Lambda Function

Problem Statement:

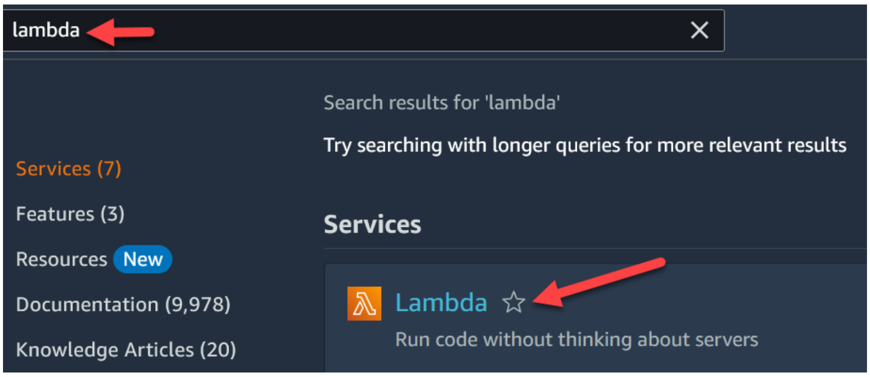
You work for TechArkit Corporation. Your corporation wants to launch a new web-based application and does not want its servers to run constantly. AWS should also manage it. Implement suitable solutions.

Tasks To Be Performed:

1. Create a sample Python Lambda function.

2. Set the Lambda Trigger as SQS and send a message to test invocations.

Answer


lambda
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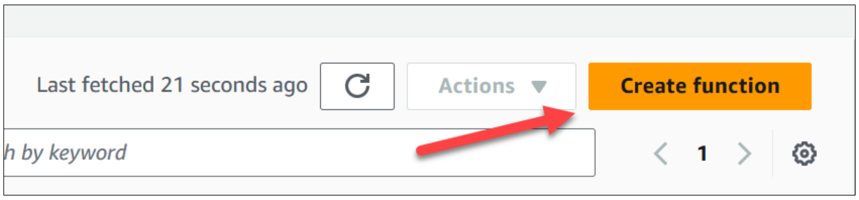
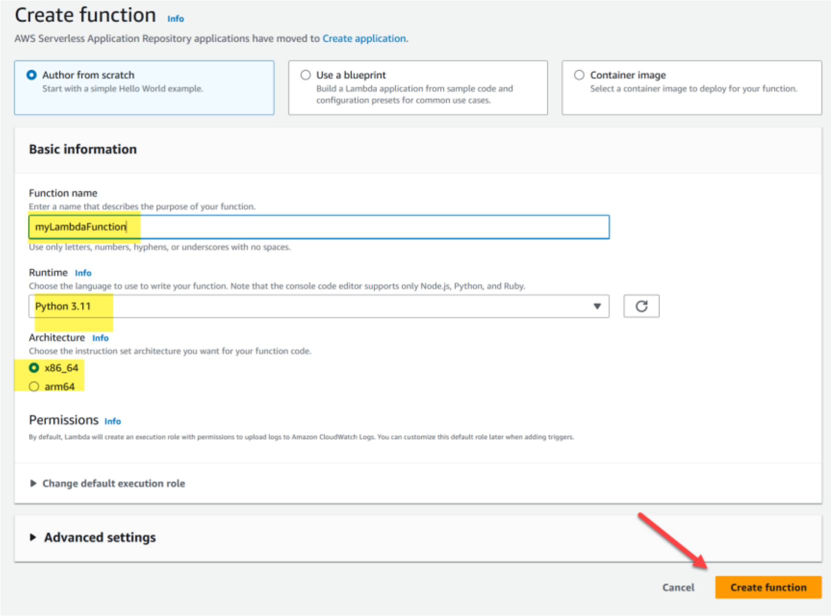


Click **Create Function**



Create function Info

AWS Serverless Application Repository applications have moved to Create application.

● 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.

Basic information

Function name
Enter a name that describes the purpose of your function.
myLambdaFunction
Use only letters, numbers, hyphens, or underscores with no spaces.

Runtime Info
Choose the language to use to write your function. Note that the console code editor supports only Node.js, Python, and Ruby.
Python 3.11

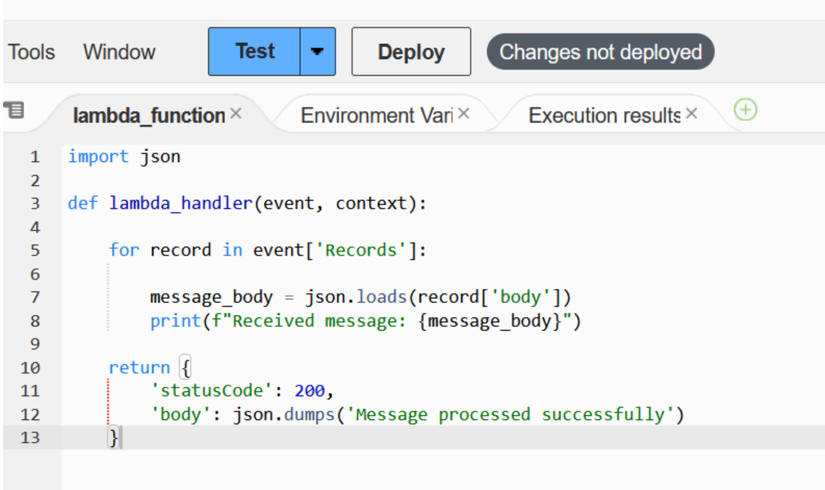
Architecture Info
Choose the instruction set architecture you want for your function code.
● x86_64
○ arm64

