

OpenFaaS Cloud: Multi-user Serverless driven by GitOps






Open Source Summit EU

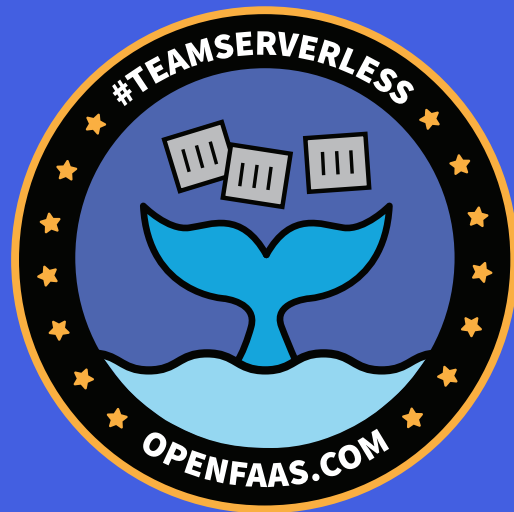
Alex Ellis - Founder - [@alexellisuk](https://twitter.com/alexellisuk)



OPENFAAS

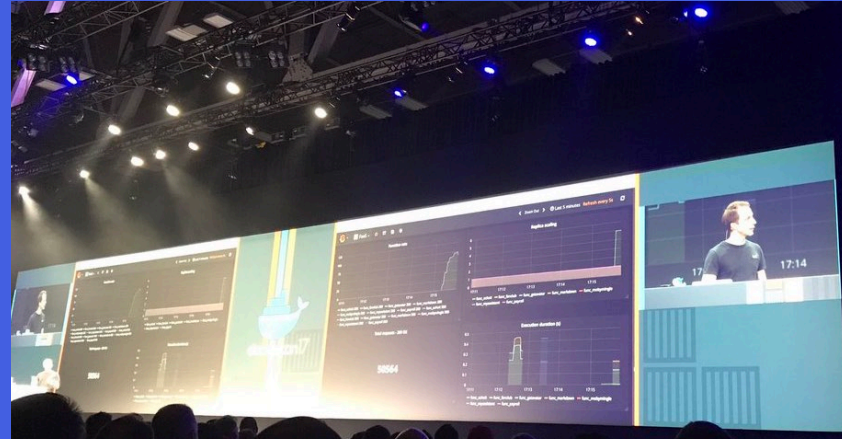
The session

- OpenFaaS
 - Story so far 
 - Case-studies
- OpenFaaS Cloud 
 - GitOps
 - Live Demo with Audience!  
- Get involved 



OpenFaaS - Functions as a Service

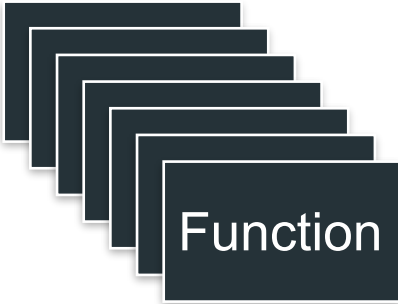
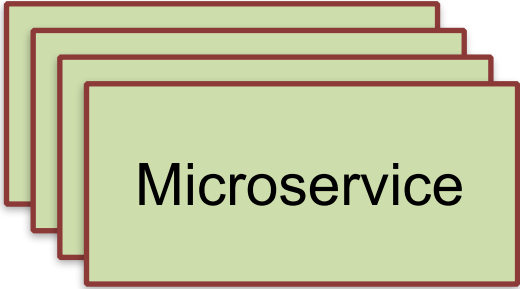
- Started in Nov 2016
- Containers, Alexa, Swarm 
- CNCF landscape
- Full time team
- Production users 
- Bossie award 



**Serverless is an
architectural pattern**



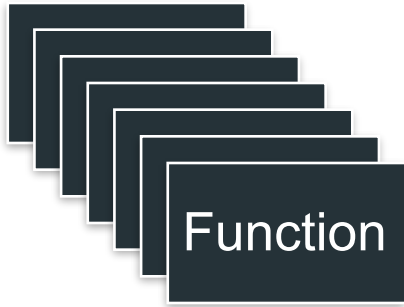
Application Evolution



Decreasing concern for infrastructure



What are Functions?



Short-lived
Single-purpose
No state
Auto-scaling



OpenFaaS: Serverless on your terms

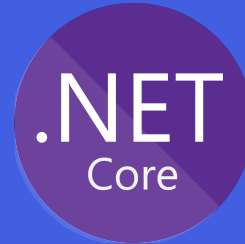
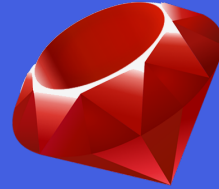
Easy to use

Any code
Anywhere
Any scale

You decide the limits



Demo: Function Store



Write a function

```
$ faas new --lang python http-status
```

```
def handler(req):  
    r = requests.get(req)  
    return str(r.status_code)
```

