



# Amazon Lambda

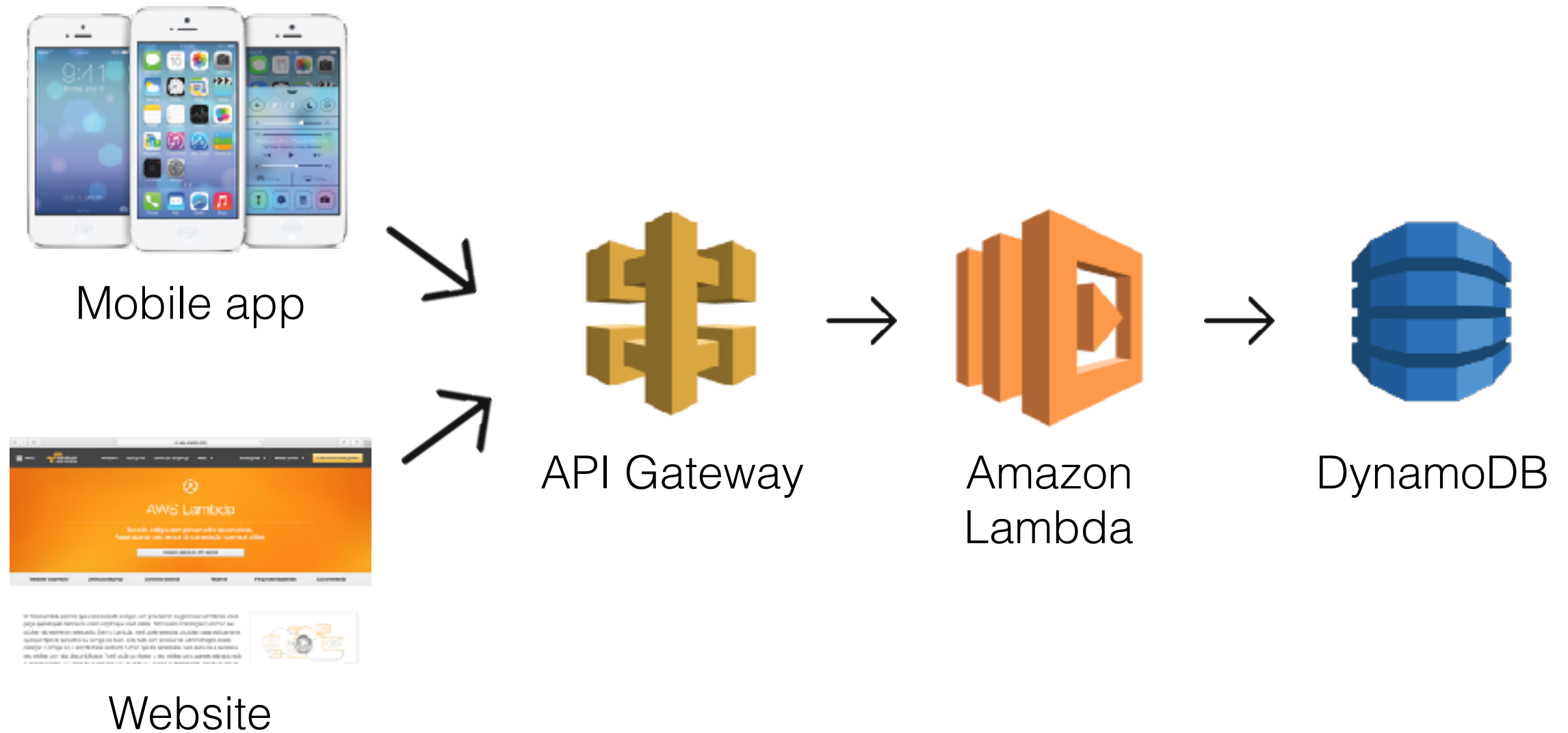
**Funções como serviço**

# O que é o AWS Lambda ?

O AWS Lambda é um serviço de **computação sem servidor** que executa seu código em resposta a eventos e gerencia automaticamente os recursos computacionais adjacentes para você.



# E a estrutura ?



# Hello World com Lambda

Vamos fazer nossa primeira função lambda  
:)

Aqui você começa



Services

Resource Groups



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Support

## AWS services

Find a service by name (for example, EC2, S3, Elastic Beanstalk).

Recently visited services



Lambda



API Gateway



Polly

> All services

## Build a solution

Get started with simple wizards and automated workflows.



