

Serverless

AWS Lambda



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Assuntos

- **Conceito Serverless**
- **Categorias de Serviços**
- **AWS Lambda**
- **Use Cases**
- **Pros / Cons**
- **Triggers**
- **Cold Start**
- **Dúvidas**
- **Arquitetura**
- **Hands-on**

serverless = sem servidor



THAT'S NOT TRUE!

serverless

servidor existe, mas tudo é gerenciado pela plataforma

infra local – on-premise

Infra as a Service – IaaS

Container as a Service – CaaS

FaaS

Function as a Service



Azure Functions



AWS Lambda



Google Cloud Functions

FaaS

Function as a Service

on-premise

code
data
runtime
containers
OS
virtualization
hardware
storage
network

IaaS

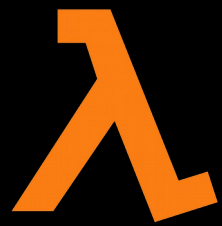
code
data
runtime
containers
OS
virtualization
hardware
storage
network

CaaS

code
data
runtime
containers
OS
virtualization
hardware
storage
network

FaaS

code
data
runtime
containers
OS
virtualization
hardware
storage
network



Lambda



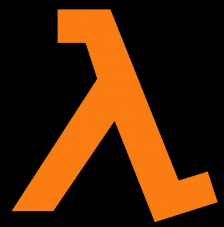
simples
objetivo
stateless



Use Cases



picos de acesso
baixo tráfego
fast dev/deploy



Pros



fácil configuração

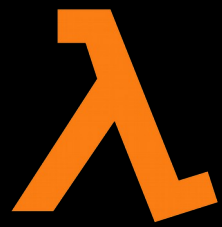
cobrança por req/tempo exec

barato (US\$0,20/1M reqs)

autoescalável

deploy rápido e simples

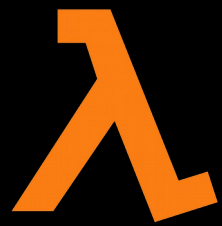
foco no código/desenvolvimento



Cons



low traffic: < custo e < performance
tempo de execução limitado (300s)
debug e teste limitados
alta demanda significa custo >