handler.py

requests

requirements.txt



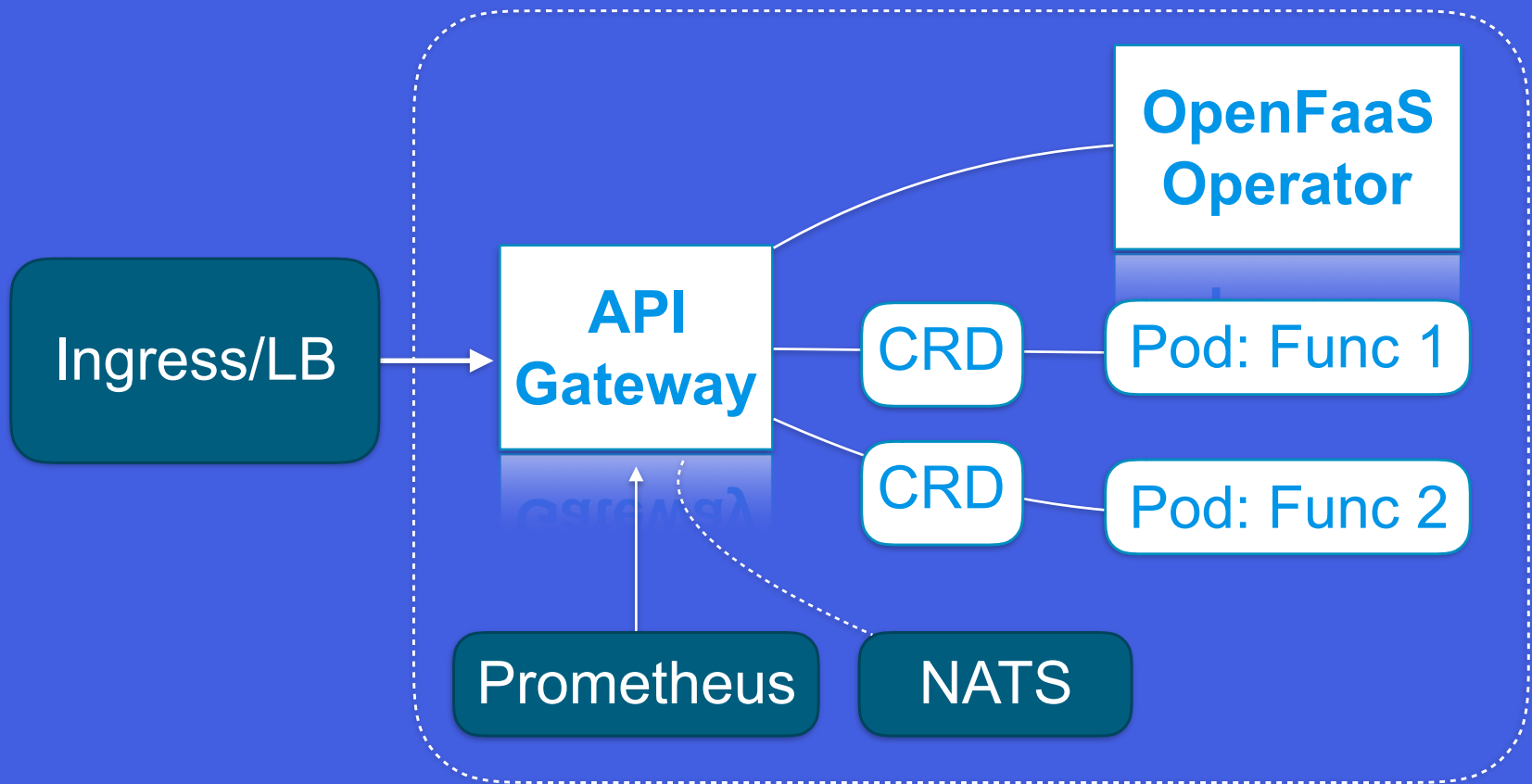
*Python
Template*



Docker
Image



Architecture: Kubernetes-native



Growth of OpenFaaS

DRIVEN BY CORE VALUES

★ 14k 

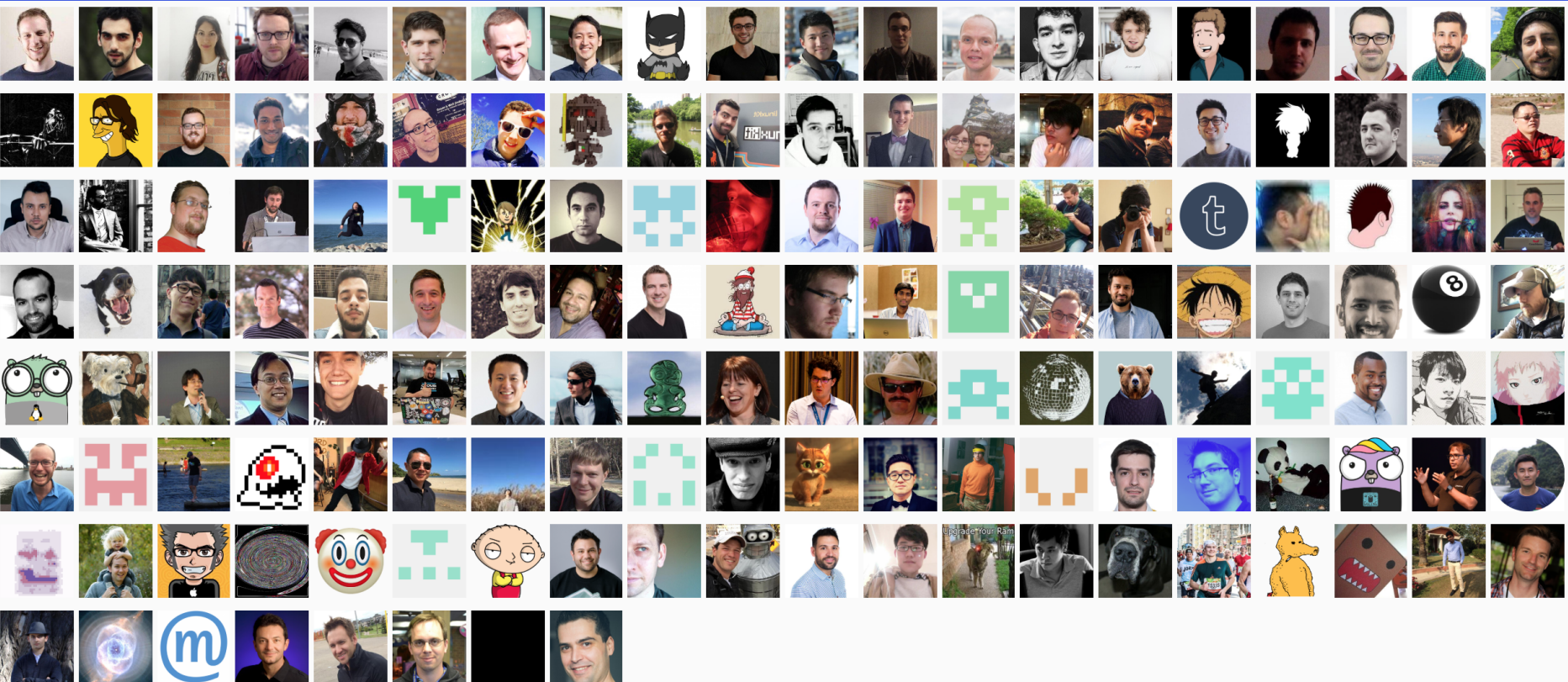
**Developer-
First**

**Operator-
Friendly**

**Community-
Centric**



Our community and contributors (aka #TeamServerless)



End-users & case-studies



Case-study 1: Bullet-proof



Bulletproof are using OpenFaaS to build an **on demand and scalable Vulnerability Scanning (VA)** engine.

Using OpenFaaS allows us to use **compute resource efficiently** yet maintain the ability to grow to meet **customer scanning demands**.

We also like the ability to use **pure docker containers** to **compose multiple scanning tools** with different technologies into a **single, coherent interface**. This has **reduced the time** need to add new tools to the platform.



