



OPENFAAS

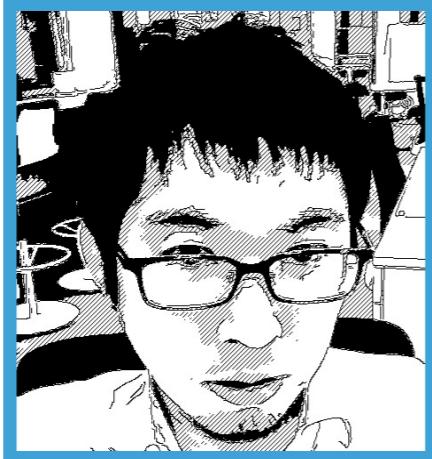


# OpenFaaS × Rancherが 気づかせてくれたこと

2017.11.15

Rancher Meetup Tokyo #11

# 自己紹介



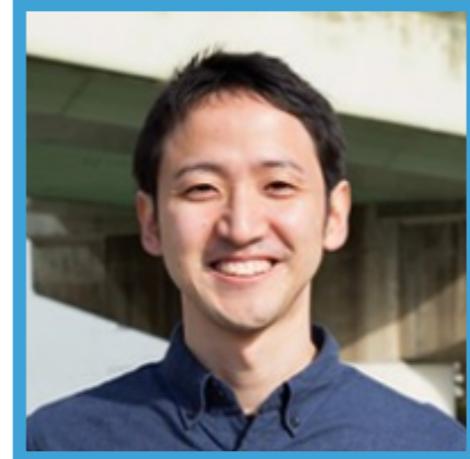
山澤 一仁

Yamazawa Kazuhito

 @kyamazawa\_ssl

チームリーダー

器用貧乏



福山 健

Fukuyama Ken

 @kenfdev

フロントエンド

バックエンド

# 会社紹介

## 株式会社スーパーソフトウェア

Supersoftware Co., Ltd.

- 1983年設立のソフトウェア開発会社
- 拠点：大阪(本社)、東京、広島、福岡
- 組み込みからスマホアプリ、AIまで色々やっています



自社クラウドサービス：[CapsuleCloud](#)

HOME サービス AWSとは 導入事例 よくあるご質問 ブログ お問い合わせ ログイン 無料会員登録

課題解決型AWSソリューション  
カプセルクラウド

お客様のクラウド構築・運用を総合支援する実戦型AWS

▶ サービスプラン一覧

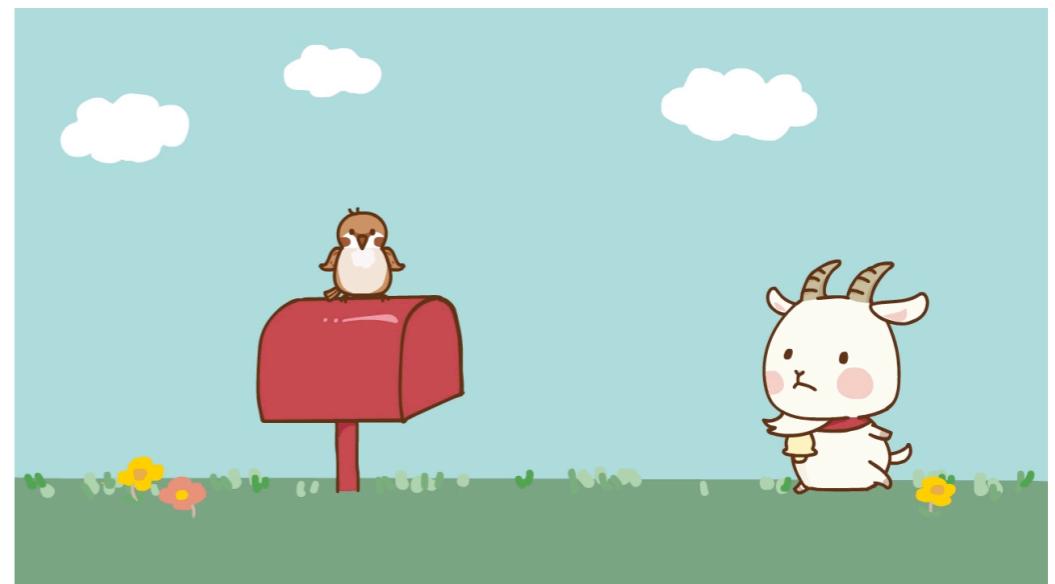
amazon web services Partner Network CONSULTING PARTNER RANCHER PARTNER NETWORK

<https://capsulecloud.io>

スマホアプリ  
：漫画カメラ



オリジナルアニメ：[ペーぺーの中にあるカミを食べる](#)