Launch a virtual machine

With EC2  
~1 minute



Build a web app

With Elastic Beanstalk  
~6 minutes



Deploy a serverless microservice

With Lambda, API Gateway  
~2 minutes



Host a static website

With S3, CloudFront, Route 53  
~5 minutes



Create a backend for your mobile app

With Mobile Hub  
~5 minutes



Register a domain

With Route 53  
~3 minutes

## Learn to build

Learn to deploy your solutions through step-by-step guides, labs, and videos.

[See all](#)

Websites

DevOps

Backup and recovery

## Featured next steps



Manage your costs

Get real-time billing alerts based on your cost and usage budgets. [Start now](#)



Get best practices

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## What's new?

### Announcing AWS Batch

Now generally available, AWS Batch enables developers, scientists, and engineers to process large-scale batch jobs with ease. [Learn more](#)

### Announcing Amazon Lightsail

See how this new service allows you to launch and manage your VPS with AWS for a low, predictable price. [Learn more](#)

[See all](#)

AWS Marketplace

## Configure triggers

You can choose to add a trigger that will invoke your function.

[Remove](#)

Warning: Your API endpoint will be publicly available and can be invoked by all users.

We'll set up an API Gateway endpoint with a [proxy integration type](#) (learn more about the [input](#) and [output](#) format for your function). Any method (GET, POST, etc.) will trigger your Lambda function. To set up more advanced method mappings or subpath routes, visit [Amazon API Gateway console](#).

API name  ⓘ

Deployment stage  ⓘ

Security  ⓘ

Lambda will add the necessary permissions for Amazon API Gateway to invoke your Lambda function. [Learn more](#) about the Lambda permissions model.

[Cancel](#)[Previous](#)[Next](#)

Lambda > New function using blueprint microservice-http-endpoint

Select blueprint

Configure triggers

Configure function

Review

Your Lambda function's code and IAM permissions have been preconfigured for you. To proceed please:

1. enter a name for your Lambda function
2. review the code
3. enter a name for your IAM role
4. click "Next"

## Configure function

A Lambda function consists of the custom code you want to execute. [Learn more](#) about Lambda functions.

Name\* HelloWorld

Description A simple backend (read/write to DynamoDB)

Runtime\* Node.js 6.10

## Lambda function code

Provide the code for your function. Use the editor if your code does not require custom libraries (other than the aws-sdk). If you need custom libraries, you can upload your code and libraries as a .ZIP file. [Learn more](#) about deploying Lambda functions.

Code entry type Edit code inline

```
1 'use strict';
2
3 console.log('Loading function');
```

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Code entry type

Edit code inline

```
1 'use strict';
2
3 exports.handler = (event, context, callback) => {
4   callback("Hello World");
5 };
6
```



You can define Environment Variables as key-value pairs that are accessible from your function code. These are useful to store configuration settings without the need to change function code. [Learn more](#). For storing sensitive information, we recommend encrypting values using KMS and the console's encryption helpers.



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Enable encryption helpers ☐

Environment variables

Key

Value



### Lambda function handler and role

Handler\*

index.handler



Role\*

Create new role from template(s)



Lambda will automatically create a role with permissions from the selected policy templates. Note that basic Lambda permissions (logging to CloudWatch) will automatically be added. If your function accesses a VPC, the required permissions will also be added.

Role name\*

HelloworldRole



Policy templates



► Advanced settings

\* These fields are required.

Cancel

Previous

Next

### ▼ Advanced settings

These settings allow you to control the code execution performance and costs for your Lambda function. Changing your resource settings (by selecting memory) or changing the timeout may impact your function cost. [Learn more](#) about how Lambda pricing works.

Memory (MB)\* 128 ⓘ

Timeout\* 0 min 10 sec

AWS Lambda will automatically retry failed executions for asynchronous invocations. You can additionally optionally configure Lambda to forward payloads that were not processed to a dead-letter queue (DLQ), such as an SQS queue or an SNS topic. [Learn more](#) about Lambda's [retry policy](#) and [DLQs](#). **Please ensure your role has appropriate permissions to access the DLQ resource.**

DLQ Resource Select resource ⓘ

All AWS Lambda functions run securely inside a default system-managed VPC. However, you can optionally configure Lambda to access resources, such as databases, within your custom VPC. [Learn more](#) about accessing VPCs within Lambda. **Please ensure your role has appropriate permissions to configure VPC.**

VPC No VPC ⓘ

Environment variables are encrypted at rest using a default Lambda service key. You can change the key below to one of your account's keys or paste in a full KMS key ARN.

KMS key (default) aws/lambda ⓘ

\* These fields are required.

[Cancel](#)

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[Next](#)

Lambda > New function using blueprint microservice-http-endpoint

- Select blueprint
- Configure triggers
- Configure function
- Review

## Review

Please review your Lambda function details. You can go back to edit changes for each section. When you are ready, click **Create function** to complete the setup process.

