



**Ambientes efímeros y
custom resources /
recursos personalizados.**

@olcortesb

Oscar Cortes Bracho

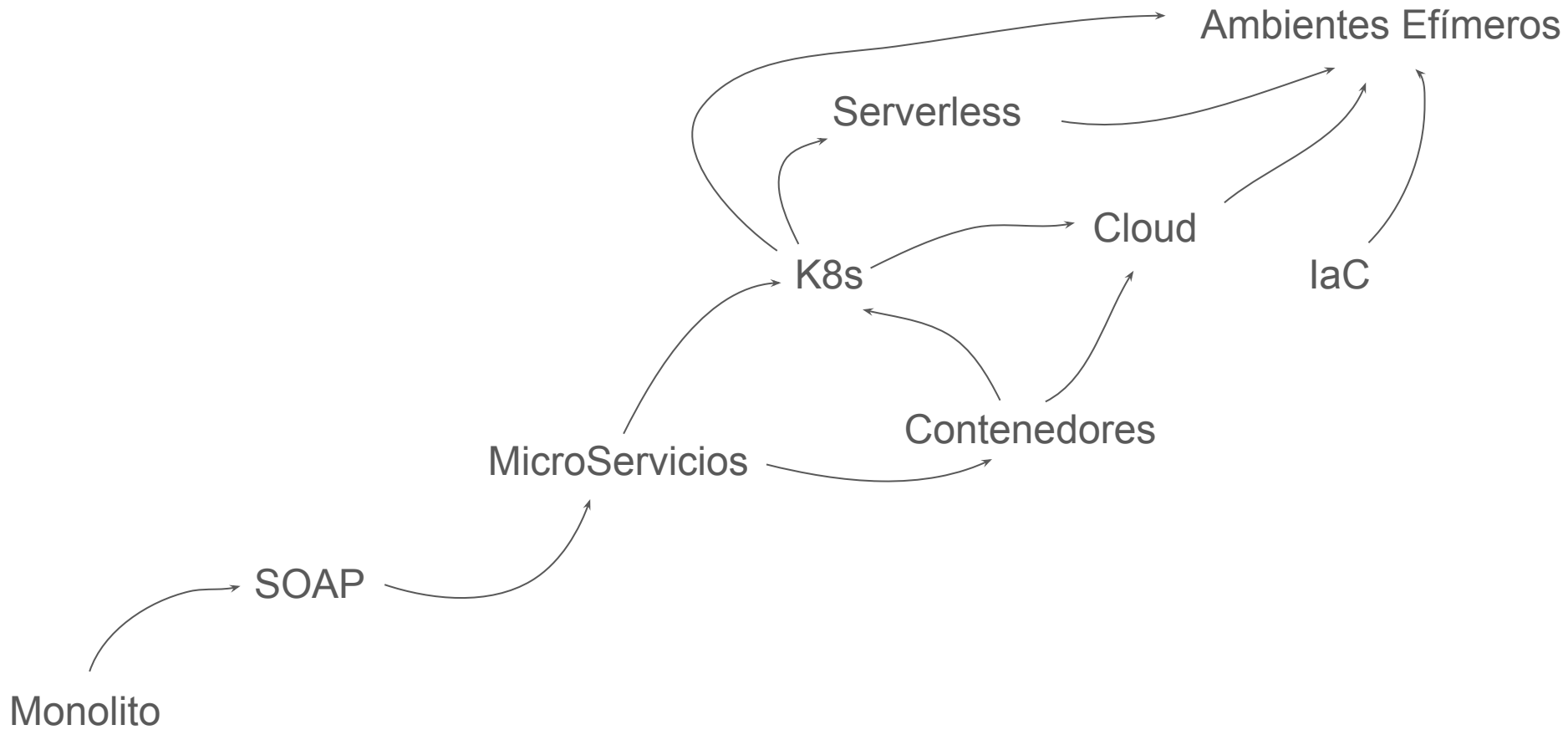
Cloud Architect @ <https://www.ackstorm.com/>

AWS User Group Madrid

AWS community Builder

*Ingeniero Electronico
Desarrollo de Software
Arquitectura de Software/Cloud
Docente Universitario*

Ambientes efímeros





Monolito

SOAP

MicroServicios

K8s

Serverless

Cloud

Contenedores

IaC

Ambientes Efímeros

Monolito



AEG
Magnetophon

SOAP

MicroServicios

K8s

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Cloud

IaC

Contenedores

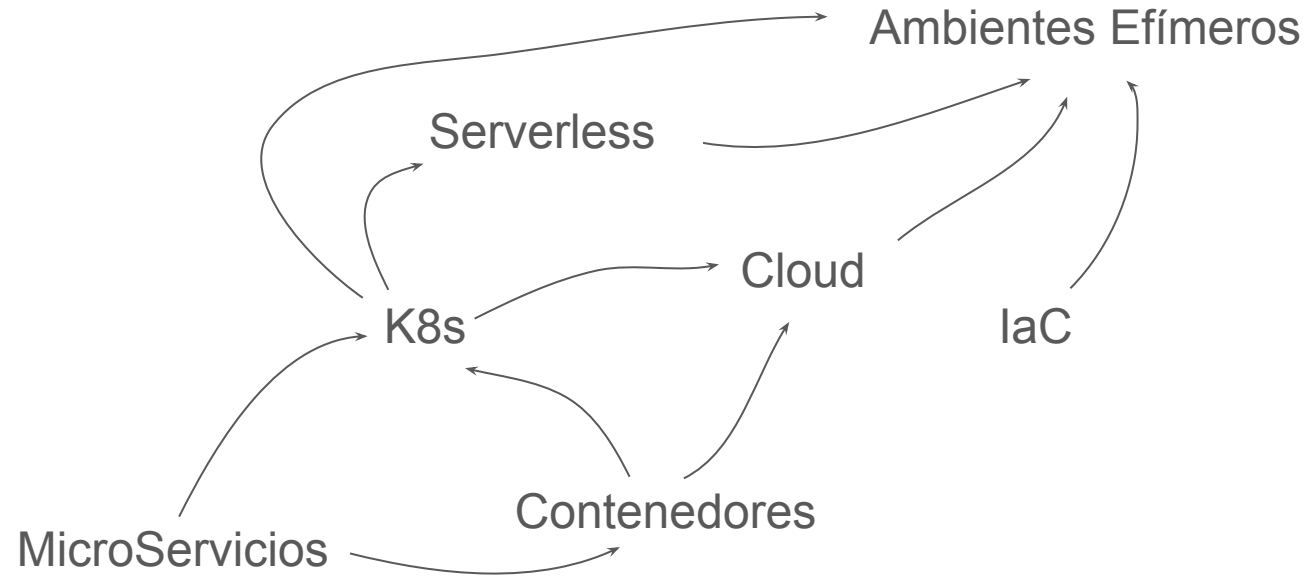
Ambientes Efímeros

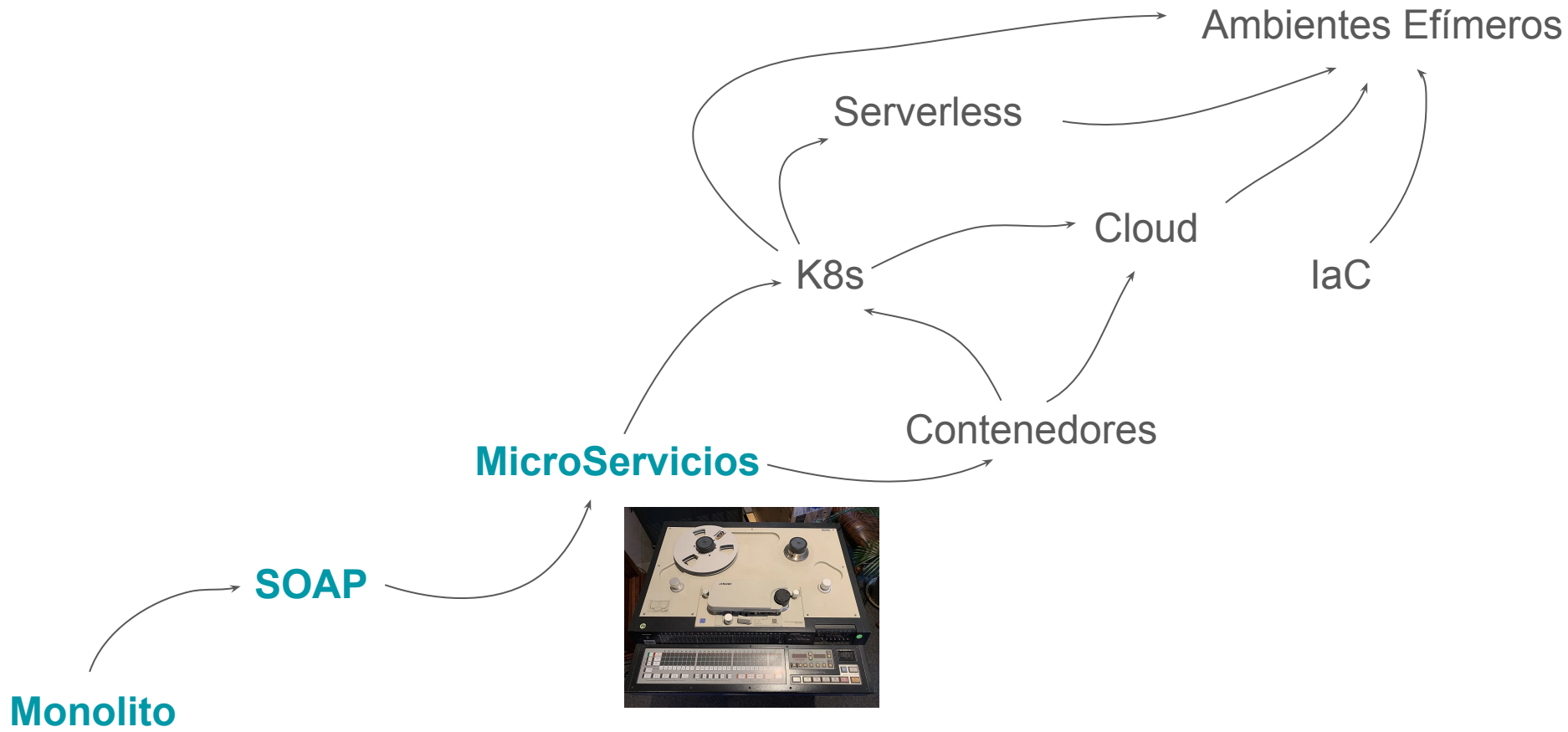
Grabador multipista: Studer A827
(Jon Arnold, 2005)



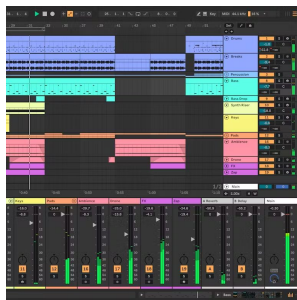
SOAP

Monolito





<https://www.ableton.com/en/live/>



Monolito

SOAP

MicroServicios

K8s

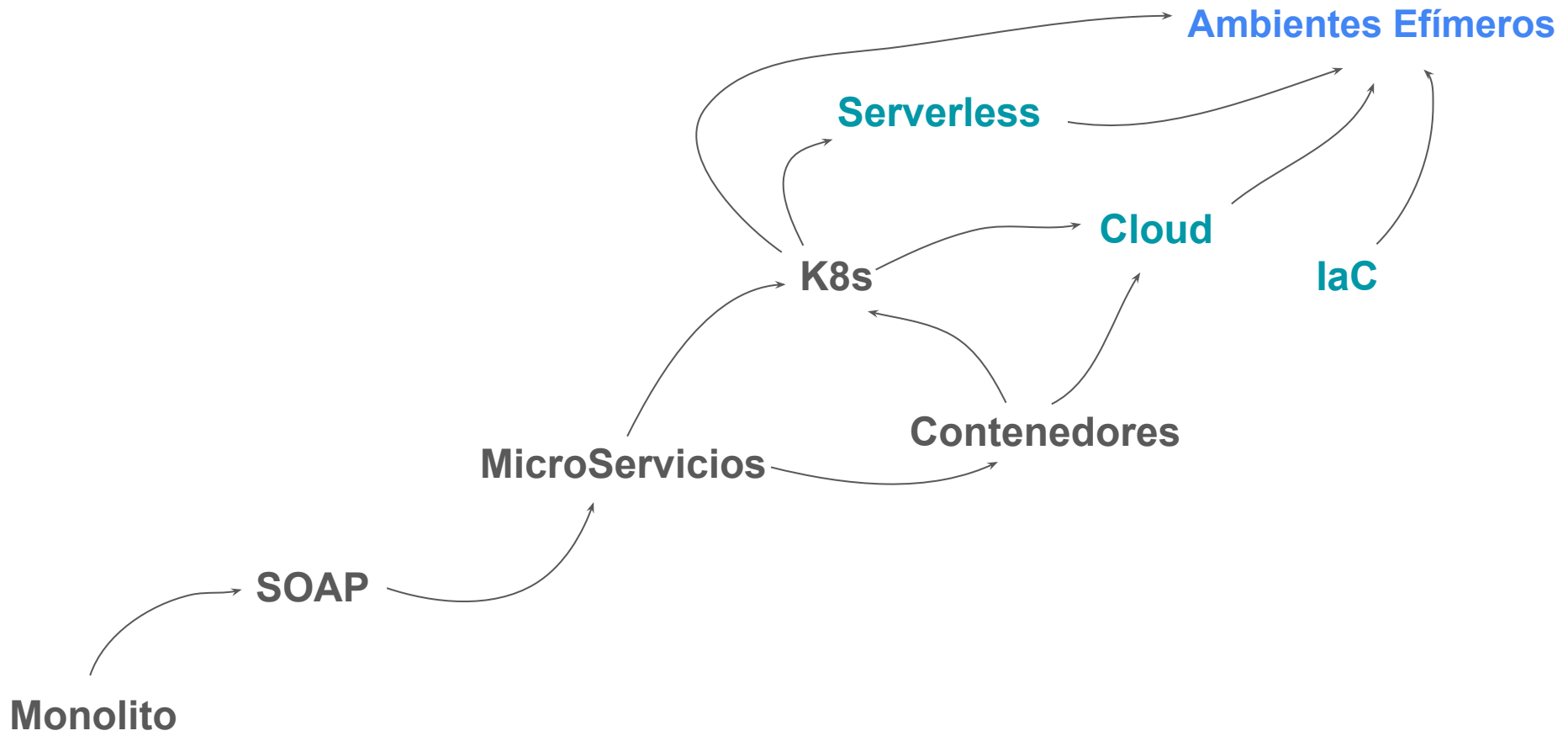
Serverless

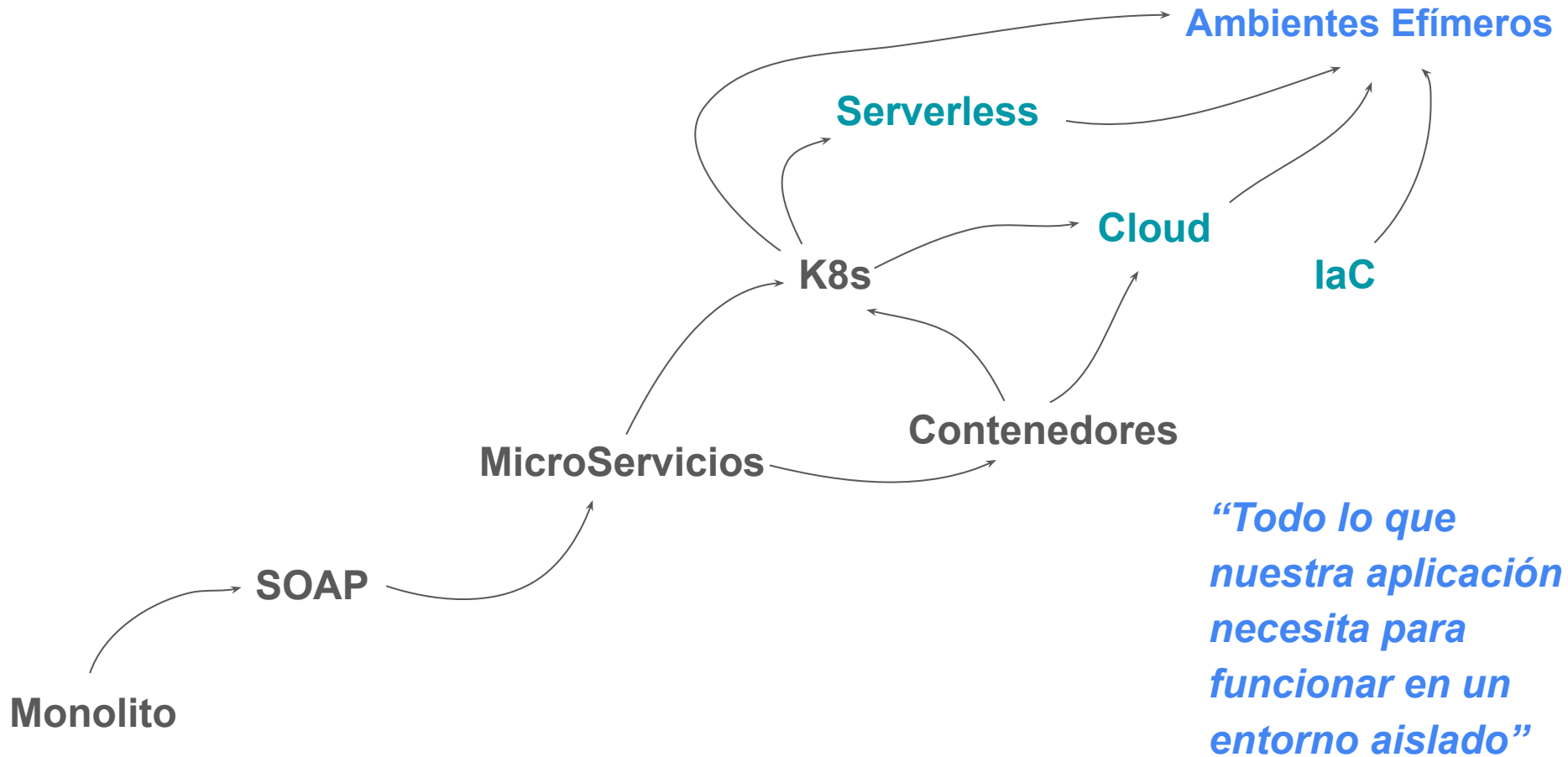
Cloud

IaC

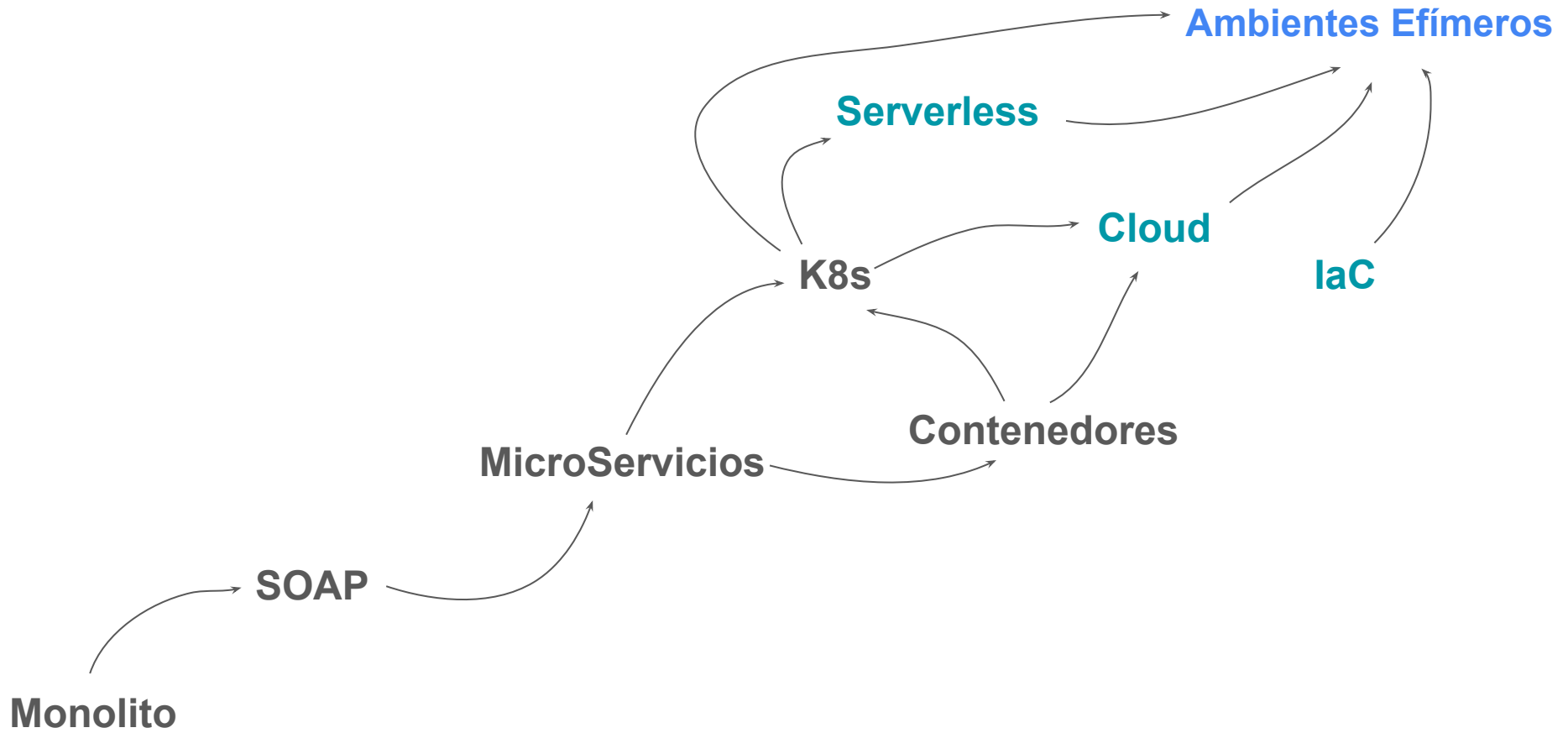
Contenedores

Ambientes Efímeros





*“Todo lo que
nuestra aplicación
necesita para
funcionar en un
entorno aislado”*





Serverless



Serverless / Cloud ...

AWS Lambda is announced.
A compute service that runs your code in response to events and automatically manages the compute resources for you,

AWS Lambda

Nov 2014



This new configuration allowed developers to pay for the RDS database resources, on a second-by-second basis.

Amazon Aurora Serverless

Nov 2017



Dramatic improvements to Lambda function start-up performance and more efficient usage of elastic network interfaces.

Improved VPC networking for Lambda

Sep 2019



Jul 2015

Amazon API Gateway

This enabled developers to build secure, scalable APIs quickly in front of a variety of different types of architectures.



Nov 2018

Layers & Custom Runtime API

Two new AWS Lambda features that enable developers to build custom runtimes, and share and manage common code between functions.



Nov 2019

Amazon RDS Proxy

A fully managed, highly available database proxy for RDS databases that makes applications more scalable, more resilient to database failures, and more secure.

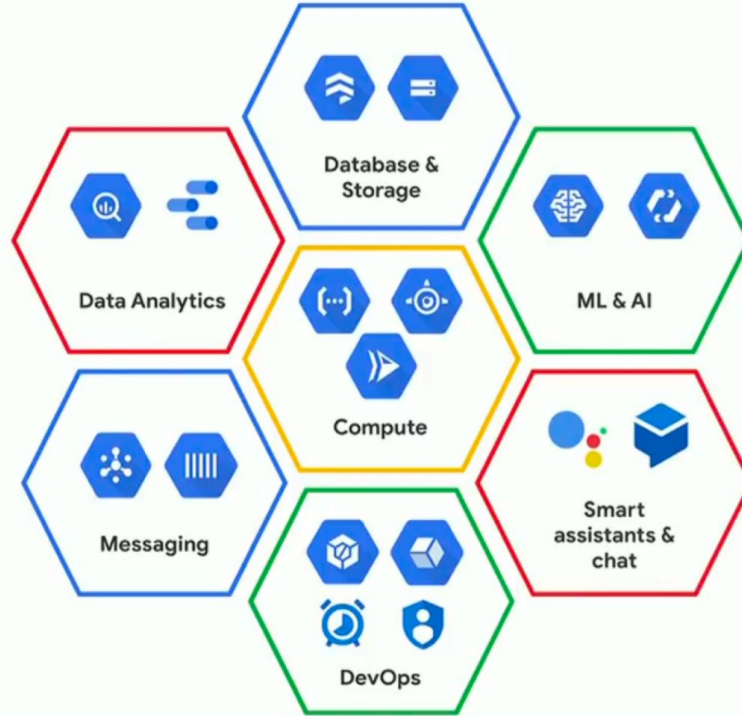


<https://aws.amazon.com/es/blogs/compute/introducing-the-new-serverless-lamp-stack/>

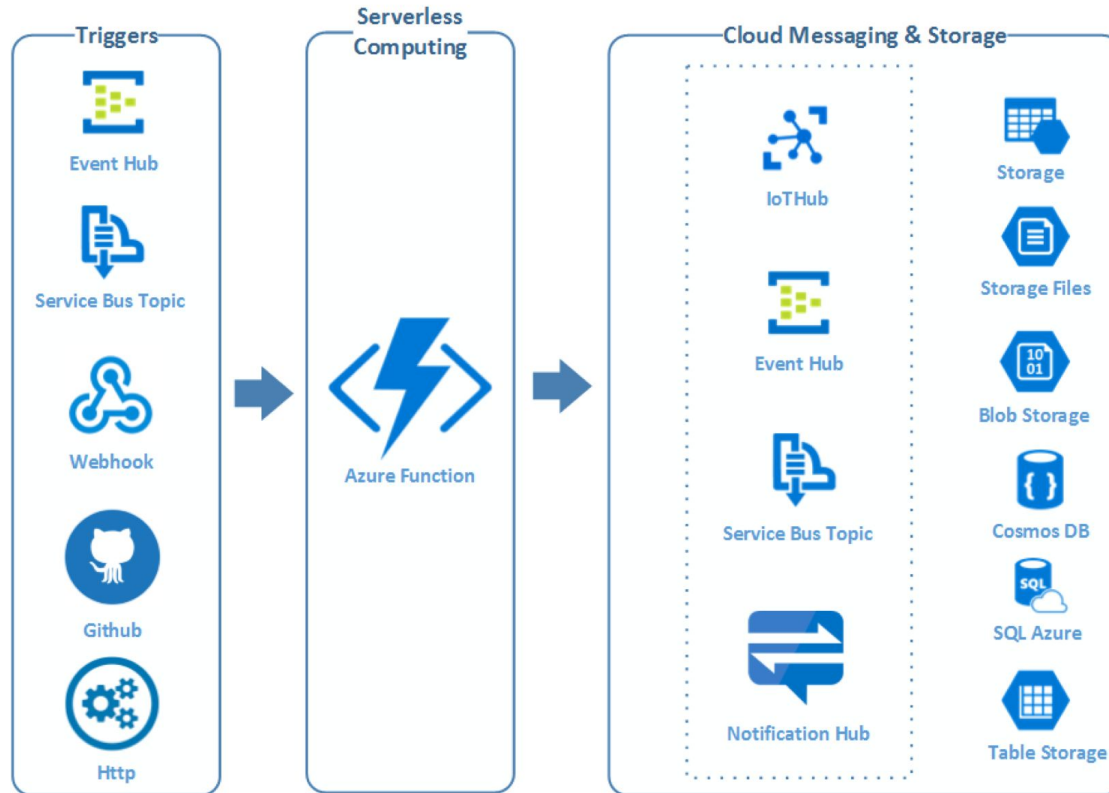


Serverless / Cloud ...

Full-stack serverless on Google Cloud



Serverless / Cloud ...



laC



CloudFormation



2010

Terraform



2014

Pulumi



2017

CDK



2019

2015

2016

2018

2022

2024

Año de lanzamiento



serverless
Framework



sam



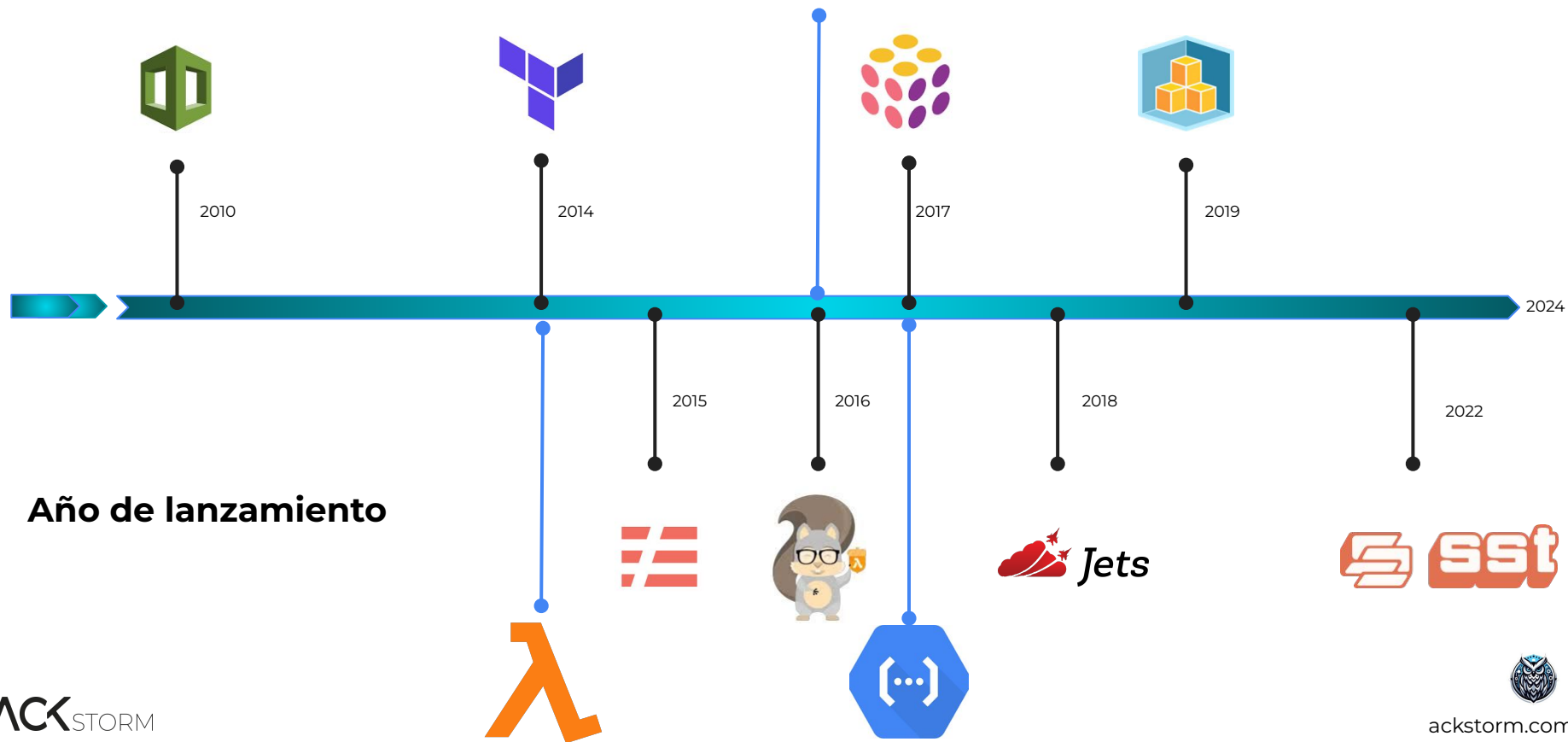
jets



sst



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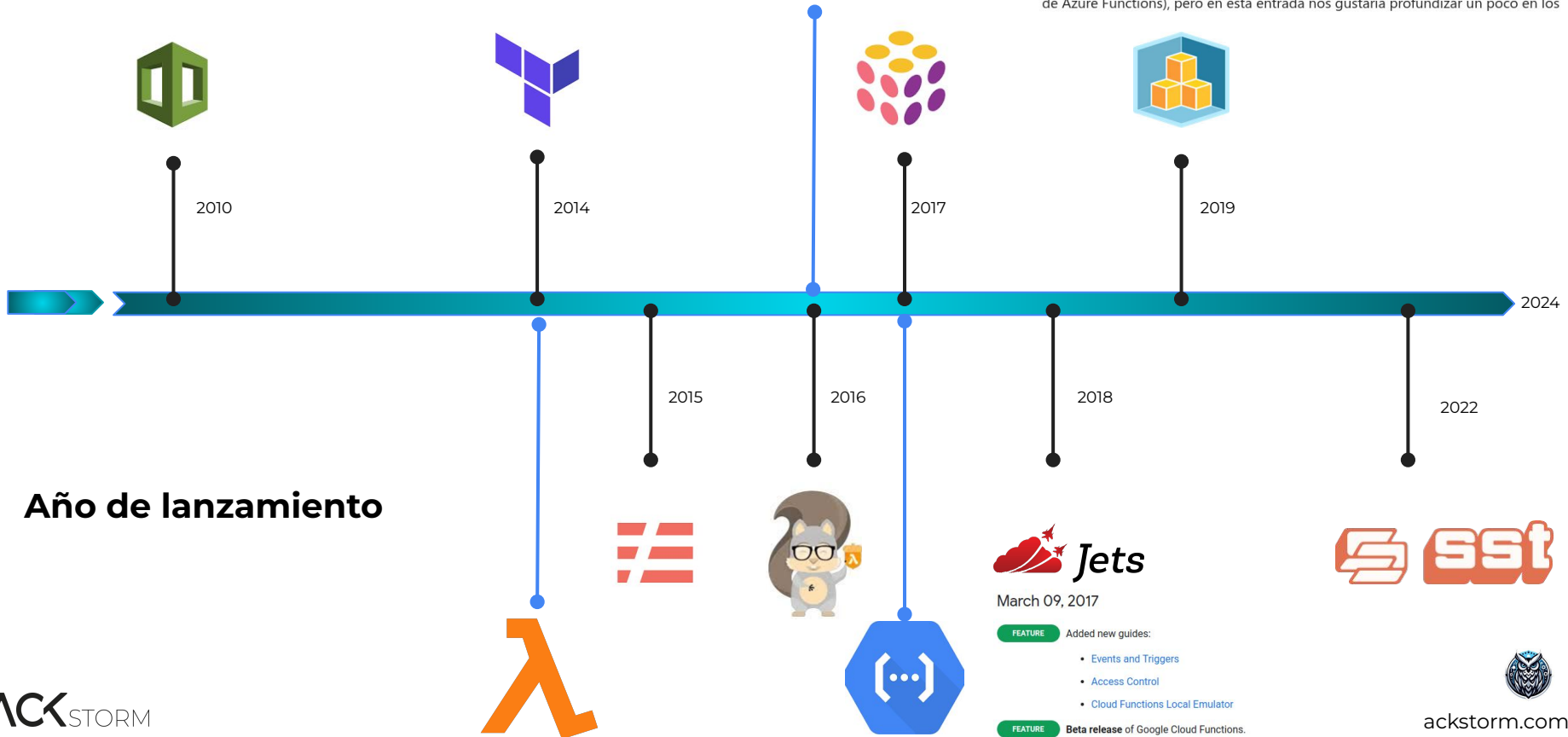


Posted on April 27, 2016
9 min read



El autor de esta entrada de blog es Mathew Charles, ingeniero de software principal, Microsoft.

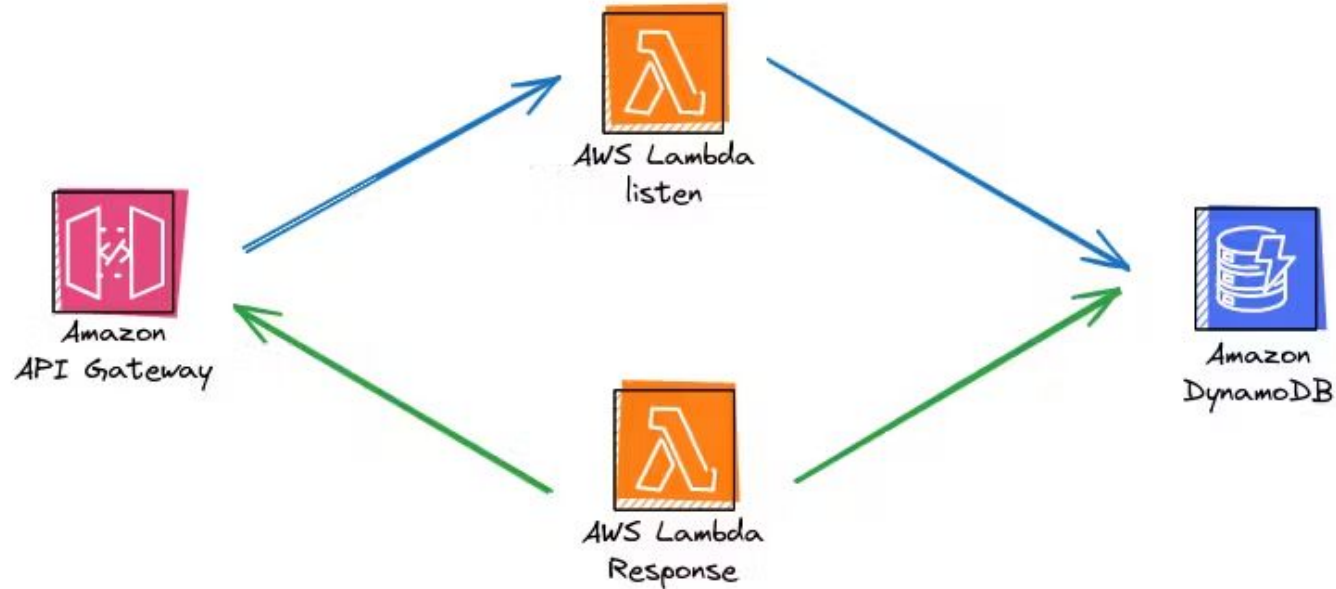
Nuestro equipo estaba entusiasmado con el reciente lanzamiento de una versión preliminar del nuevo servicio [Azure Functions](#) en //build. Ya hemos publicado algunos blogs sobre el servicio, como [Introducing Azure Functions](#) (Presentación de Azure Functions), pero en esta entrada nos gustaría profundizar un poco en los



Demo



Stack Mimic (laboratorio)



<https://olcortesb.hashnode.dev/comparing-different-iac-tools-for-serverless-deployment-1-mimic-serverless-lab>

Custom Resources/ Recursos Personalizados





CloudFormation
Custom Resource
(CloudFormation)

?

Monolito

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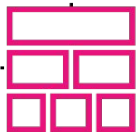
Ambientes Efímeros

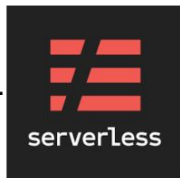
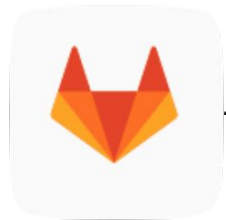
*“Todo lo que
nuestra aplicación
necesita para
funcionar en un
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Custom
Resources

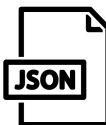
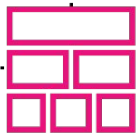
 AWS Account

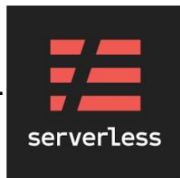




Custom
Resources

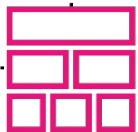
AWS Account





Custom
Resources

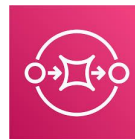
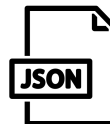
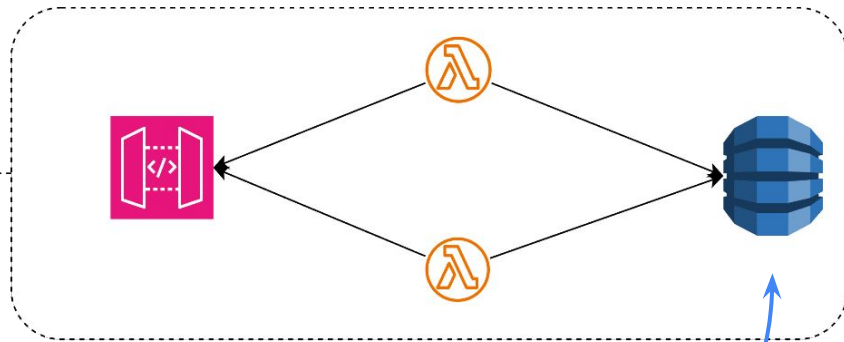
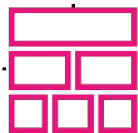
AWS Account



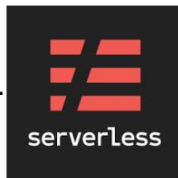


Custom
Resources

AWS Account

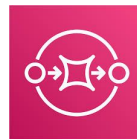
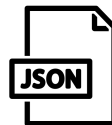
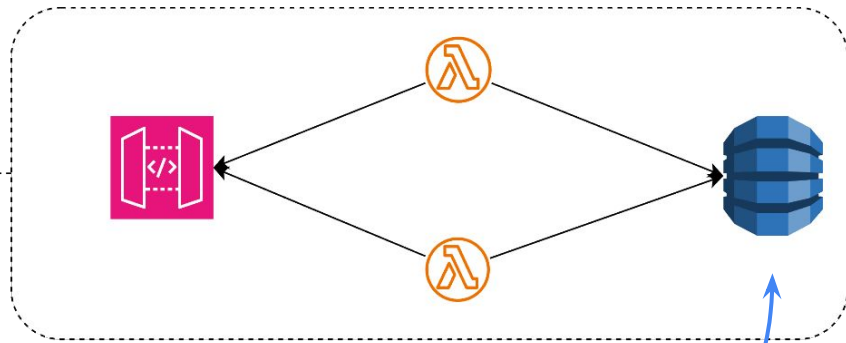
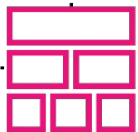


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Custom
Resources

AWS Account



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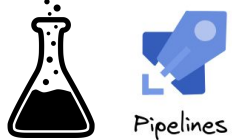
¡Muchas gracias!

Oscar Cortes Bracho
Cloud Architect



Anexos





Pipelines

```
git-clone-lambda-code:
  stage: git-clone-lambda-code
  image: alpine
  before_script:
    - apk add git
  script:
    - git clone --depth=1 -b main https://gitlab-ci-token:${CI_
    - rm -rf source_code/.git
    - cd repository
    - rm LICENSE
    - rm README.md
  artifacts:
    paths:
      - repository
```

clients

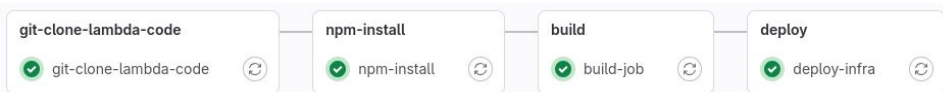
services

mimicListens.js

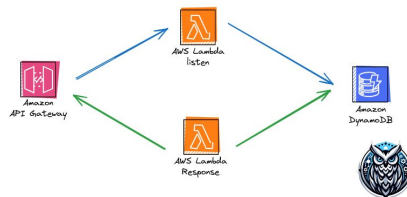
mimicResponse.js

package-lock.json

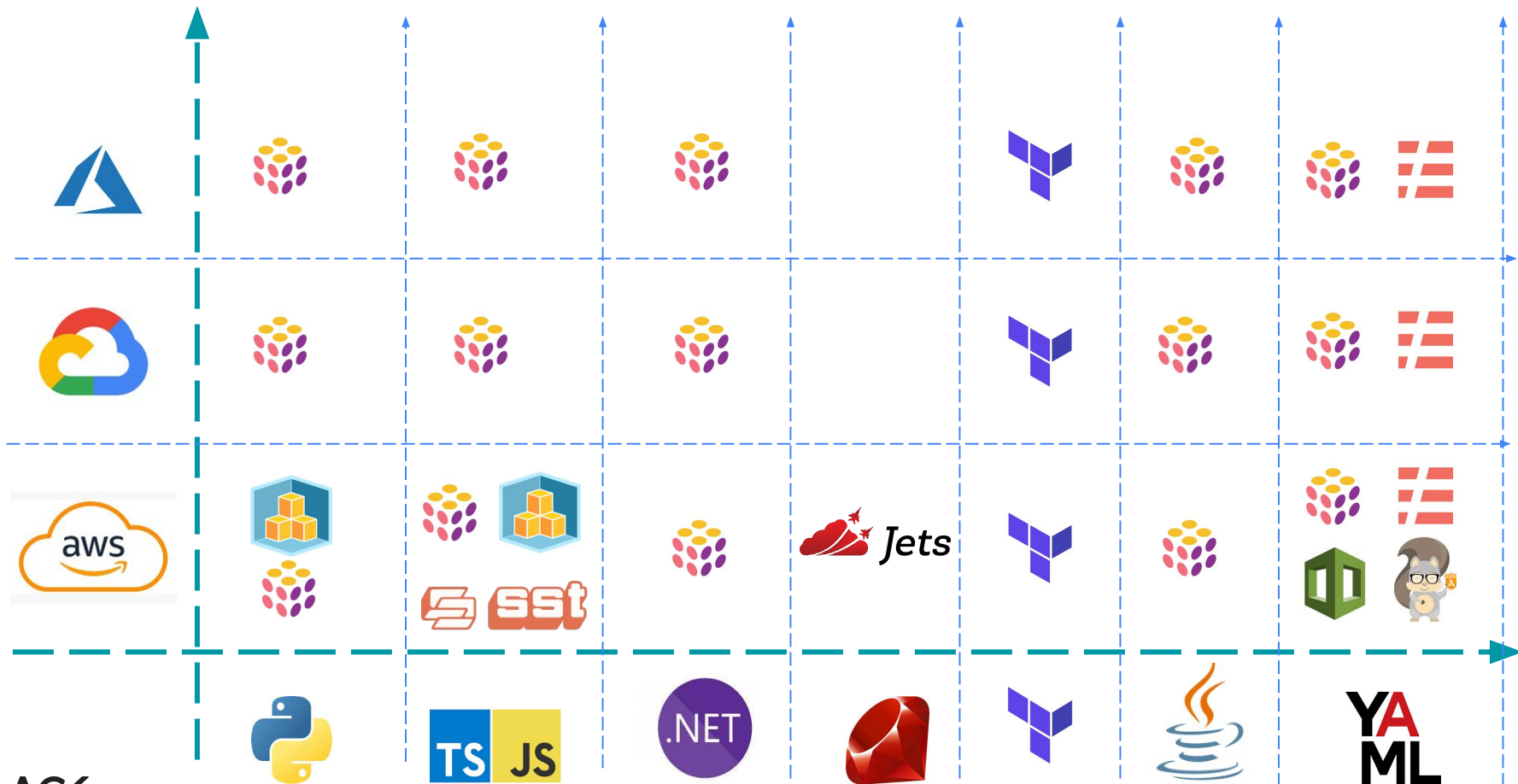
package.json



```
deploy-infra:
  stage: deploy
  variables:
    CDK_DEPLOY_ACCOUNT: $PROD_ACCOUNT_ID
    CDK_DEPLOY_REGION: $AWS_PROD_REGION
  before_script:
    - npm install -g aws-cdk@latest
    - cdk --version
  script:
    - cdk bootstrap aws://${PROD_ACCOUNT_ID}/${AWS_PROD_REGION}
    - npx cdk synth
    - cdk diff
    - cdk deploy --require-approval never
```



Cloud provider vs lenguajes de programación para IaC



Serverless ...

Compute



AWS Lambda

Messaging



Amazon SQS

Integration



Amazon
API Gateway

Security



Amazon
Cognito

Monitoring



Amazon
Cloudwatch

Database



Amazon
DynamoDB

Analytics



Amazon
Kinesis



AWS Fargate



Amazon SNS



AWS Step
Functions



AWS Key
Management
Service



Amazon
QuickSight



Amazon
Aurora



Amazon
Athena



AWS Lambda (Arquitectura)