Penetration Testing



Vulnerability
Assessments



Managed SIEM



Case-study 2: Vision Banco, Paraguay



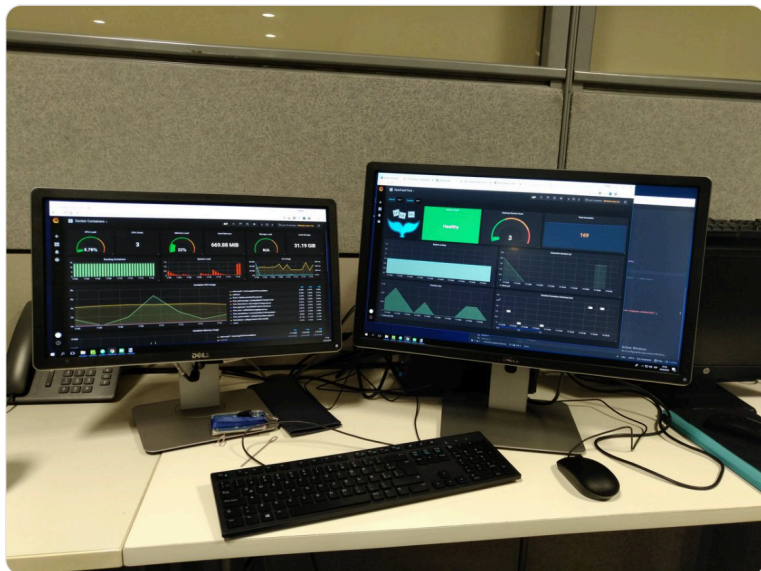
Pato Díaz

@padiazg

Following



Just switched to production one of our functions, the first one. Monitoring how it performs. [@alexellisuk](#) [#FaaSFriday](#)
twitter.com/padiazg/status...



9:25 PM - 22 Jun 2018



- Digital Transformation
- OpenFaaS in production with HomeServe
- KubeCon talk @ Seattle
- Completely on-prem with GitLab

Case-study 3: IconScout



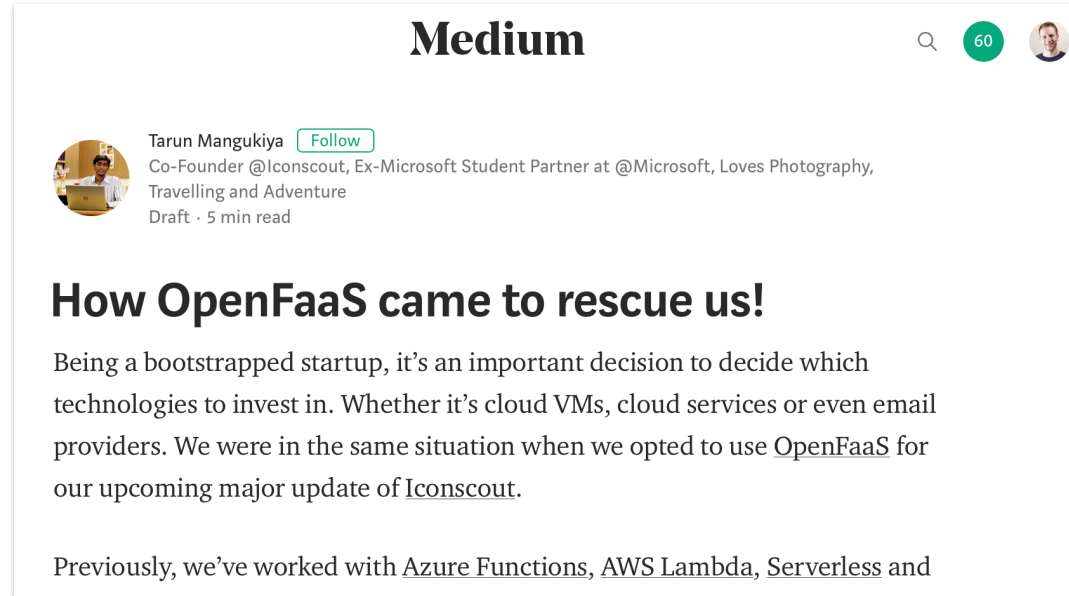
Tarun Mangukiya
Co-founder



Icons, stock
photography &
illustrations

Custom sizing

3x speed increase

A screenshot of a Medium article preview. At the top right, the word "Medium" is displayed in a bold, black font. To its right are a search icon, a green circle with the number "60", and a small profile picture. Below this, the author's name "Tarun Mangukiya" is shown next to a "Follow" button. The author's bio reads: "Co-Founder @Iconscout, Ex-Microsoft Student Partner at @Microsoft, Loves Photography, Travelling and Adventure". Below the bio, it says "Draft · 5 min read". The article title is "How OpenFaaS came to rescue us!". The main text of the article begins with: "Being a bootstrapped startup, it's an important decision to decide which technologies to invest in. Whether it's cloud VMs, cloud services or even email providers. We were in the same situation when we opted to use OpenFaaS for our upcoming major update of Iconscout." At the bottom, it says: "Previously, we've worked with Azure Functions, AWS Lambda, Serverless and".

Medium

Tarun Mangukiya [Follow](#)

Co-Founder @Iconscout, Ex-Microsoft Student Partner at @Microsoft, Loves Photography, Travelling and Adventure

Draft · 5 min read

How OpenFaaS came to rescue us!

Being a bootstrapped startup, it's an important decision to decide which technologies to invest in. Whether it's cloud VMs, cloud services or even email providers. We were in the same situation when we opted to use OpenFaaS for our upcoming major update of Iconscout.

Previously, we've worked with Azure Functions, AWS Lambda, Serverless and

A common theme

- Early adopters
 - support less technical teams
 - build bespoke CI/CD solutions
 - collaboration & feedback

We applied software engineering best practices

**We wanted
to make it
seamless.**



Ivan Pedrazas

@ipedrazas

Following



When you git push, our CI builds, deploys your code and returns an endpoint.

This, in essence, is what serverless is about. Serverless is more than just lambda.

9:13 AM - 12 Jun 2018

1 Retweet 13 Likes





Follow



Automate your workflow.

Meet GitHub Actions 🙌
It might just change the way you work.

[github.com/features/actio...](https://github.com/features/actions)

GitHub Actions
GitHub Actions applies open source principles to workflow automation, weaving together the tools you use from idea to production into one complete workflow.



