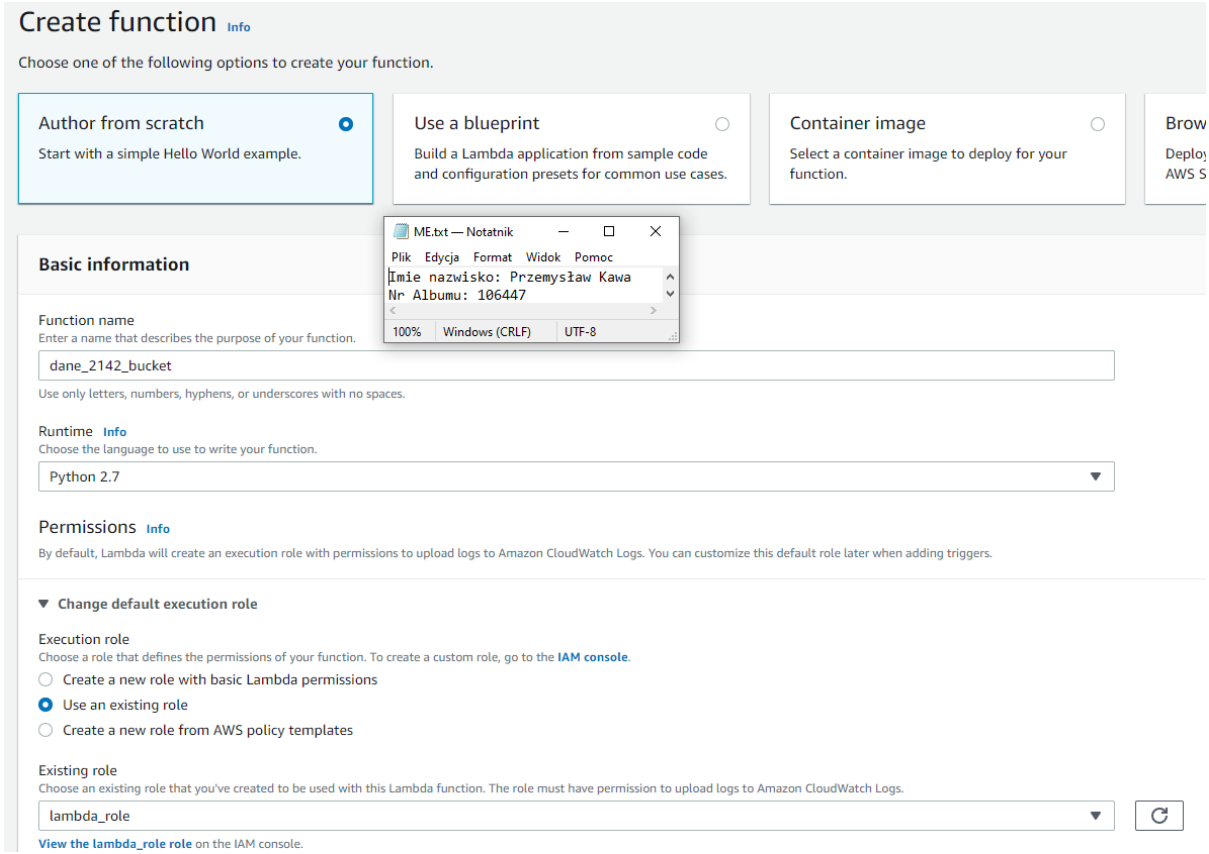


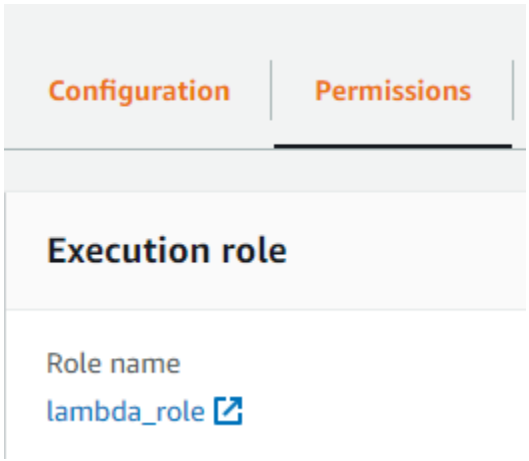
DynamoDB



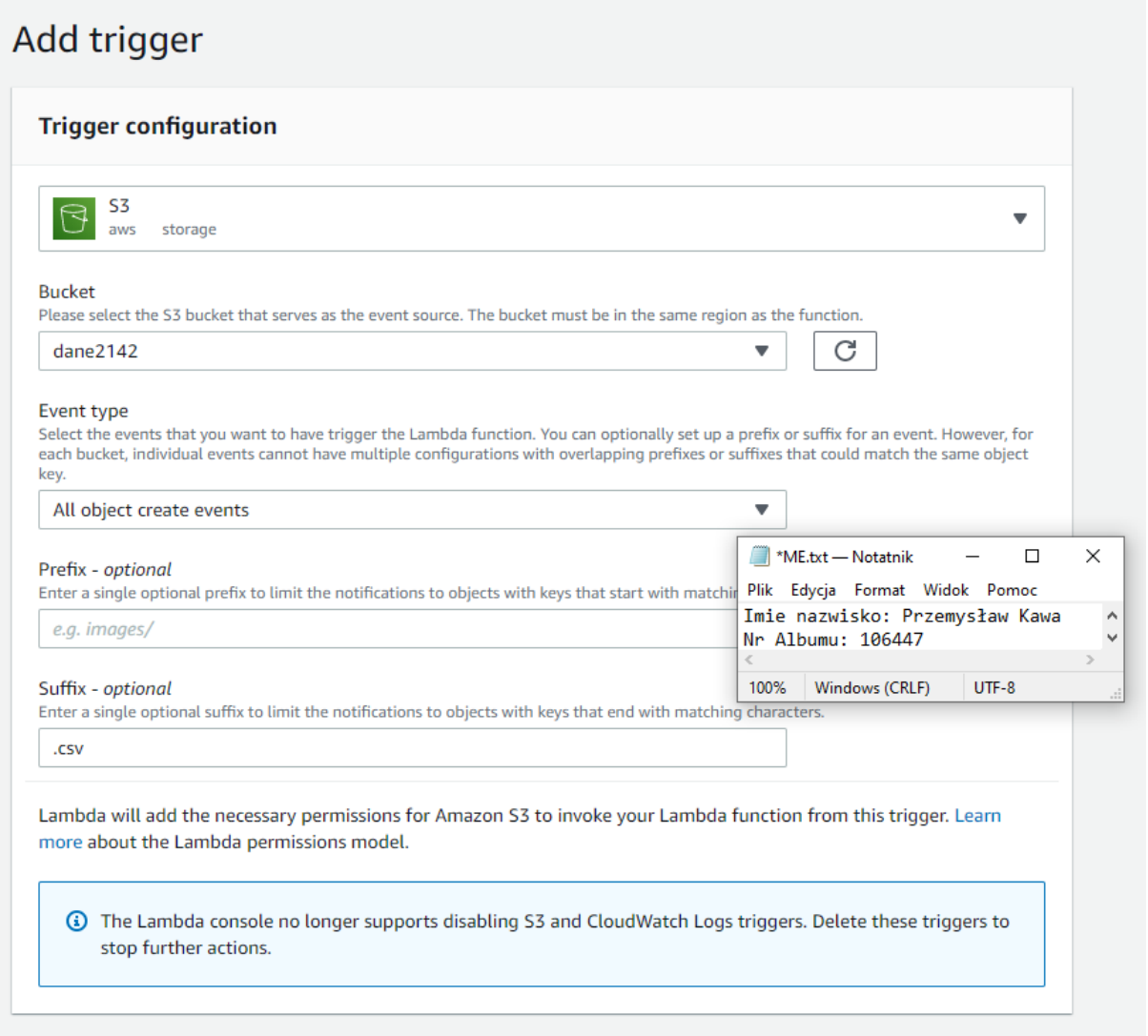


Tworzymy funkcje lambda


Create function Info
Choose one of the following options to create your function.
Author from scratch
Start with a simple Hello World example.
Use a blueprint
Build a Lambda application from sample code and configuration presets for common use cases.
Container image
Select a container image to deploy for your function.
ME.txt — Notatnik
Plik Edycja Format Widok Pomoc
Imie nazwisko: Przemysław Kawa
Nr Albumu: 106447
100% Windows (CRLF) UTF-8
Basic information
Function name
Enter a name that describes the purpose of your function.
dane_2142_bucket
Use only letters, numbers, hyphens, or underscores with no spaces.
Runtime Info
Choose the language to use to write your function.
Python 2.7
Permissions Info
By default, Lambda will create an execution role with permissions to upload logs to Amazon CloudWatch Logs. You can customize this default role later when adding triggers.
Change default execution role
Execution role
Choose a role that defines the permissions of your function. To create a custom role, go to the IAM console.
Create a new role with basic Lambda permissions
Use an existing role
Create a new role from AWS policy templates
Existing role
Choose an existing role that you've created to be used with this Lambda function. The role must have permission to upload logs to Amazon CloudWatch Logs.
lambda_role
View the lambda_role role on the IAM console.