<https://youtu.be/D9SJzmPiv1Y>

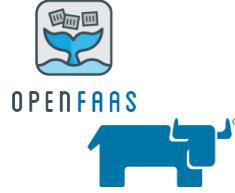


# 今回のお話は…



OpenFaaS x Rancherが  
気づかせてくれたこと

Serverlessってなんだろう？



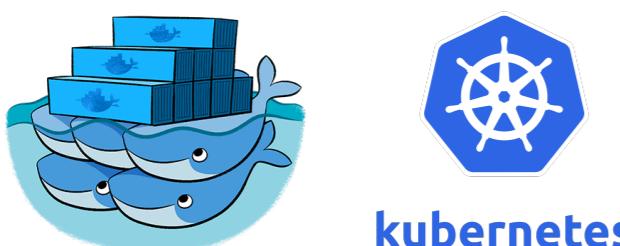
# OpenFaaS とは

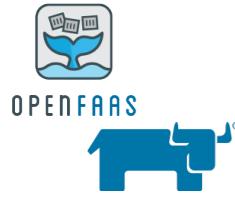
Docker上で動くServerlessなFramework

コンテナに入っていれば何でもFunctionになり得る

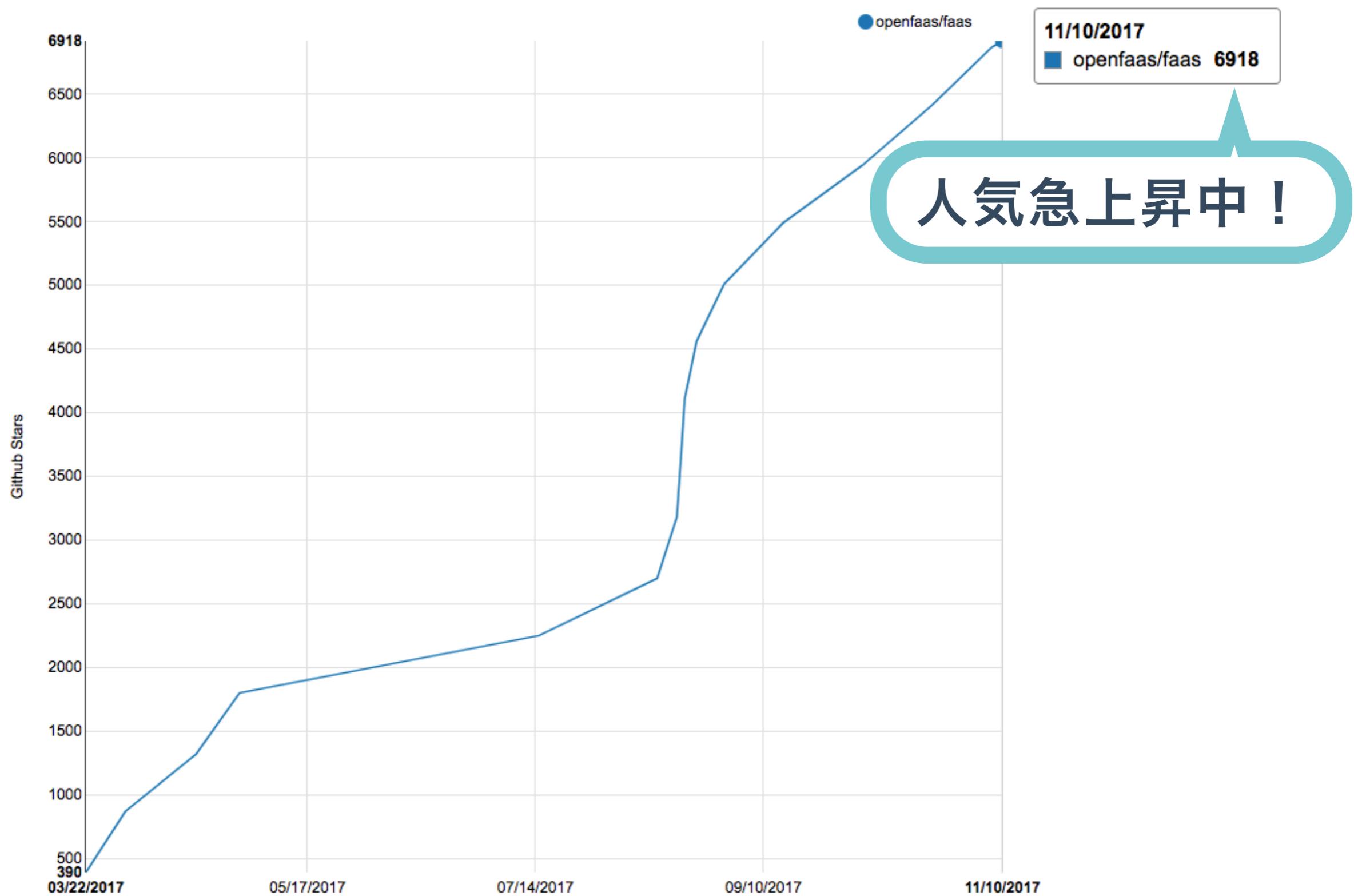


Docker SwarmとKubernetesでの動作がサポートされている





# OpenFaaSとは



# OpenFaaS とは



The screenshot shows a news article from InfoWorld titled "Bossie Awards 2017: The best cloud computing software". The article discusses the best open source software for building and managing cloud infrastructure. It features a quote from Martin Heller, Andrew C. Oliver, and Serdar Yegulalp. The article includes a sidebar for sharing and navigation (All Slides, Slide 7 of 12). Below the article, there's a thumbnail image of the OpenFaaS UI, which is a serverless functions framework built with Docker. The UI shows sections for API Gateway, Function Watchdog, and Docker, along with icons for Prometheus, Swarm, and Kubernetes. The OpenFaaS logo is prominently displayed. At the bottom of the thumbnail, it says "InfoWorld BOSSIE 2017 AWARDS OpenFaaS".

≡ InfoWorld  
FROM IDG

INSIDER Sign In | Register

Home > Cloud Computing

## Bossie Awards 2017: The best cloud computing software

InfoWorld picks the best open source software for building and managing cloud infrastructure

By Martin Heller, Andrew C. Oliver and Serdar Yegulalp, InfoWorld | Sep 27, 2017

Share All Slides Slide 7 of 12

◀ ▶

Functions as a Service (OpenFaaS)