Triggers



API Gateway



Kinesis



S3



SQS



Cognito



Alexa



Triggers



DynamoDB



CloudWatch



IoT



CodeCommit



SNS



Load Balancer



Cold Start

AWS Side

User Side

download
code

container
setup

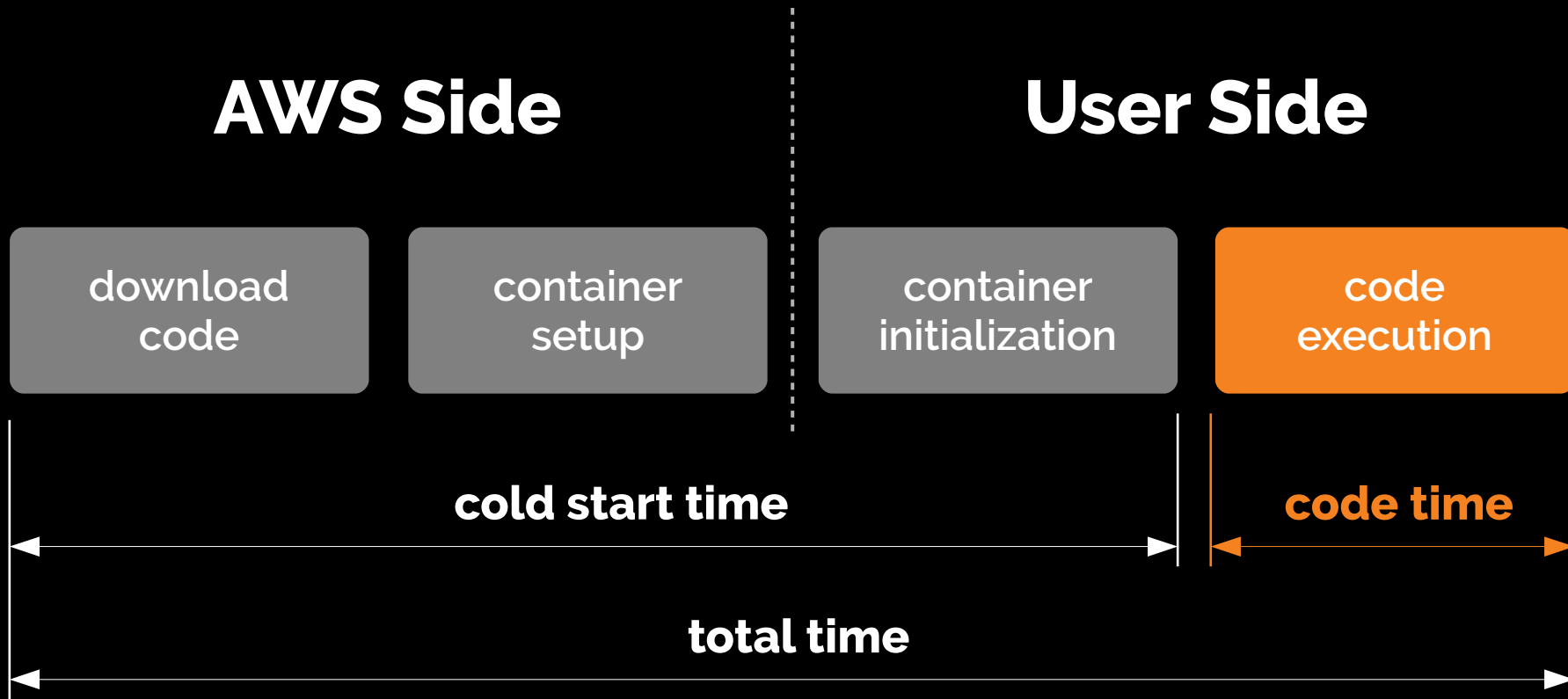
container
initialization

code
execution

cold start time

code time

total time



1st call

2nd call

3rd call

4h call

initialization

code

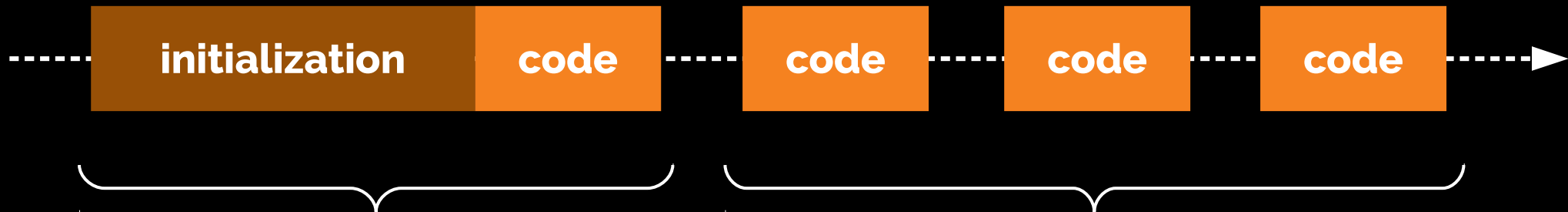
code

code

code

cold

warm

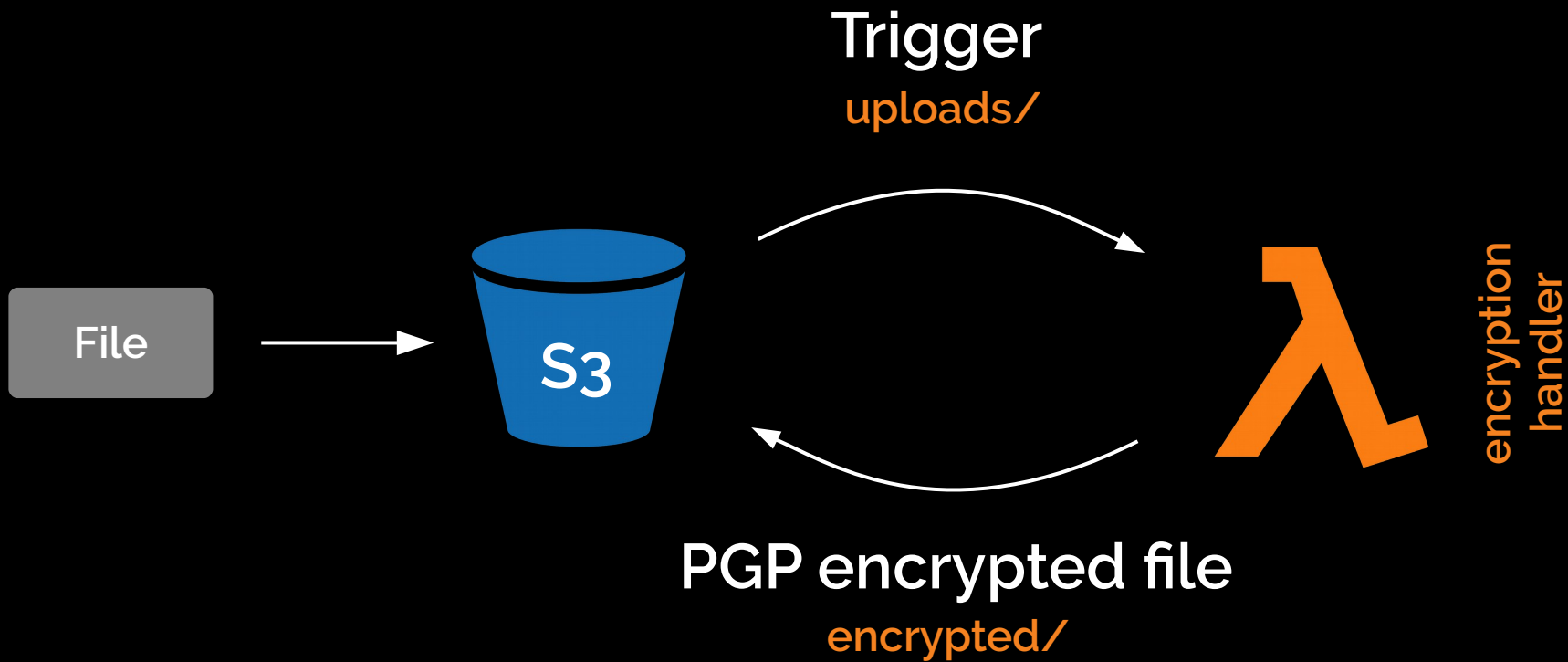


Dúvidas



“Talk is cheap.”

“Show me the code.”





/ bolzon / **serverless-lambda**

Referências

<https://github.com/bolzon/serverless-lambda> (GitHub repo)

<https://aws.amazon.com/lambda>

<https://aws.amazon.com/lambda/resources/customer-case-studies>

<https://blog.octo.com/en/cold-start-warm-start-with-aws-lambda>

<https://techbeacon.com/enterprise-it/economics-serverless-computing-real-world-test>

<https://aws.amazon.com/solutions/case-studies/bustle> (84% cost saving use case)

<https://serverless-stack.com/chapters/pt/what-is-serverless.html>

https://en.wikipedia.org/wiki/Pretty_Good_Privacy (PGP)

<https://serverless.com> (framework to work with serverless apps)

<https://gnupg.org> (GnuPG)

OBRIGADO

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