Alexis Richardson

@monadic

Follow



mega update on GitOps and why
Kubernetes is so important for it >>>

Weaveworks @weaveworks

Have you wondered what's the difference between infrastructure as code, Continuous Delivery and #GitOps? @monadic discusses developer experience and its role in production velocity bit.ly/2MJgwVm

12:49 PM - 21 Aug 2018

25 Retweets 66 Likes



3



25



66

GitOps + Functions



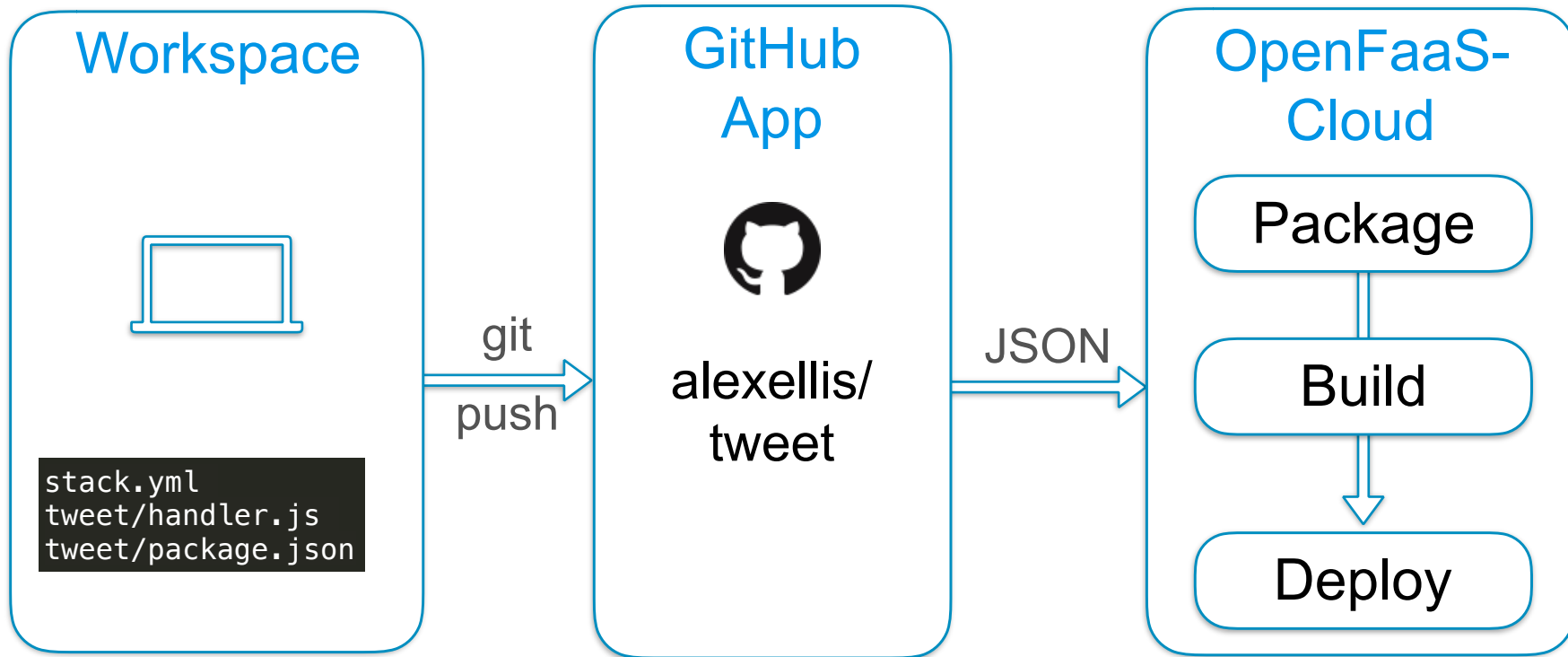
OpenFaaS Cloud ☁️



- Managed
- Multi-user
- Personal dashboard
- CI/CD (GitOps)
- Feedback via *GitHub*

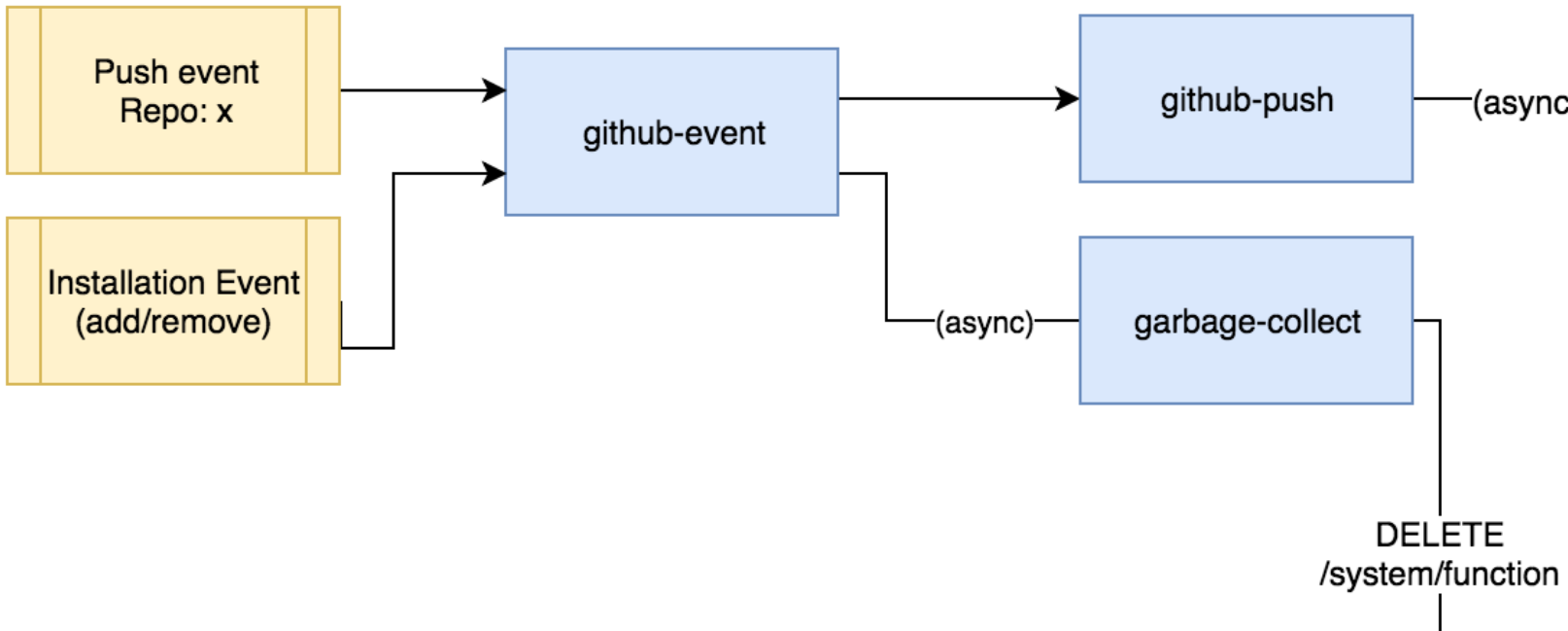
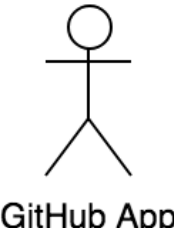
Free Community Cluster*

Conceptual workflow (CI/CD)

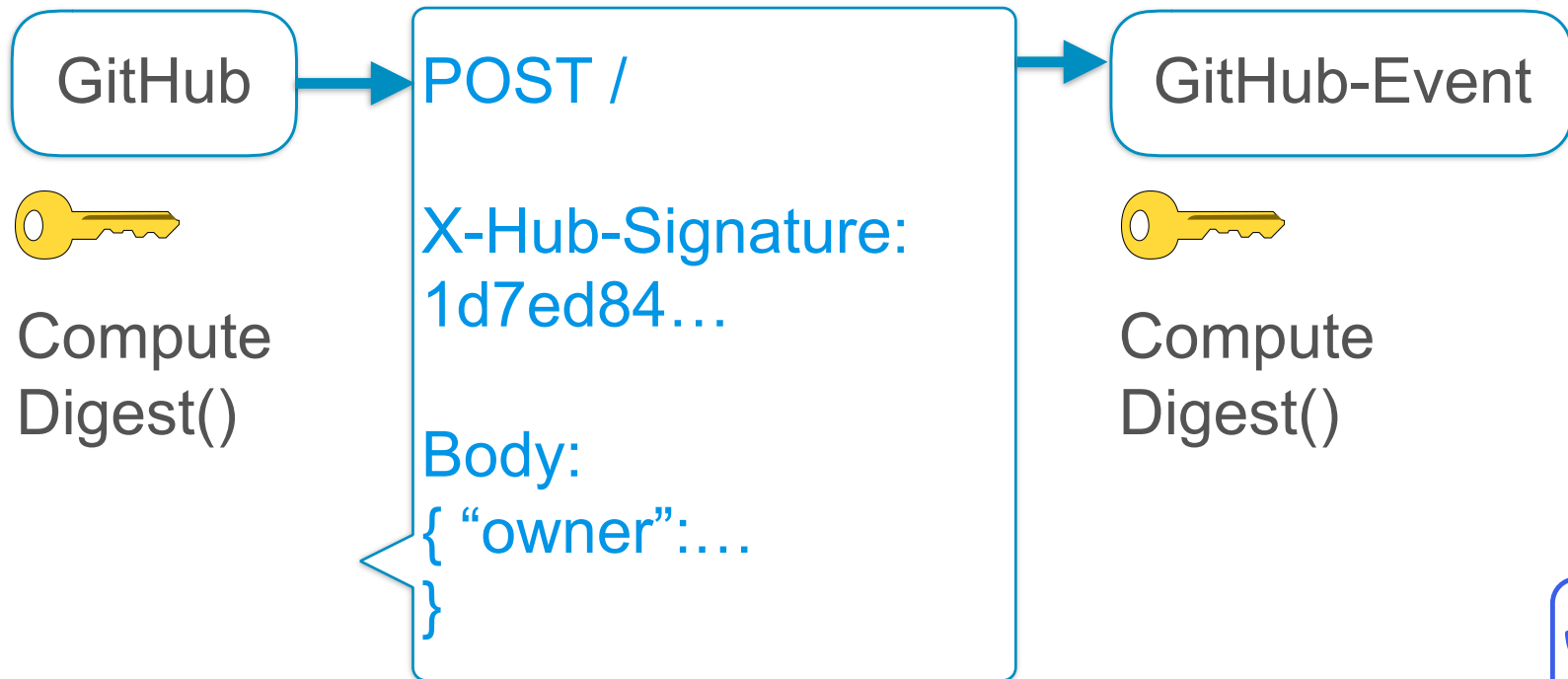


Endpoint: <https://alexellis.o6s.io/tweet>

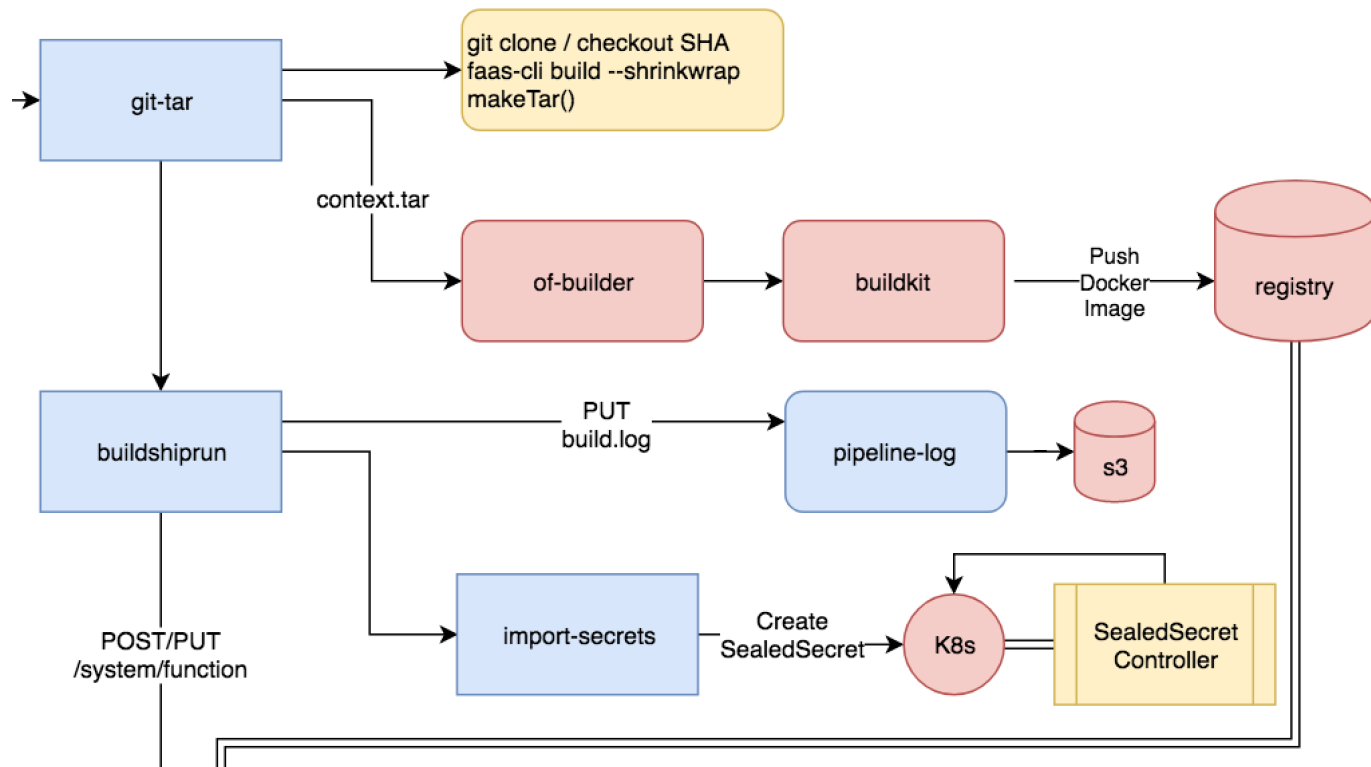
Event integration



Trust & signing (HMAC)



CI & CD



Code

Issues 0

Pull requests 0

Projects 0

Wiki

Insights



Branch: master

Commits on Oct 17, 2018

Validate empty login



alexellis committed 18 hours ago



Update README.md



alexellis committed 18 hours ago



Remove S3 config



alexellis committed 18 hours ago



Reinstate conflict error



alexellis committed 19 hours ago



Move connStr up

All checks have passed

4 successful checks



move-money — Build move-money

[Details](#)



pot-total — Build pot-total

[Details](#)



register-user — Build register-user

[Details](#)



stack-deploy — Deploy to OpenFaaS

[Details](#)



Search or jump to...

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[alexellis](#) / [pledge-fn](#) Private

[Code](#) [Issues 0](#) [Pull requests 0](#) [Projects 0](#) [Wiki](#) [Insights](#) [Settings](#)

1d7ed84 — Validate empty login

▼ **OFC Mini**

Succeeded — 18 hours ago

✓ [move-money](#)

✓ [pot-total](#)

✓ [register-user](#)

✓ [stack-deploy](#)

move-money

✓ **Success**

🕒 ran **18 hours ago** in **less than 5 seconds**

🔗 [1d7ed84](#) by [@alexellis](#)

🔑 [master](#)

Build move-money

[deployed: alexellis-move-money](#)

DETAILS

```
v: 2018-10-17T18:01:46Z local://dockerfile (Dockerfile)
v: 2018-10-17T18:01:46Z local://context (.dockerignore)
s: 2018-10-17T18:01:46Z transferring dockerfile: 0
s: 2018-10-17T18:01:46Z transferring dockerfile: 36
s: 2018-10-17T18:01:46Z transferring dockerfile: 1227
s: 2018-10-17T18:01:46Z transferring context: 0
v: 2018-10-17T18:01:46Z local://dockerfile (Dockerfile) 0.04s
s: 2018-10-17T18:01:46Z transferring context: 0
```

Dashboard



OpenFaaS Cloud

Home

GitHub

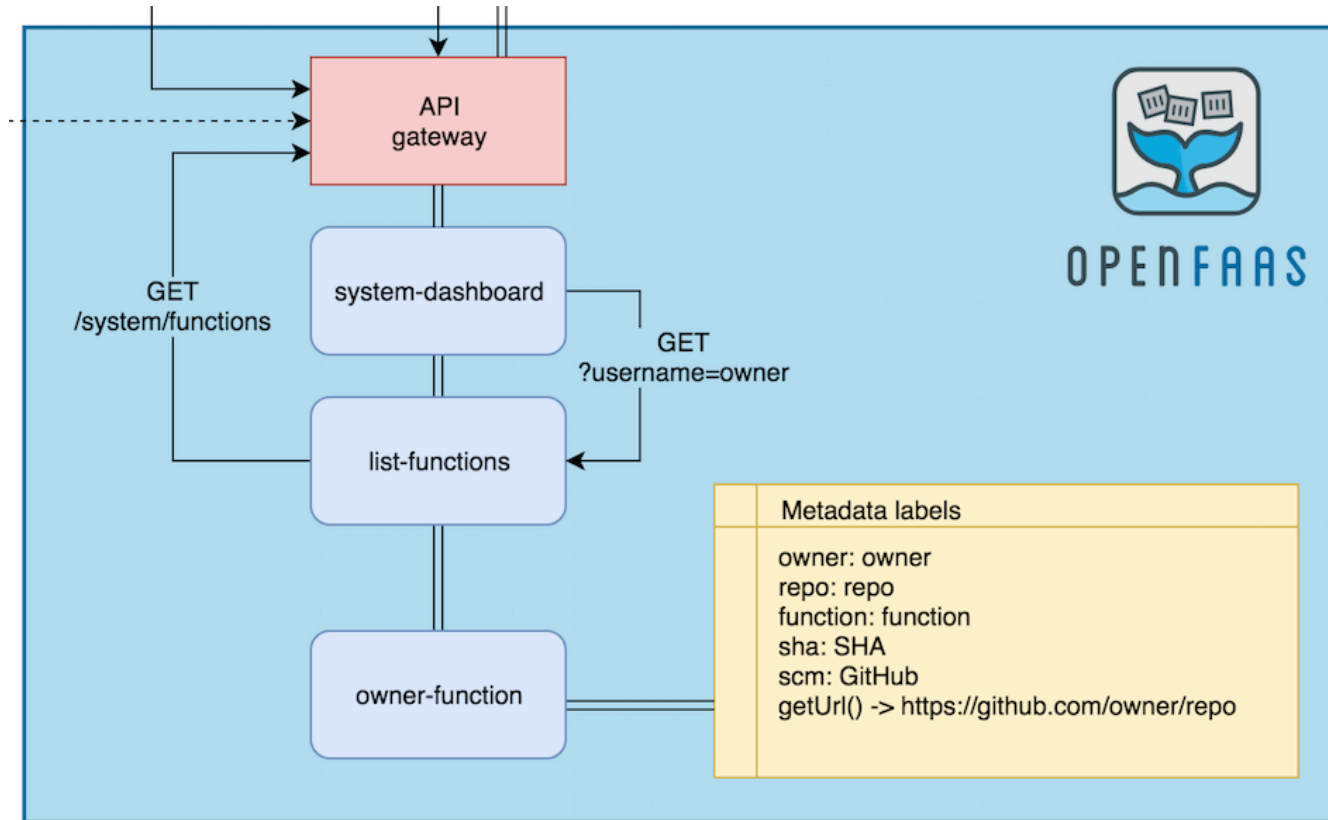
alexellis

Functions for alexellis

Welcome to the OpenFaaS Cloud Dashboard! Click on a function for more details.

Name		Repository	SHA	Deployed	Invocations	Replicas	
move-money		pledge-fn	1d7ed84	18 hours ago	87	1/4	
register-user		pledge-fn	1d7ed84	18 hours ago	315	1/4	
pot-total		pledge-fn	1d7ed84	18 hours ago	646	1/4	

Serving functions



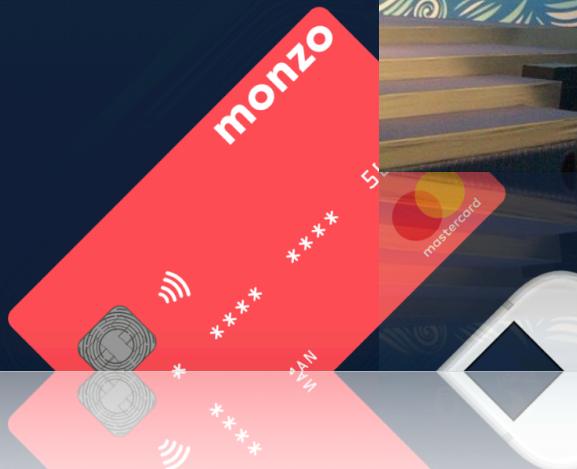
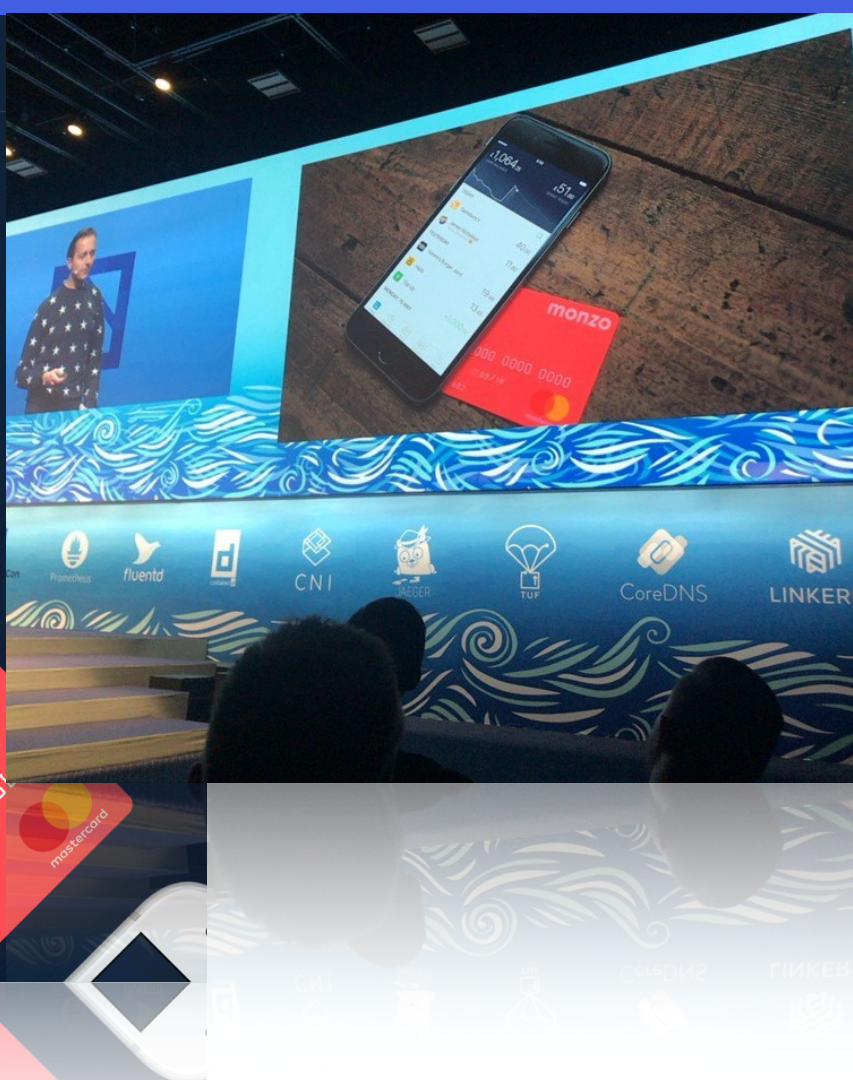


Are you in?

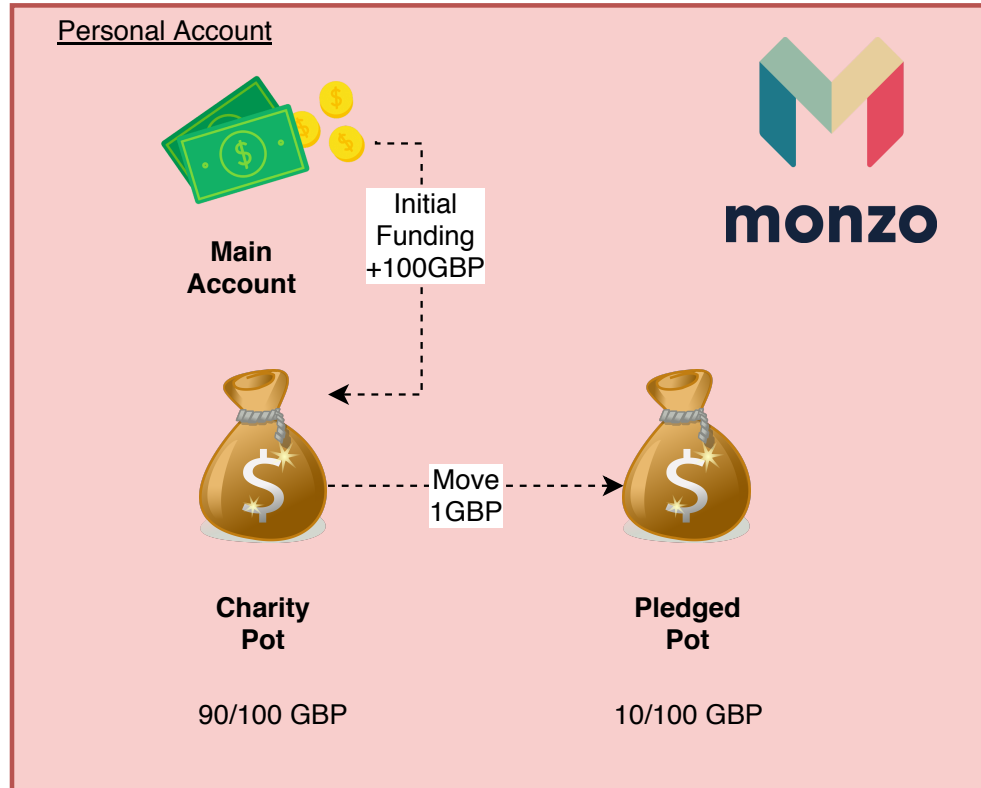
The bank of the future

This isn't banking as you know it. Monzo is a bank for everyone, that works with you, for you.

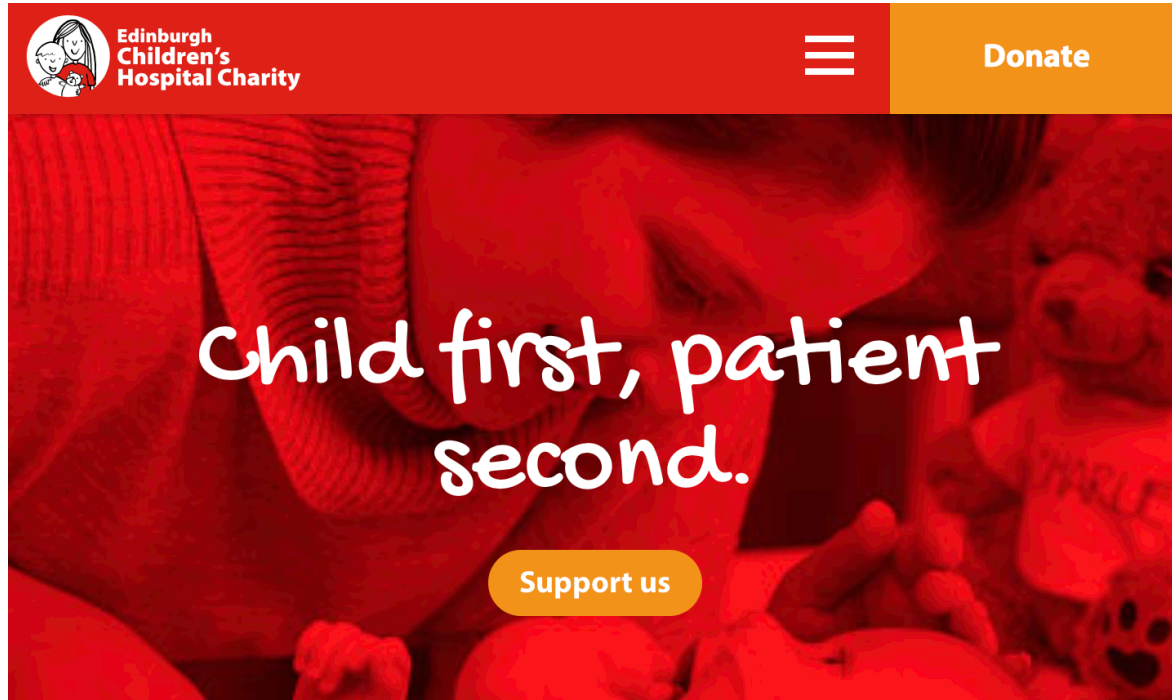
Join today for your own UK current account.



Working with my bank's API



You register with the App and I'll pledge

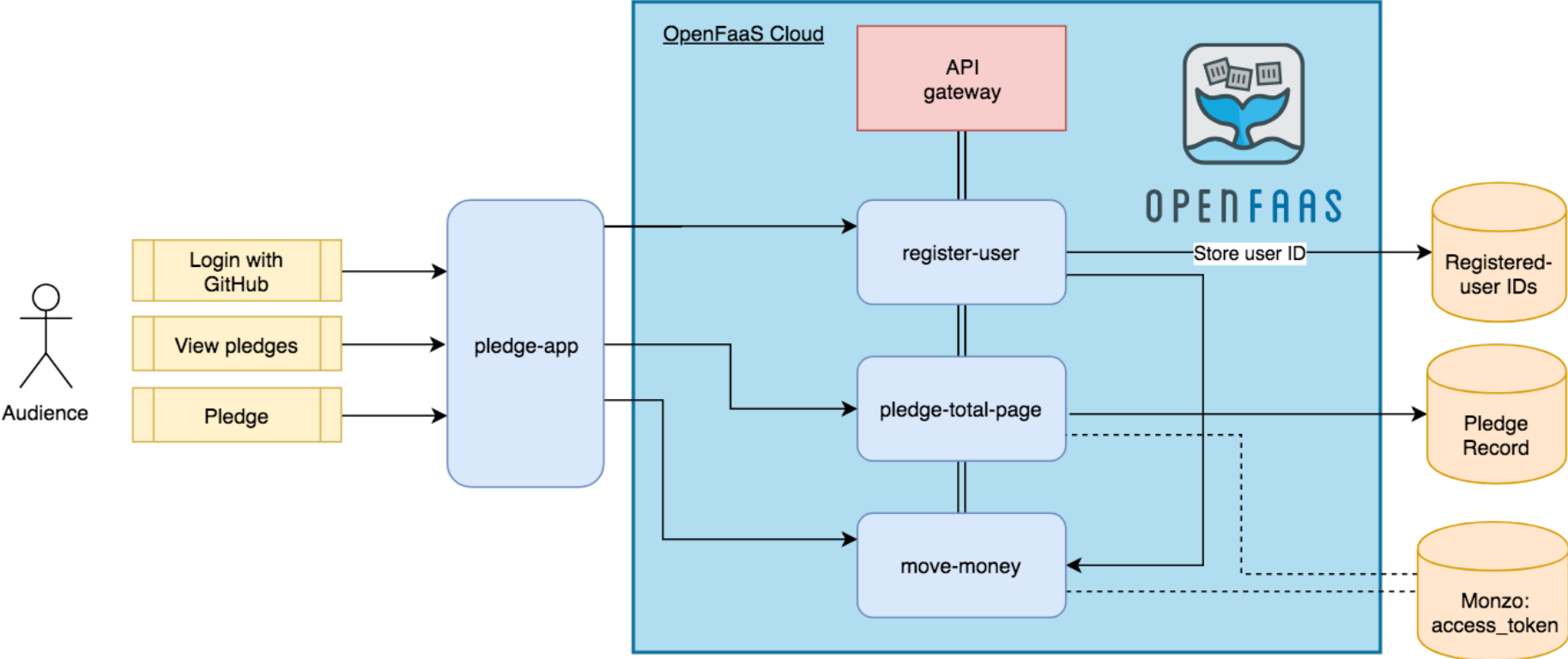


<https://echcharity.org>

Pledge via this URL:

<https://...>

How it works



Summing up

OpenFaaS Cloud brings:

- Portable multi-user Serverless
- Developer-native workflow (GitOps)
- Rapid iteration from concept to production



Roadmap

- OpenFaaS Cloud
 - Teams & organisations
 - GitLab => 100% on-prem
 - Staging endpoints
- OpenFaaS
 - Fall t-shirt coming soon!
 - API extensions: logs & secrets



Get involved

1. Join Slack 🙌

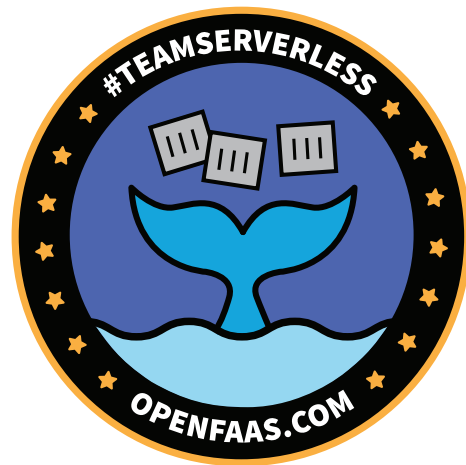
<https://docs.openfaas.com/community>

2. Try the workshop! 🖥️

<https://github.com/openfaas/workshop>

3. Hacktoberfest - submit a PR

<https://github.com/openfaas>



Meet-us here:

- VMware booth all week
- Docker Meetup on Istio



OPENFAAS

Thank you!

www.openfaas.com