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

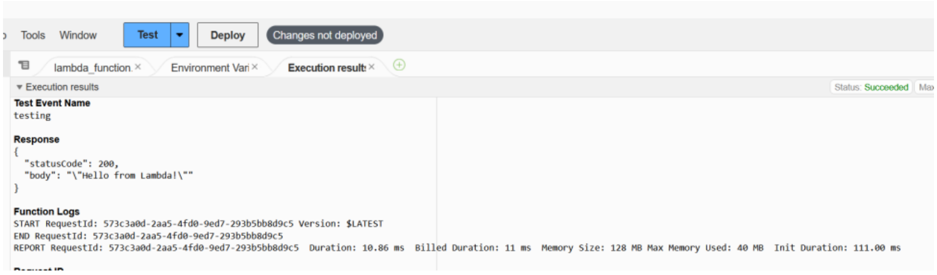
▸ Advanced settings

Click Create Function



```
import json

def lambda_handler(event, context):

    for record in event['Records']:

        message_body = json.loads(record['body'])
        print(f"Received message: {message_body}")

    return {
        'statusCode': 200,
        'body': json.dumps('Message processed successfully')
    }
```

Add trigger



Test Event Name
testing

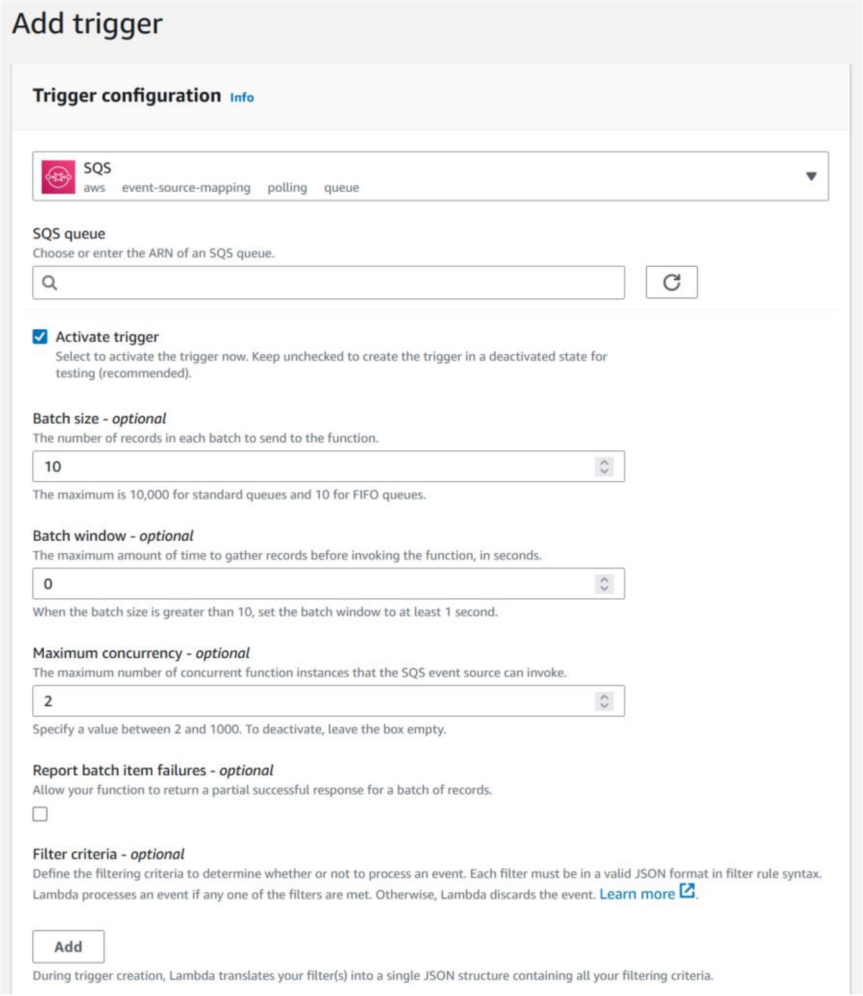
Response

```
{
  "statusCode": 200,
  "body": "\"Hello from Lambda!\""
}
```

Function Logs

```
START RequestId: 573c3a0d-2aa5-4fd0-9ed7-293b5bb8d9c5 Version: $LATEST
END RequestId: 573c3a0d-2aa5-4fd0-9ed7-293b5bb8d9c5
REPORT RequestId: 573c3a0d-2aa5-4fd0-9ed7-293b5bb8d9c5  Duration: 10.86 ms  Billed Duration: 11 ms  Memory Size: 128 MB Max Memory Used: 40 MB  Init Duration: 111.00 ms
```

When you click on the test above the results.



Add trigger

Trigger configuration Info

SQS
aws event-source-mapping polling queue

SQS queue
Choose or enter the ARN of an SQS queue.

☑ Activate trigger
Select to activate the trigger now. Keep unchecked to create the trigger in a deactivated state for testing (recommended).

Batch size - *optional*
The number of records in each batch to send to the function.
10
The maximum is 10,000 for standard queues and 10 for FIFO queues.

Batch window - *optional*
The maximum amount of time to gather records before invoking the function, in seconds.
0
When the batch size is greater than 10, set the batch window to at least 1 second.

Maximum concurrency - *optional*
The maximum number of concurrent function instances that the SQS event source can invoke.
2
Specify a value between 2 and 1000. To deactivate, leave the box empty.

Report batch item failures - *optional*
Allow your function to return a partial successful response for a batch of records.
□

Filter criteria - *optional*
Define the filtering criteria to determine whether or not to process an event. Each filter must be in a valid JSON format in filter rule syntax. Lambda processes an event if any one of the filters are met. Otherwise, Lambda discards the event. Learn more.

During trigger creation, Lambda translates your filter(s) into a single JSON structure containing all your filtering criteria.

That’s how you can create a Lambda function and adding the trigger.