Functions as a Service

API Gateway Function Watchdog

Prometheus Swarm Kubernetes

docker

OPENFAAS

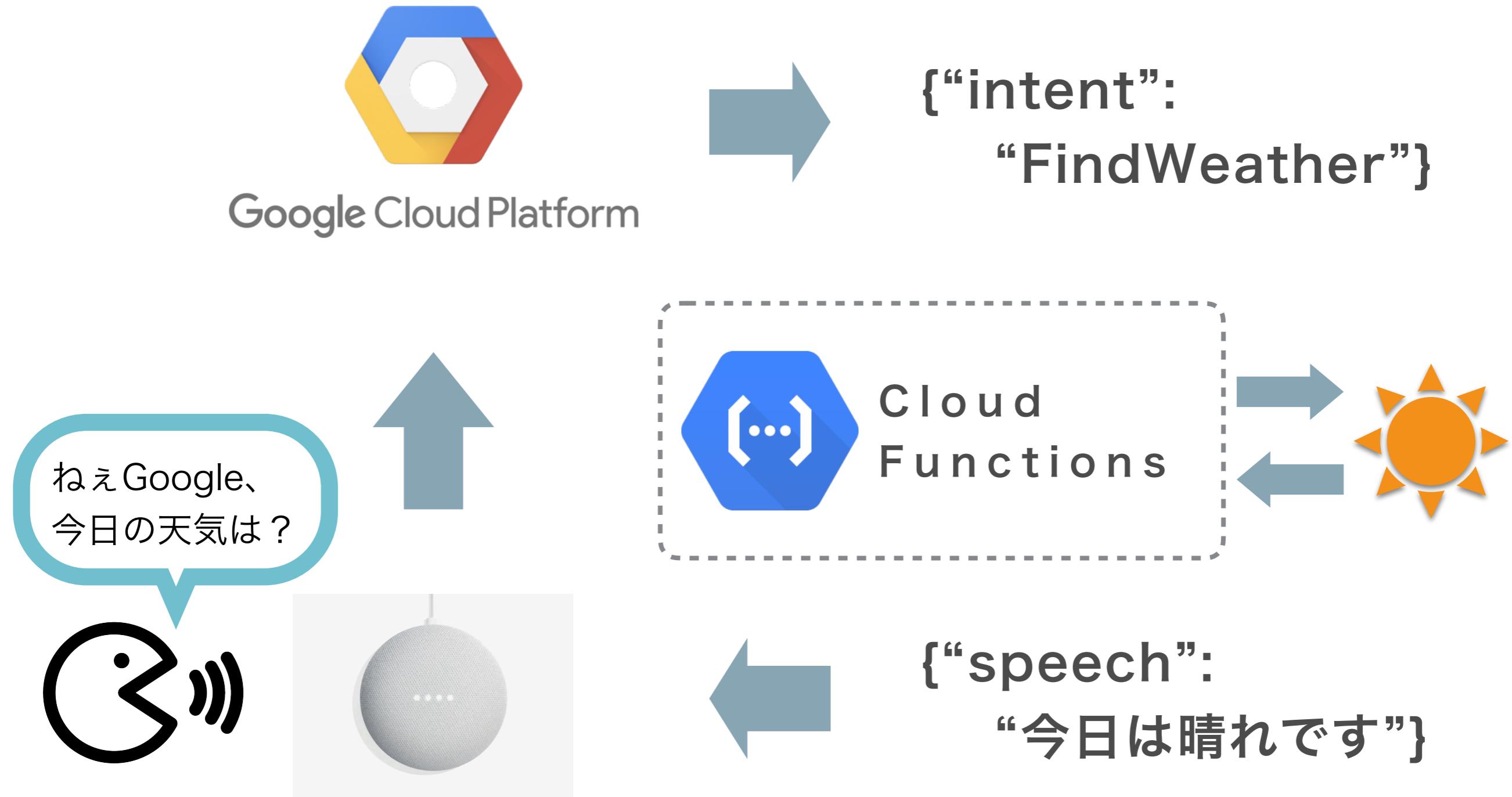
OpenFaaS is a framework for building serverless functions with Docker which has first class support for Dockerfiles. A function can be packaged as a Docker image and consumed via a range of web events.

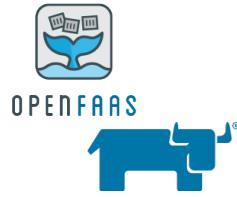
Highlights

- Ease of use through UI portal and one-click install
- Write functions in any language for Linux or Windows and package in Docker/OCI images
- Portable - runs on existing hardware or public/private cloud - Kubernetes or Docker
- CLI available with YAML format for templating and defining functions
- Auto-scales as demand increases

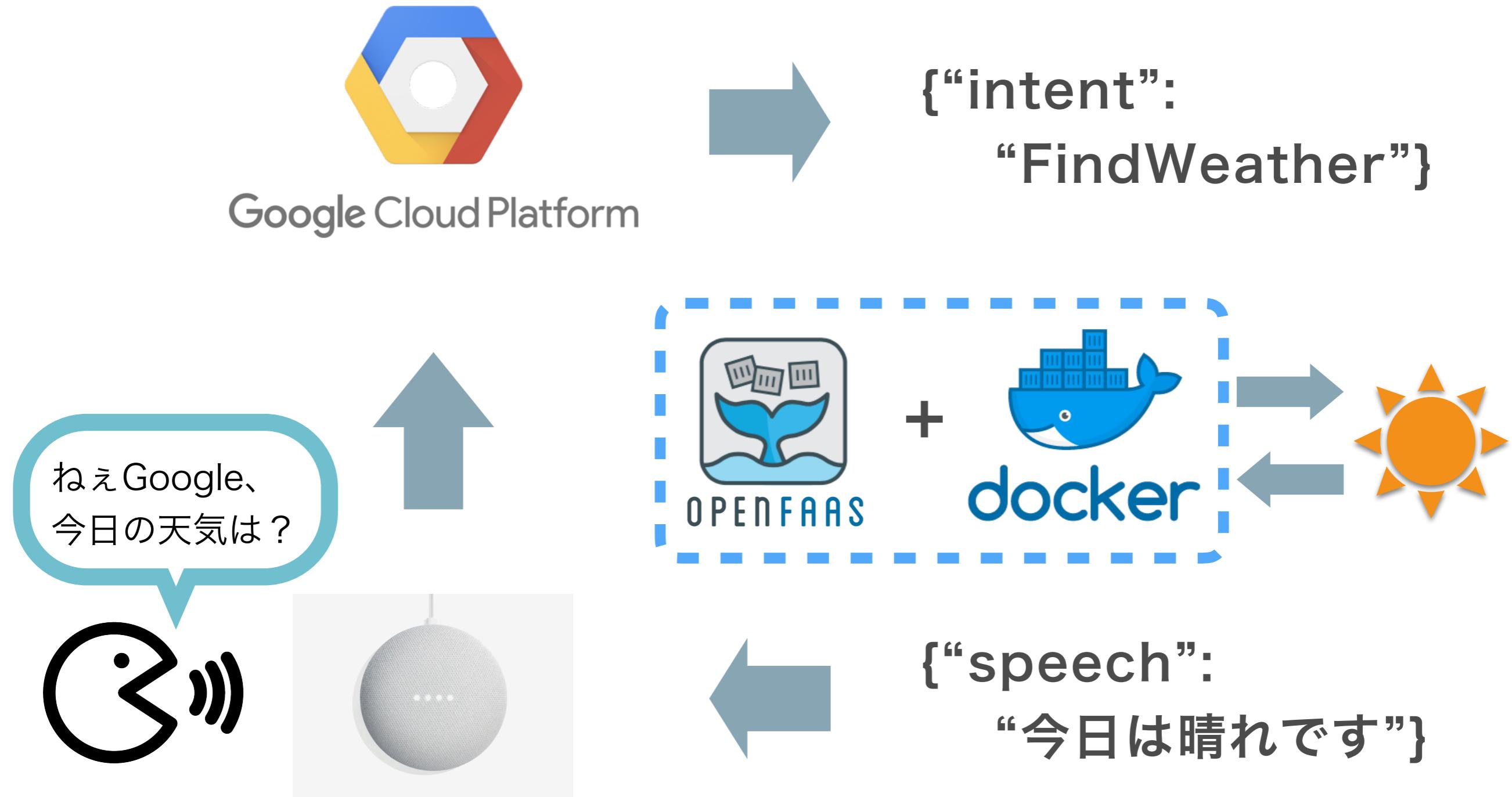
InfoWorld BOSSIE 2017 AWARDS OpenFaaS

# Serverlessな実例 (GCP)



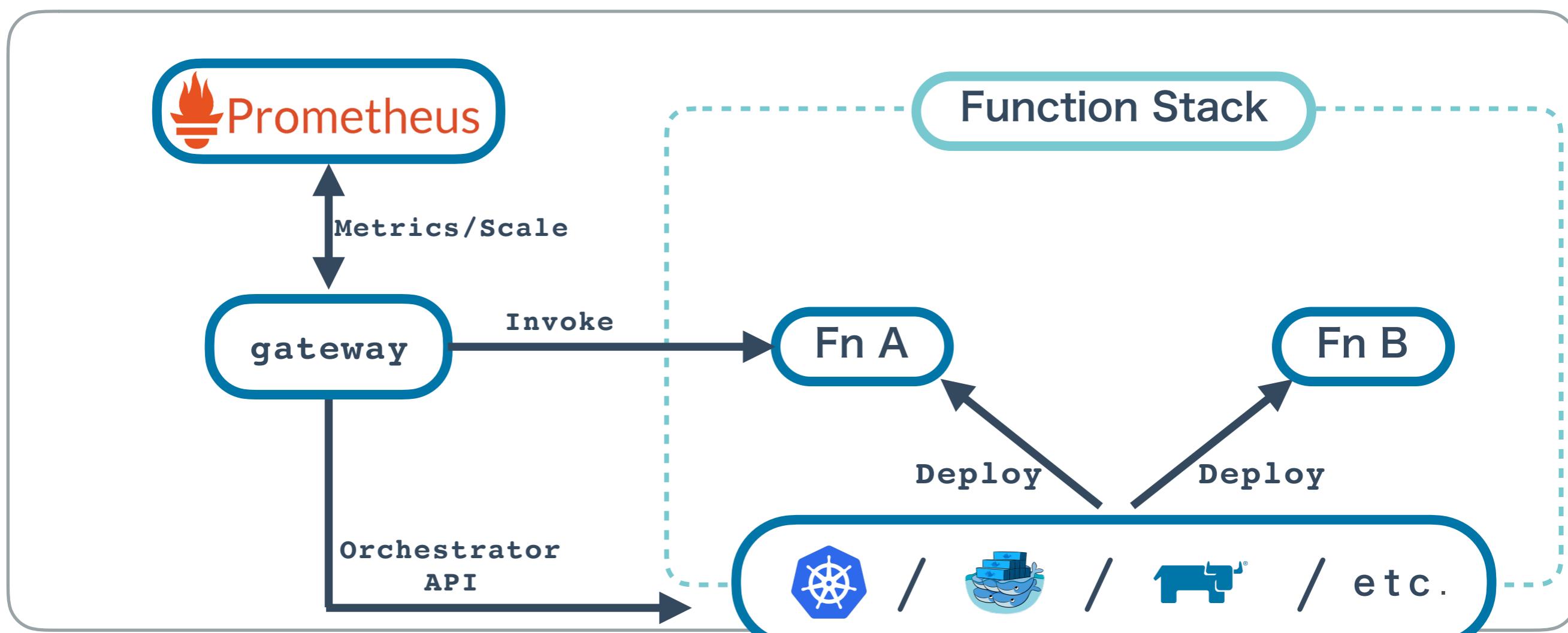


# Serverlessな実例（OpenFaaS）



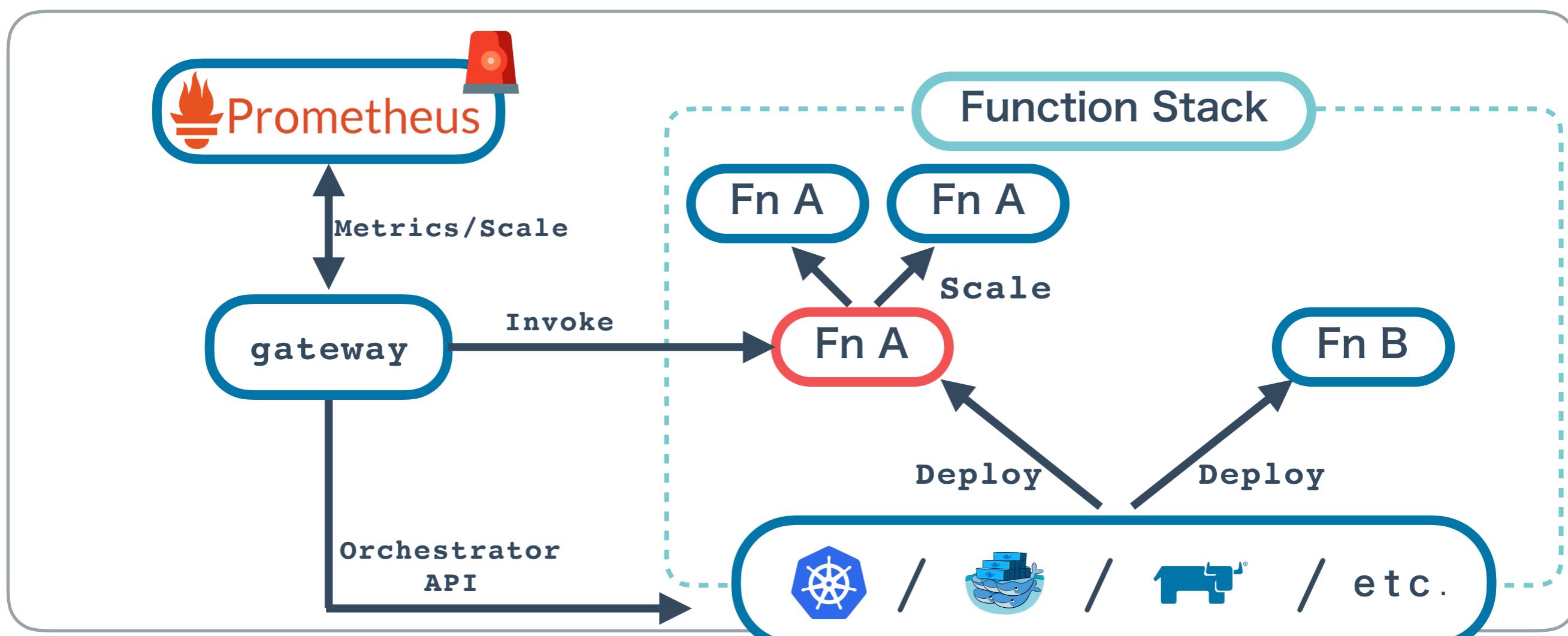
# OpenFaaS の仕組み

## 基本構成



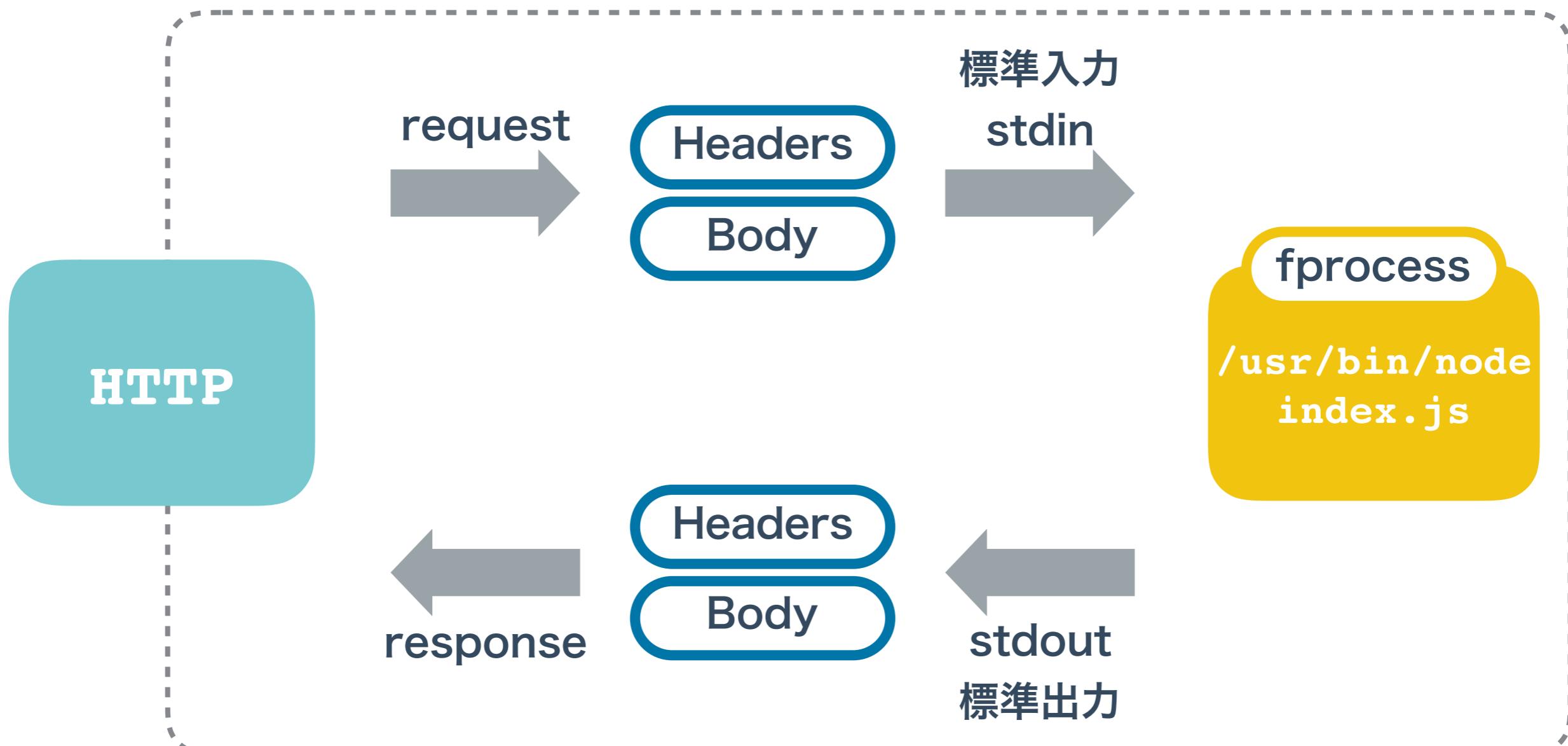
# OpenFaaSの仕組み

やばくなったら自動的にスケール！



# OpenFaaS の仕組み

## Functionの仕組み





# 何がうれしいのか？



**S e r v e r l e s s ?**

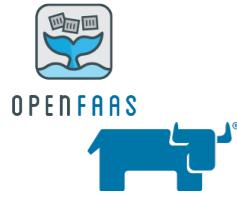
## Container Platform: Enabling the Software Supply Chain

- Diverse Applications
- Disparate Infrastructure
- Lifecycle Management
- Orchestrate Complex Systems
- Secure by Default
- Edge / IoT
- Serverless Anywhere



 dockercon<sup>17</sup> EU

<https://www.slideshare.net/Docker/dockercon-eu-2017-general-session-day-1>



# Serverless Anywhere

***"Customers want deployment flexibilities. Business rules change. Requirements change. Regulatory environments change."***

***"Serverless has to be anywhere. It can't be linked or tied to a single platform."***

- Steve Singh @ DockerCon EU 2017

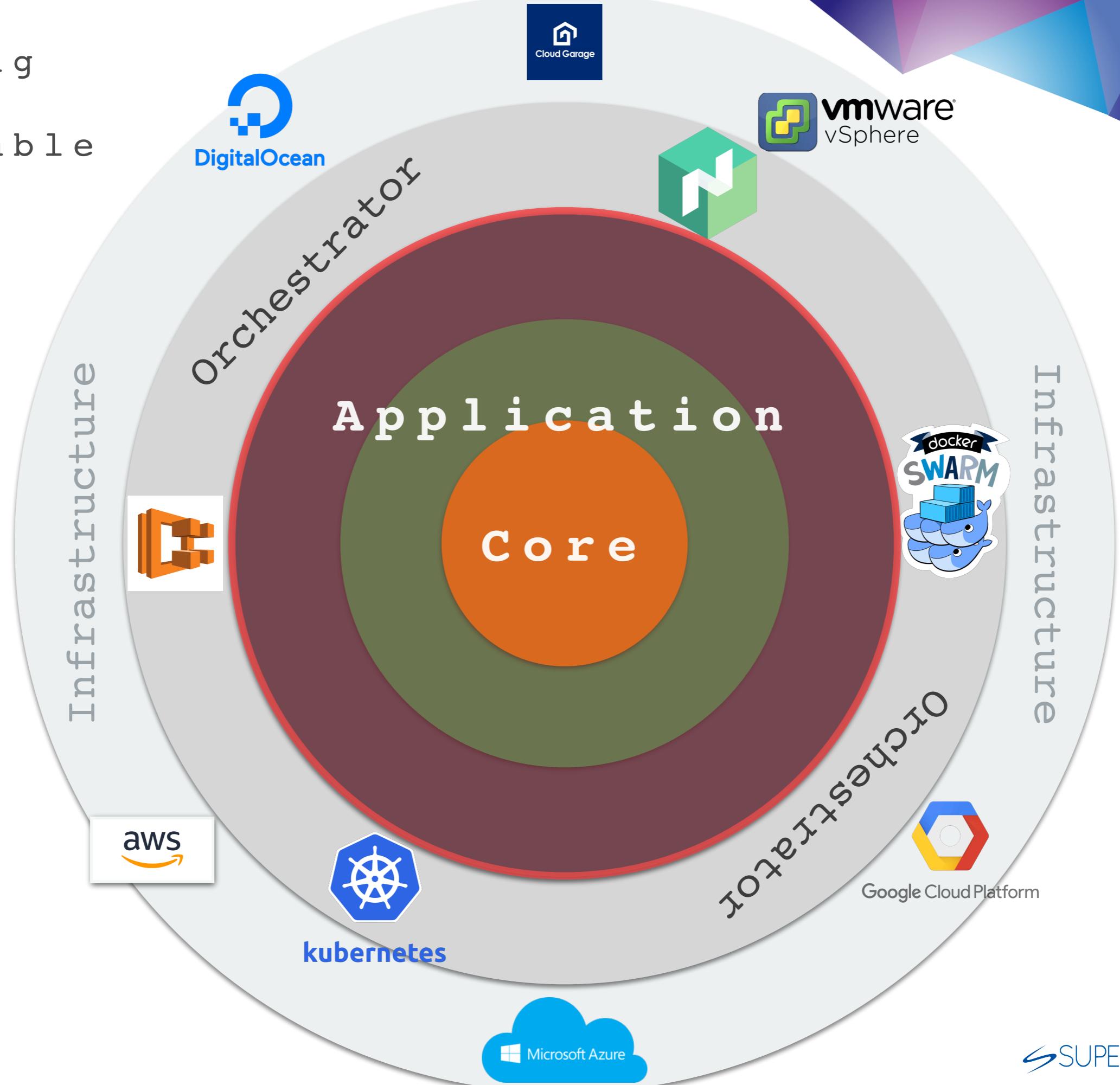


# Portability



# **I n f r a s t r u c t u r e   P o r t a b i l i t y**

Plug  
&  
Playable





# **A p p l i c a t i o n   P o r t a b i l i t y**

# App Portability



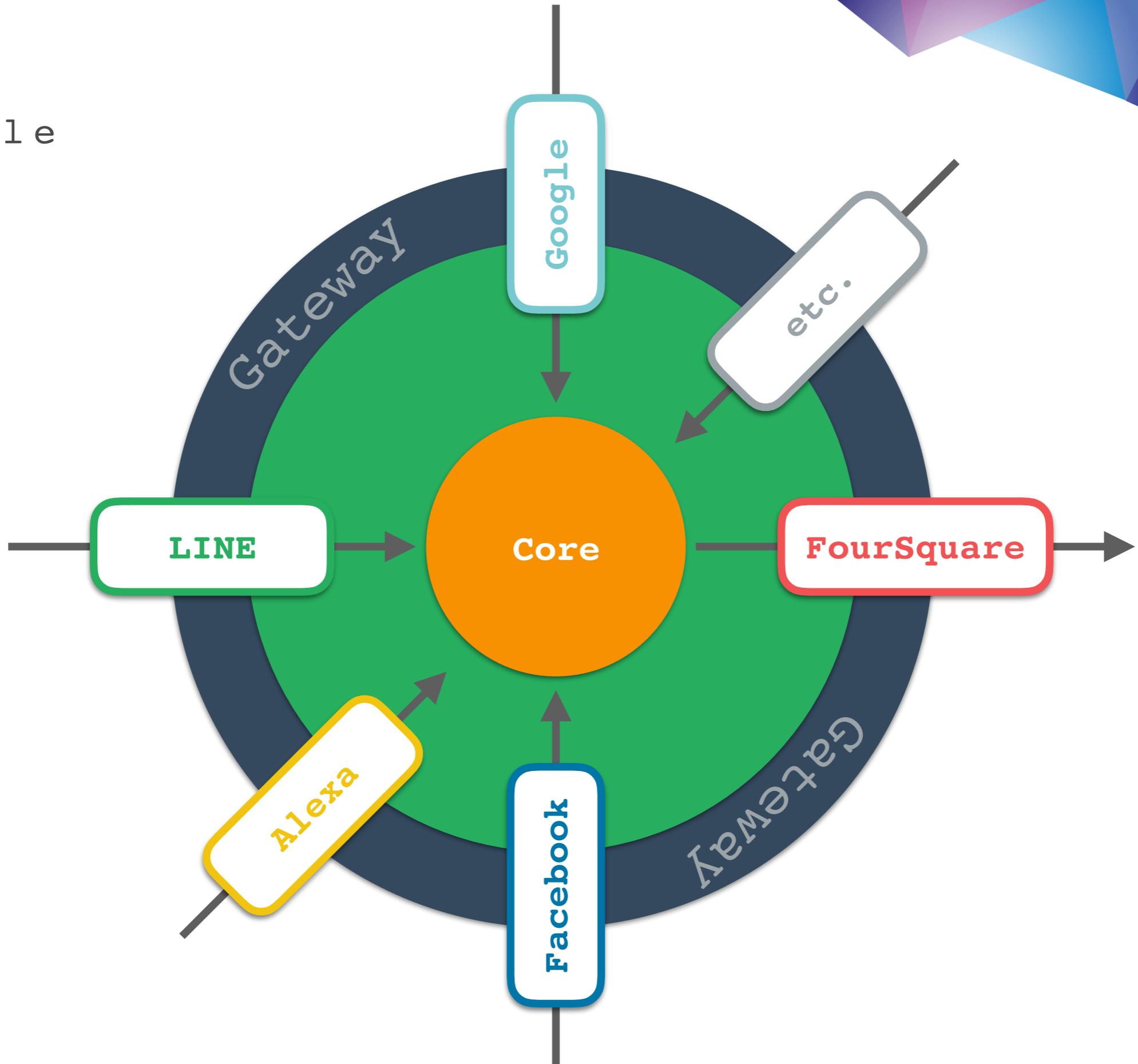
Monolith

Microservice

Function



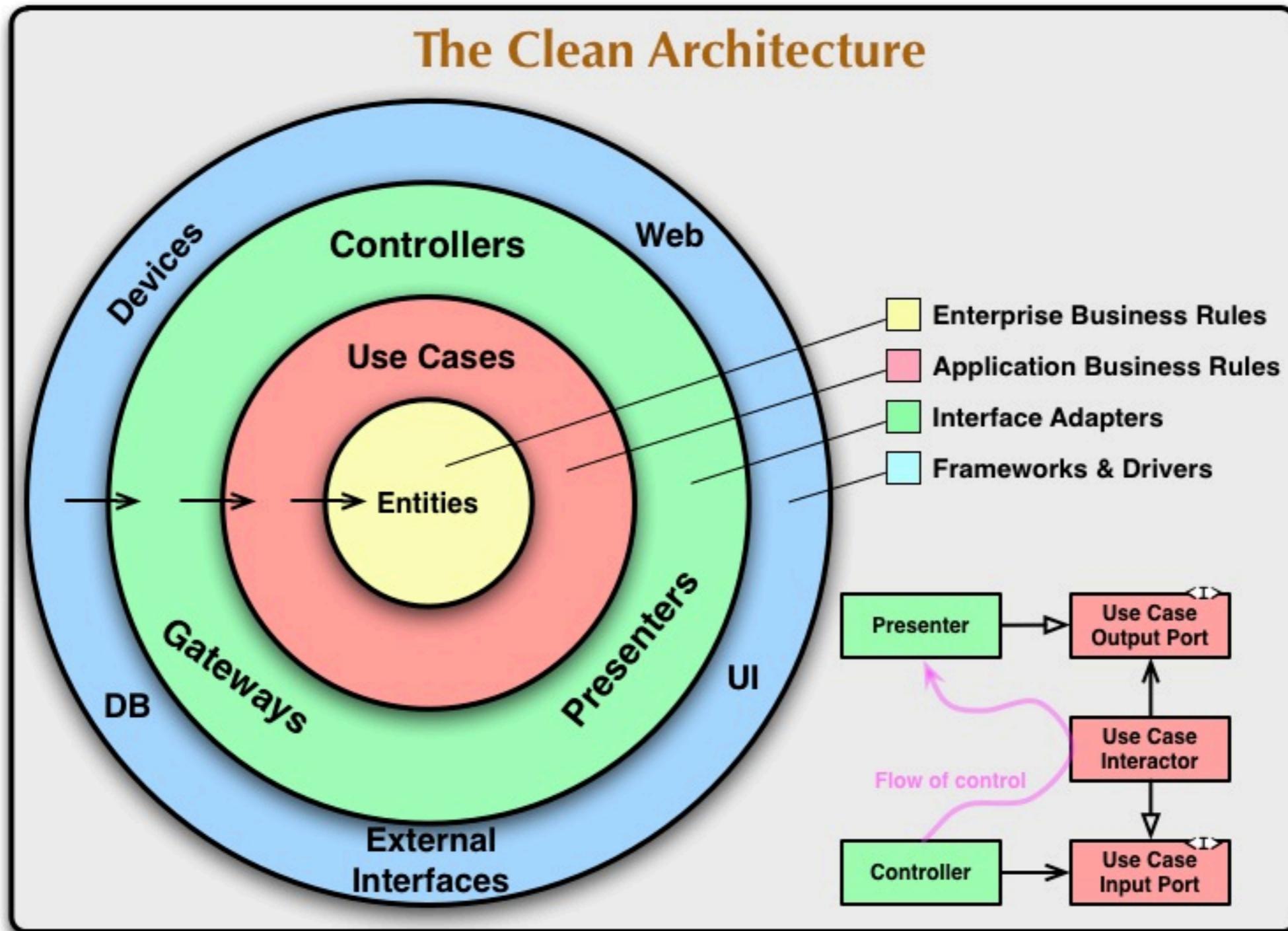
Plug  
&  
Playable





この形、どこかで見た気が…

# Clean Architecture



<https://8thlight.com/blog/uncle-bob/2012/08/13/the-clean-architecture.html>

# Clean Architecture



<https://www.youtube.com/watch?v=Nltqi7ODZTM>

# Clean Architecture



*Make the Delivery Mechanism a Plugin to your Application.*

All the architectural decisions we want to defer...

How do we defer them?  
*We turn them into plugins.*

Robert C. Martin (Uncle Bob)