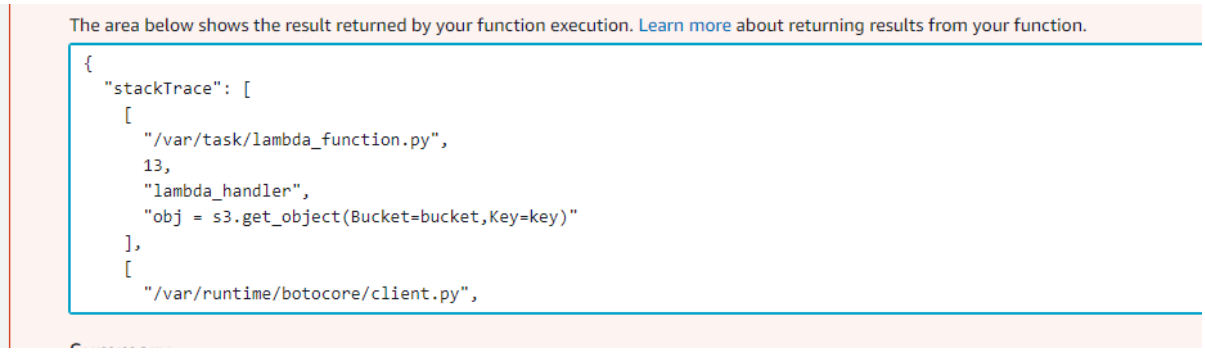

Configuration
Permissions
Execution role
Role name
lambda_role

Trigger:

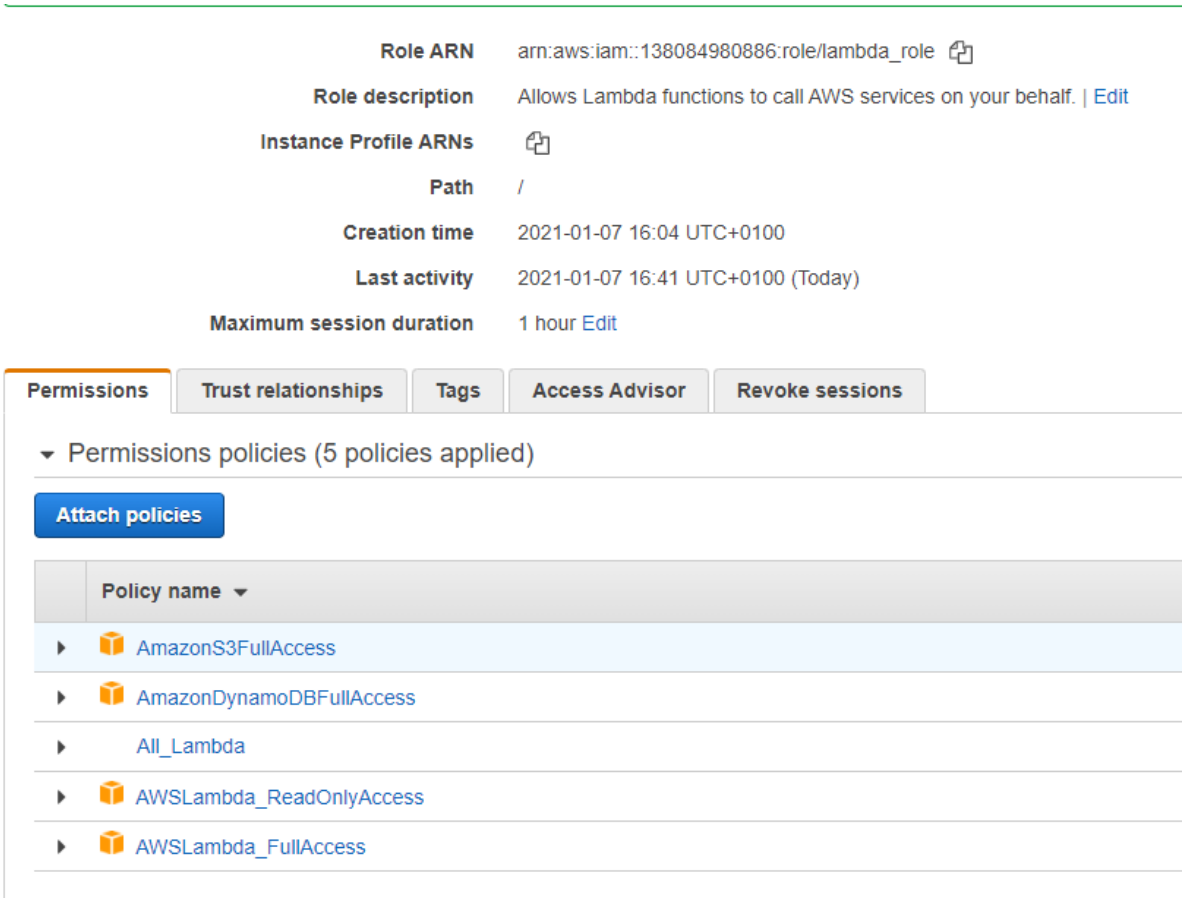


^ tworzymy taki sam dla .txt

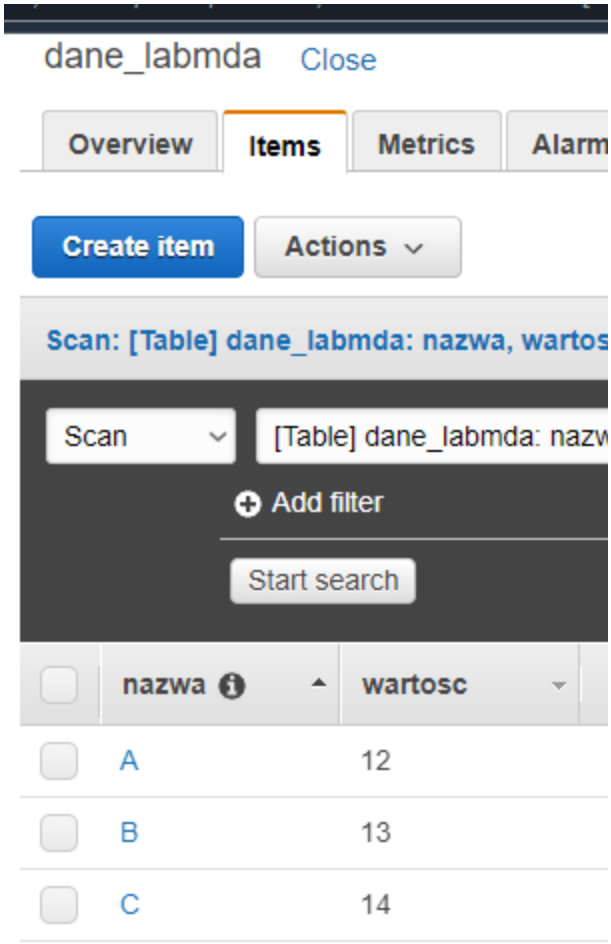
Basic test:



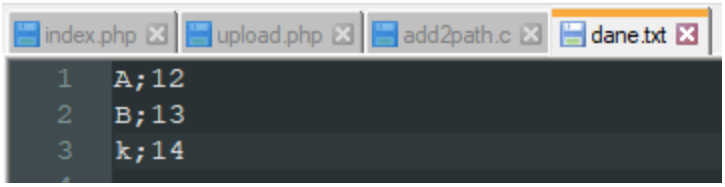
Try fix:

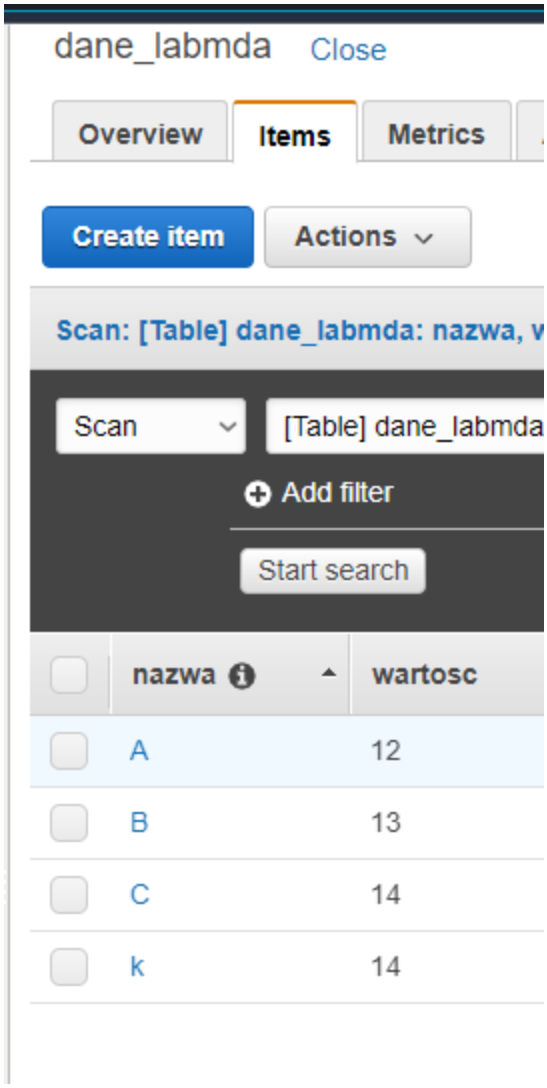


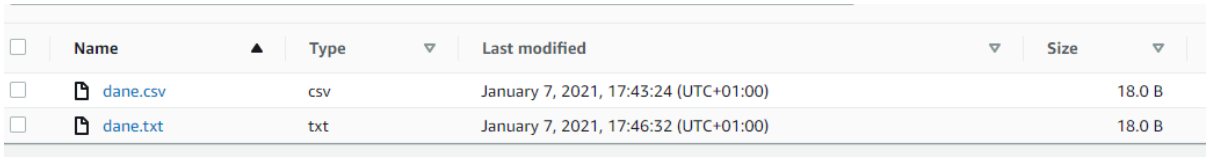
After File dane.csv upload



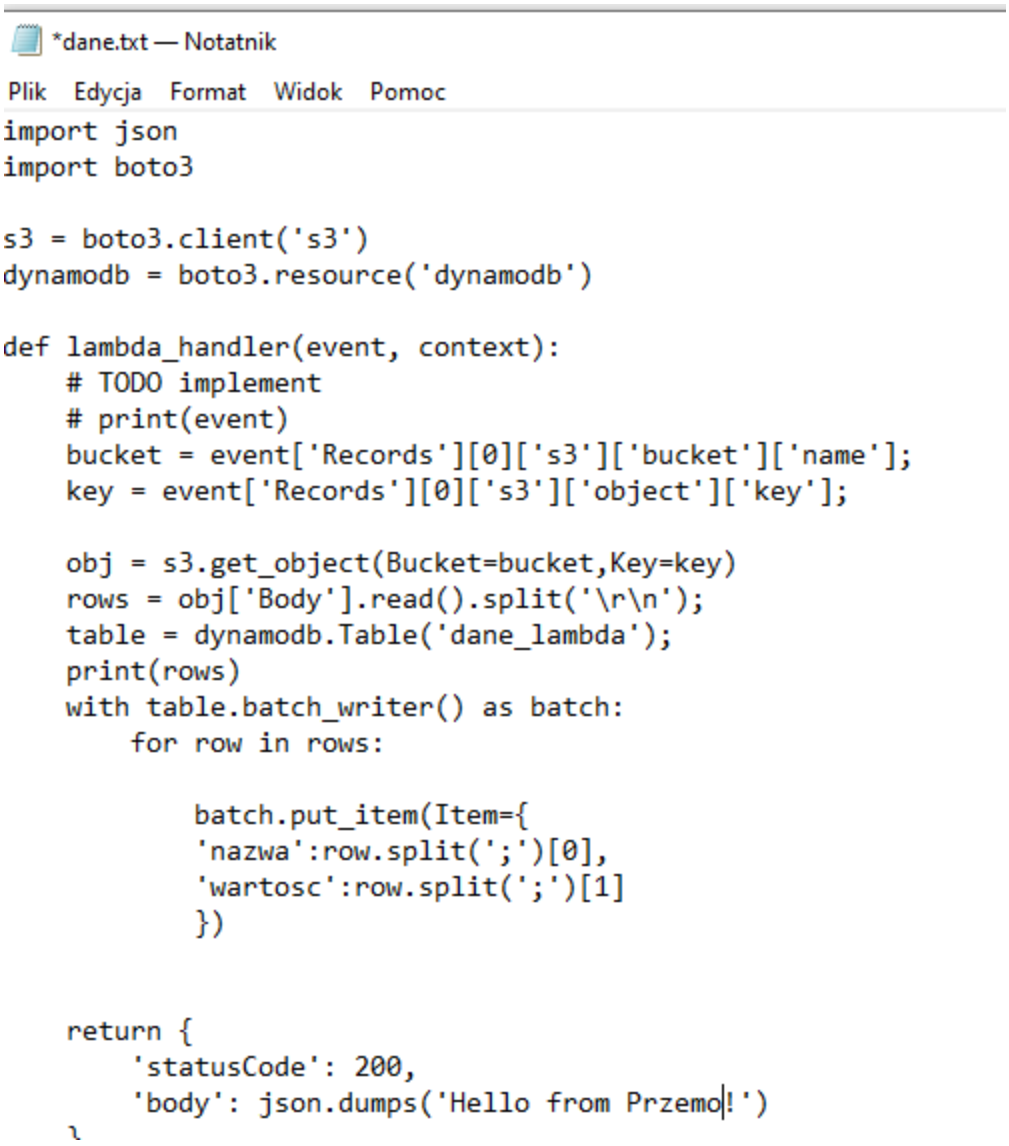
Txt next test







Wszystko działa zamykamy

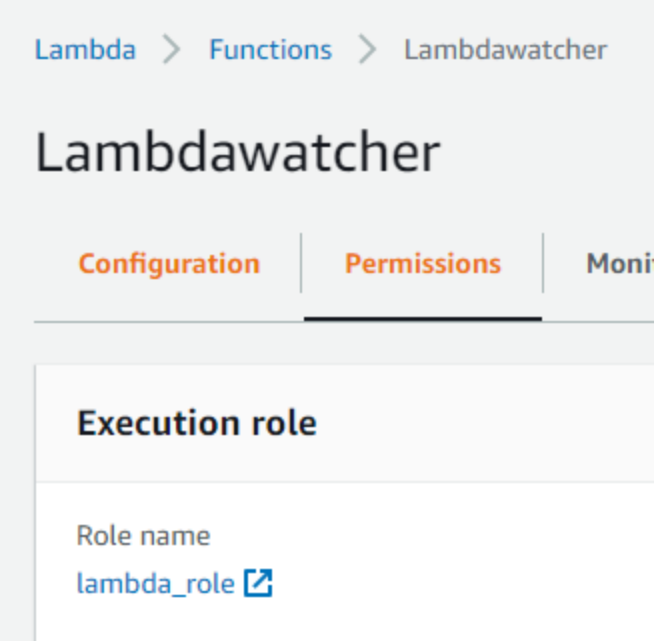


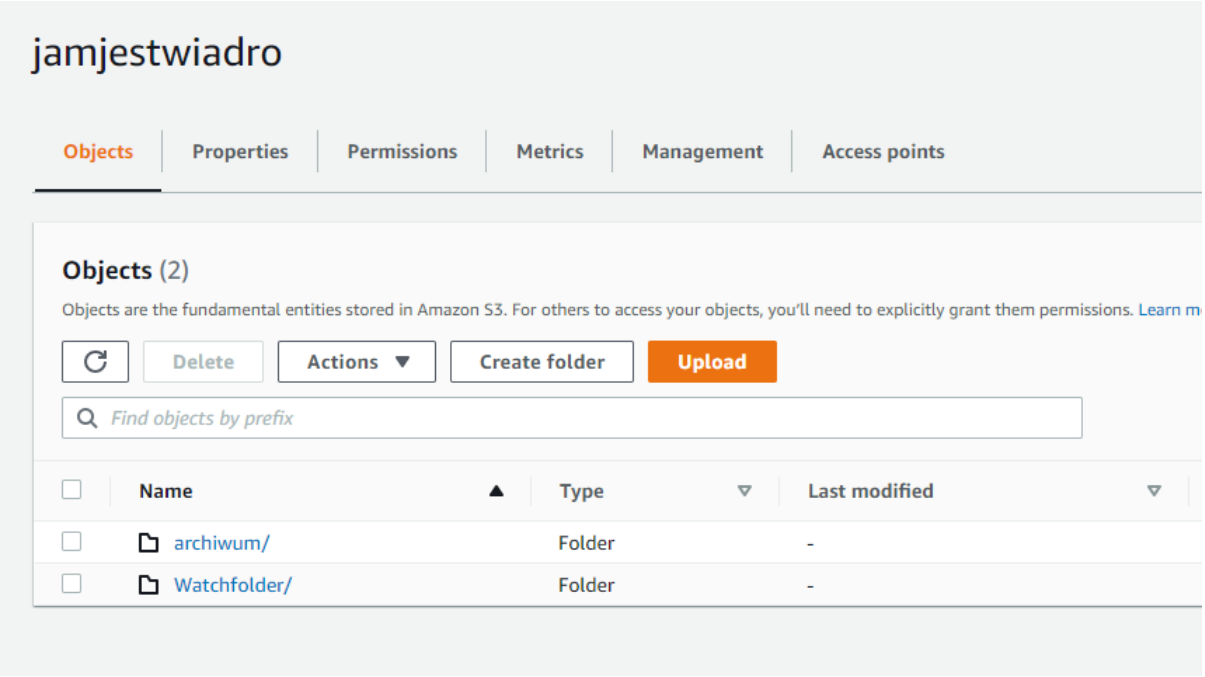
2. Zaprojektuj funkcję lambda, która monitoruje wybrany katalog w zasobie S3, i przenosi wybrane pliki (np. o ustalonym rozszerzeniu), do katalogu archiwum również w zasobie S3. W sprawozdaniu należy dodatkowo umieścić kod źródłowy odpowiednich funkcji lambda.

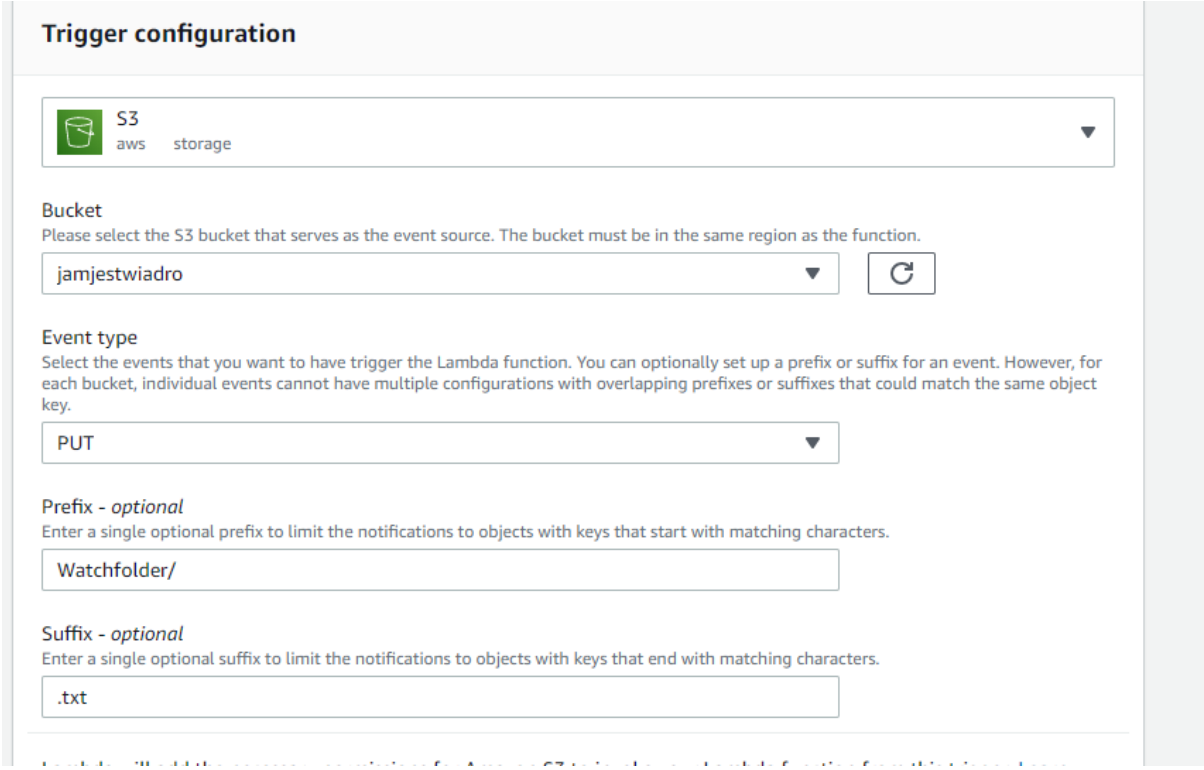
Uwagi:

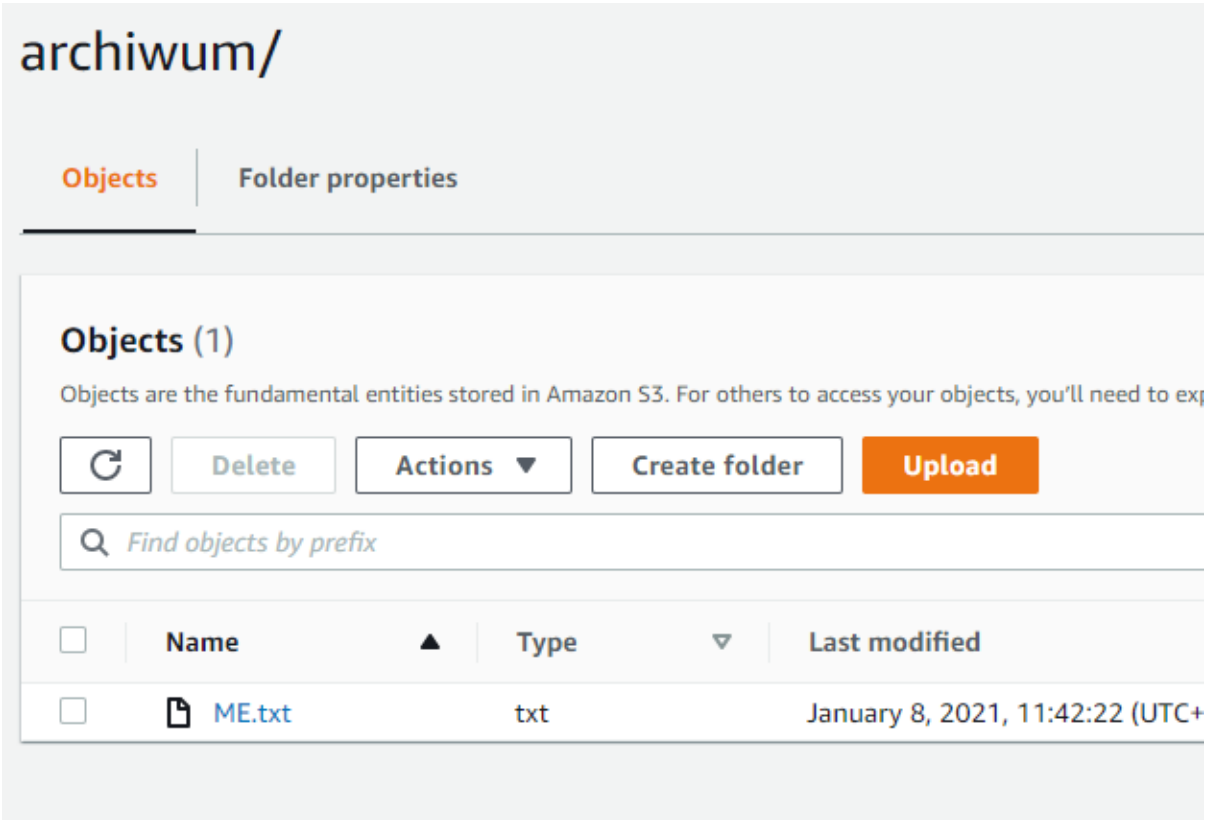
1 Należy prześledzić nagranie z lab8 w celu konfiguracji roli wykorzystane poniżej lub wczytać się zadanie powyżej