### Triggers

Edit



#### API Gateway

API name:  
**LambdaMicroservice** Deployment  
stage: **prod** Security: **NONE**

### Lambda function

Edit

**Name** HelloWorld

**Description** A simple backend (read/write to DynamoDB) with a RESTful API endpoint using Amazon API Gateway.

**Runtime** Node.js 6.10

#### Environment variables

**Handler** index.handler

**Role name\*** HelloworldRole

with a RESTful API endpoint using Amazon  
API Gateway.

**Runtime** Node.js 6.10

**Environment variables**

**Handler** index.handler

**Role name\*** HelloworldRole

**Policy templates**

**DLQ Resource**

**Memory (MB)** 128

**Timeout** 10

**VPC** No VPC

**KMS key** (default) aws/lambda

[Cancel](#)

[Previous](#)

[Export function](#)

[Create function](#)



API Gateway: c4sli778yc  
<https://c4sli778yc.execute-api.us-east-1.amazonaws.com/prod/HelloWorld>  
Deployment stage: **prod** Method: **ANY**

Delete

+ Add trigger

▸ View function policy

Lambda > Functions > HelloWorld

ARN - arn:aws:lambda:us-east-1:135113179411:function:HelloWorld

Qualifiers Test Actions

Code Configuration Triggers Monitoring



API Gateway: c4sli778yc

<https://c4sli778yc.execute-api.us-east-1.amazonaws.com/prod/HelloWorld>

Deployment stage: prod Method: ANY

Delete

Add trigger

View function policy

### Execution result: failed (logs)

The area below shows the result returned by your function execution. [Learn more](#) about returning results from your function.

```
{
  "errorMessage": "Hello World"
}
```

### Summary

Code SHA-256 AVcYYsrzuKZCwGnbG6zmgGkh+8QX2UmH9AqiuMrwbdw=

Request ID 7f6358bf-1029-11e7-9cb2-cbdd4d822ffd

### Log output

The area below shows the logging calls in your code. These correspond to a single row within the CloudWatch log group corresponding to this Lambda function. [Click here](#) to view the CloudWatch log group.

```
START RequestId: 7f6358bf-1029-11e7-9cb2-cbdd4d822ffd Version: $LATEST
2017-03-24T00:33:27.688Z 7f6358bf-1029-11e7-9cb2-cbdd4d822ffd {"errorMessage": "Hello
```



Services ▾

Resource Groups ▾



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## AWS Lambda

Dashboard

Functions

Lambda > Functions > HelloWorld

ARN - arn:aws:lambda:us-east-1:135113179411:function:HelloWorld

Qualifiers ▾

Test

Actions ▾

Code

Configuration

Triggers

Monitoring

Code entry type

Edit code inline ▾

```
1 exports.handler = (event, context, callback) => {  
2   callback(null, 'Hello' + event.name);  
3 };
```



## AWS Lambda

Dashboard

Functions

Lambda > Functions > HelloWorld

ARN - arn:aws:lambda:us-east-1:135113179411:function:HelloWorld

Qualifiers ▾

Test

Actions ▴

Code

Configuration

Configure test event

Publish new version

Create alias

Delete function

Export function

```
1 exports.handler = (event, context, callback) => {  
2   callback(null, 'Hello World');  
3 };
```



Qualifiers ▾ **Test** Actions ▾

### Input test event

Use the editor below to enter an event to test your function with. You can edit the event again by choosing **Configure test event** in the Actions list. Note that changes to the event will only be saved locally.

Sample event template

Hello World ▾

```
1 {  
2   "name": "Harie"  
3 }
```



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Dashboard

Functions

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Enable encryption helpers ☐

Environment variables

Key

Value



### ✓ Execution result: succeeded ([logs](#))



The area below shows the result returned by your function execution. [Learn more](#) about returning results from your function.

"Hello Harie!"

#### Summary

**Code SHA-256** qoYHBDI8MambE6vJk0tgC8dsuAcrKqFYLzFnpsdI7s=

**Request ID** ed986390-1029-11e7-b850-0720badd9a1

**Duration** 57.77 ms

**Billed duration** 100 ms

#### Log output

The area below shows the logging calls in your code. These correspond to a single row within the CloudWatch log group corresponding to this Lambda function. [Click here](#) to view the CloudWatch log group.

START RequestId: ed986390-1029-11e7-b850-0720badd9a1 Version: \$LATEST  
END RequestId: ed986390-1029-11e7-b850-0720badd9a1  
REPORT RequestId: ed986390-1029-11e7-b850-0720badd9a1 Duration: 57.77 ms Billed Duration: