

**SERVERLESS**

**PYWAW. 20.03.2017**

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- **FOGBUGZ**
- **STACKOVERFLOW (& SE)**
- **TRELLO**

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- **STACKOVERFLOW (& SE)**
  - **TRELLO**
  - **GLITCH**

# SERVERLESS?

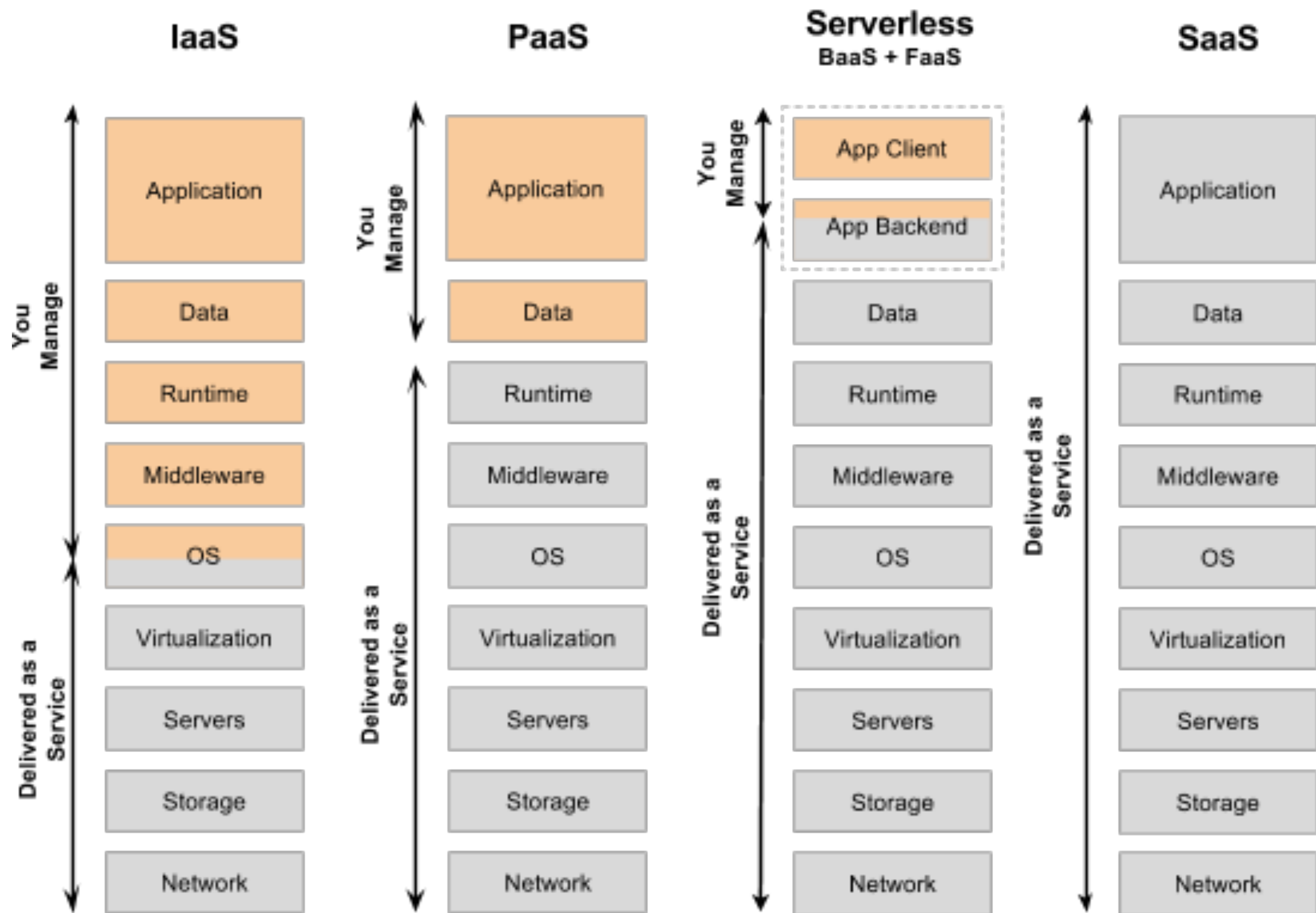
# **FUNCTION AS A SERVICE [FAAS]**



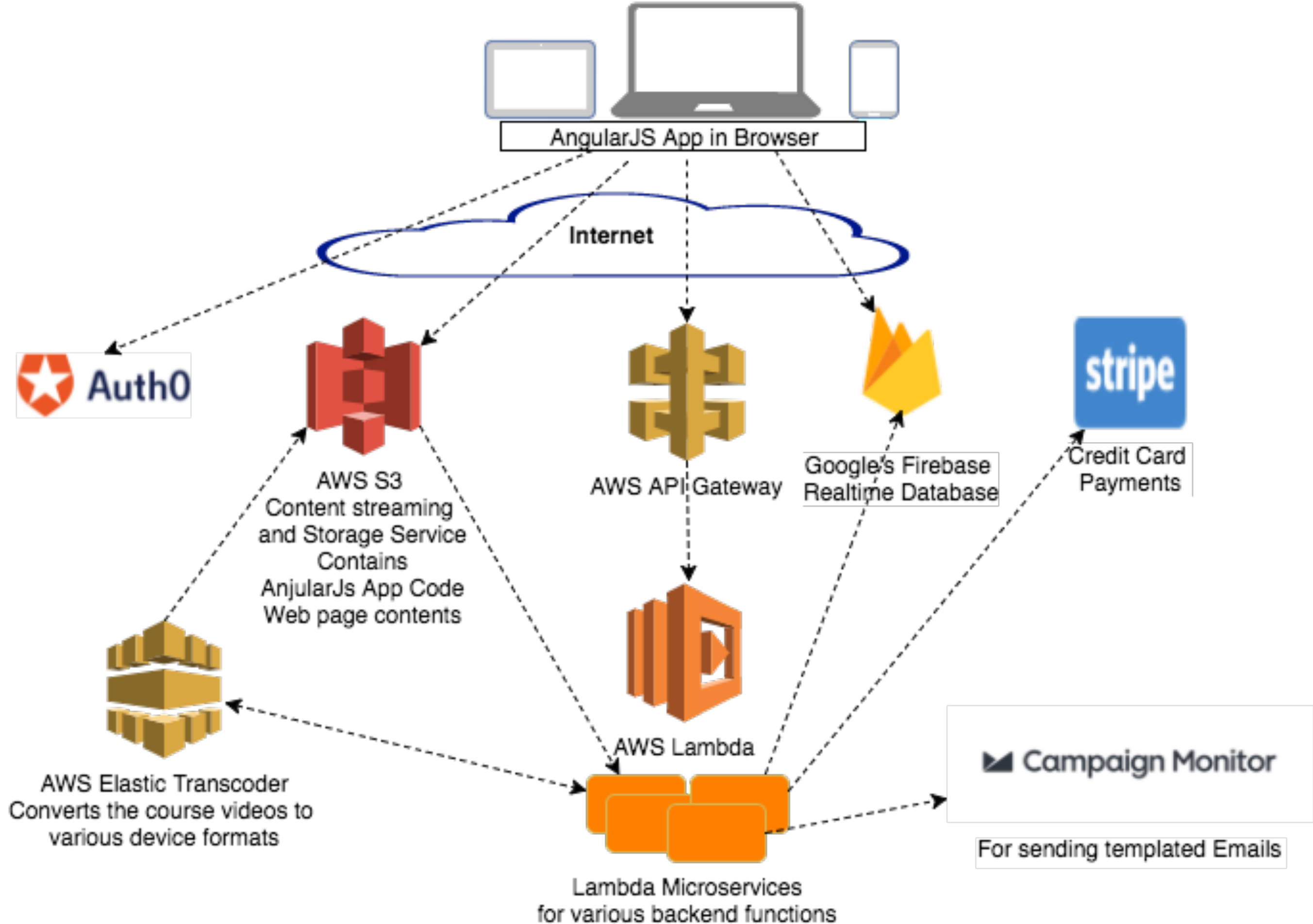


Server less  
 $\lambda$









- **AWS LAMBDA**
- **GOOGLE CLOUD FUNCTIONS**
- **AZURE FUNCTIONS**

Lambda > Functions > myFunctionName

Qualifiers ▾

Test

Actions ▾

Code

Configuration

Triggers

Monitoring

Code entry type

Edit code inline ▾

```
1 from __future__ import print_function
2
3 import json
4
5 print('Loading function')
6
7
8 def lambda_handler(event, context):
9     print("Received event.")
10
11     operation = event['httpMethod']
12
13     response = {
14         'statusCode': '200',
15         'body': 'Hello from lambda fun! V2!',
16         'headers': {
17             'Content-Type': 'application/json',
18         },
19     }
20
21     return response
22
23
```

**Runtime**

Python 2.7



**Handler**

lambda\_function.lambda\_handler



**Role**

existing



**Existing role**

arn:aws:iam::710067685471:role/service-r



**Description**

A simple backend (read/write to DynamoDE

# **TRIGGERS INCLUDE:**

- \* SNS**
- \* CLOUDWATCH**
- \* HTTP (API GATEWAY)**
- \* S3**
- \* DYNAMODB**
- \* CODECOMMIT**



# HELLO WORLD:

- > 3 SERVICES

- > ~ 25 STEPS

# **GREAT WINS?**

# **GREAT WINS:**

- > SCALABILITY**
- > PRICING**
- > NOOPS**

# **GREAT WINS:**

- > SCALABILITY, BUT...**
  - > PRICING**
  - > NOOPS**

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# CHALLENGES?

**BAAIDE [BROWSER AS AN IDE] 🤔**

**.zip DEPLOYMENT**  
**ALSO VIA CLI, CD-FRIENDLY**

~~BAAIDE [BROWSER AS AN IDE]~~ 😊



# UNIT AND INTEGRATION TESTING 🙄

# AWS LAMBDA HAS A TINY API

```
def lambda_handler(event, context):
```

**TINY, BUT TROUBLESOME...**

# ~~UNIT AND INTEGRATION TESTING~~ 😞

# COMPLEX DOMAIN IN TINY APP 🤔



# SHARING CODEBASE (NOT A MICROSERVICE ANYMORE)

# **EXTRACTING SCALING PARTS ONLY**

# ~~COMPLEX DOMAIN IN TINY APP~~

# STEEP LEARNING CURVE

# **HIGHER LEVEL FRAMEWORKS SERVERLESS, PYTHON-LAMBDA, ZAPPA**

**WARMING UP** 🤫

# LIMITS

- HOW TO AVOID THEM?
- SHOULD YOU AVOID THEM?

**PYTHON 2.7** 🤔



# LACK OF CONTENERIZATION

# MULTITENANCY

**AND ALL OF THE PROBLEMS OF MICROSERVICES**

# SUMMARY

# SOURCES

<https://martinfowler.com/articles/serverless.html>

<https://github.com/Miserlou/Zappa>

<https://serverless.com/>

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

<https://cloud.google.com/functions/>

<https://azure.microsoft.com/en-us/services/functions/>