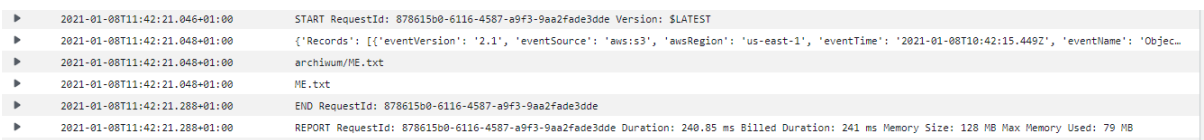
2 Zadziała tylko jeśli wrzucimy do Warchfolder plik txt w celu innych konfiguracji sprawdź kod i trriger!


Lambda > Functions > Lambdawatcher
Lambdawatcher
Configuration
Permissions
Moni
Execution role
Role name
lambda_role


jamjestwiadro
Objects
Properties
Permissions
Metrics
Management
Access points
Objects (2)
Objects are the fundamental entities stored in Amazon S3. For others to access your objects, you'll need to explicitly grant them permissions. Learn m
Delete
Actions
Create folder
Upload
Find objects by prefix
Name
Type
Last modified
archiwum/
Folder
-
Watchfolder/
Folder
-


Trigger configuration
S3
aws storage
Bucket
Please select the S3 bucket that serves as the event source. The bucket must be in the same region as the function.
jamjestwiadro
Event type
Select the events that you want to have trigger the Lambda function. You can optionally set up a prefix or suffix for an event. However, for each bucket, individual events cannot have multiple configurations with overlapping prefixes or suffixes that could match the same object key.
PUT
Prefix - optional
Enter a single optional prefix to limit the notifications to objects with keys that start with matching characters.
Watchfolder/
Suffix - optional
Enter a single optional suffix to limit the notifications to objects with keys that end with matching characters.
.txt


archiwum/
Objects
Folder properties
Objects (1)
Objects are the fundamental entities stored in Amazon S3. For others to access your objects, you'll need to exp
Delete
Actions
Create folder
Upload
Find objects by prefix
Name
Type
Last modified
ME.txt
txt
January 8, 2021, 11:42:22 (UTC+


2021-01-08T11:42:21.046+01:00 START RequestId: 878615b0-6116-4587-a9f3-9aa2fade3dde Version: $LATEST
2021-01-08T11:42:21.048+01:00 {'Records': [{'eventVersion': '2.1', 'eventSource': 'aws:s3', 'awsRegion': 'us-east-1', 'eventTime': '2021-01-08T10:42:15.449Z', 'eventName': 'Objec…
2021-01-08T11:42:21.048+01:00 archiwum/ME.txt
2021-01-08T11:42:21.048+01:00 ME.txt
2021-01-08T11:42:21.288+01:00 END RequestId: 878615b0-6116-4587-a9f3-9aa2fade3dde
2021-01-08T11:42:21.288+01:00 REPORT RequestId: 878615b0-6116-4587-a9f3-9aa2fade3dde Duration: 240.85 ms Billed Duration: 241 ms Memory Size: 128 MB Max Memory Used: 79 MB

Kod (Sprawdzić wcięcia po skopiowaniu!):

```
import json
import boto3

s3 = boto3.client('s3')

def lambda_handler(event, context):
    # TODO implement
    print(event)
    bucket = event['Records'][0]['s3']['bucket']['name'];
    key = event['Records'][0]['s3']['object']['key'];
    dest = "archiwum/";
    source = "Watchfolder/";
    filename = key.replace(source,"");
    newkey = key.replace(source, dest);
    print(newkey);
    print(filename);
    # Copy Source Object
    ourtxt = {'Bucket': bucket, 'Key': key}

    # S3 copy object operation
    s3.copy_object(CopySource=ourtxt, Bucket=bucket, Key=newkey);
    s3.delete_object(Bucket=bucket, Key=key);
    return {
        'statusCode': 200,
        'body': json.dumps('Hello from Jam jest Wiadro Przemek!')
    }
```

Wnioski:

- Lambda pozwala na integracje kilku usług AWS na własnych zasadach (sami piszemy kod)
- Wymaga jednak znajomości funkcji AWS dla danego języka by z niego korzystać

- Powyższe programy miały problemy z przetworzeniem utf-16. Nie przeprowadziłem dalszych testów niż utf-8 i utf16