# Serverless



***"Serverless is about delivering developer experience."***

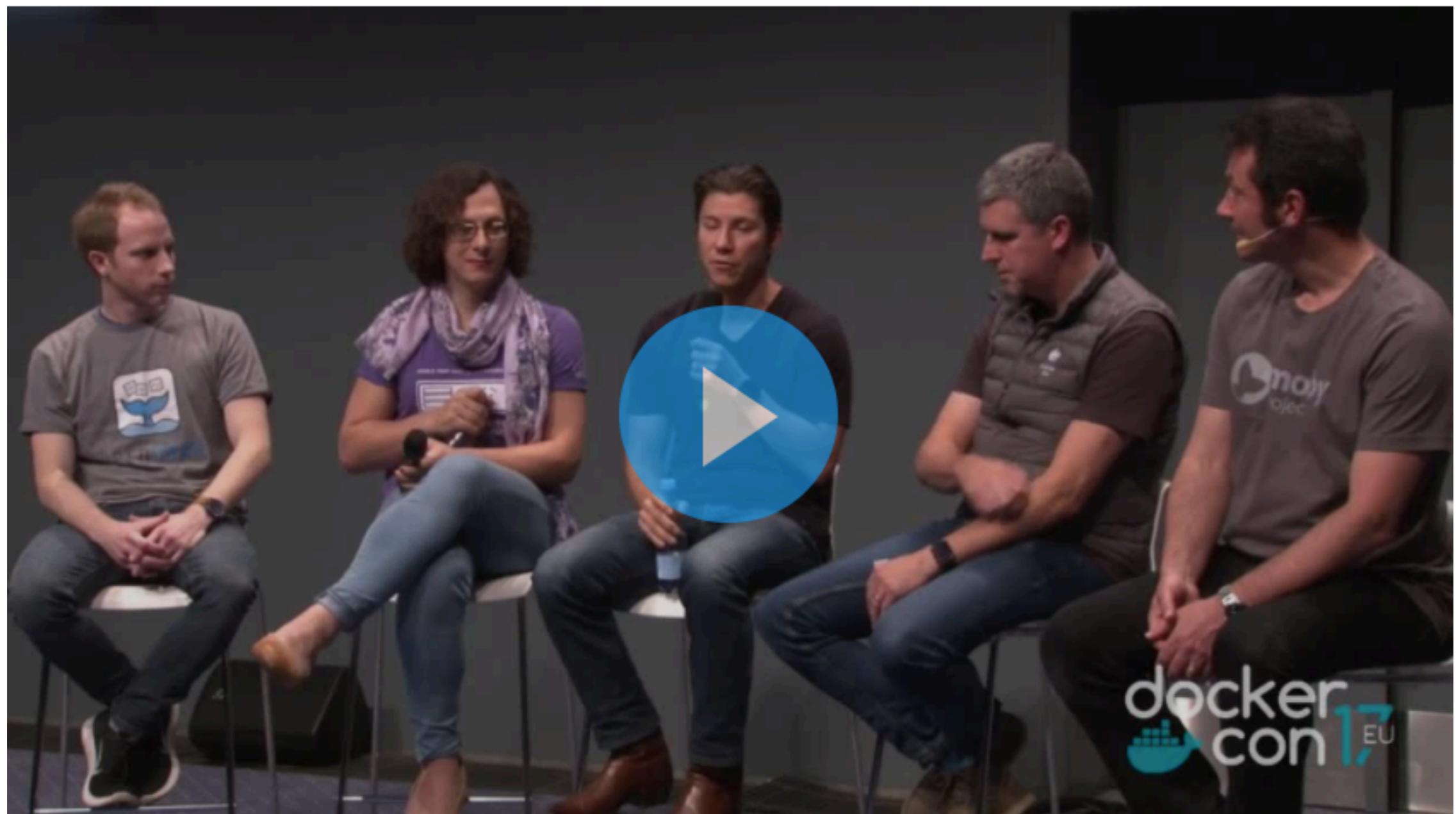
*"How fast can you iterate?"*

*"How fast can you get the code out?"*

*"How easy can you make it?"*

- Alex Ellis @ DockerCon EU 2017

# Serverless Panel



<https://dockercon.docker.com/watch/5Ek8NH6M7Lbxsc4KZ9PNAg>

# Serverless の意義

Portability ↑

Developer Experience ↑

Customer Experience ↑



# OpenFaaS の DX

# Functionの作成フロー

faas-cli new

faas-cli build

faas-cli push

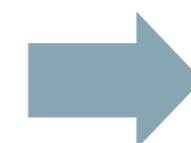
```
module.exports = (context, callback) => {
  callback(undefined, {status: "done"});
}
```

handler.js

```
{
  "name": "function",
  "version": "1.0.0",
  "description": "",
  "main": "handler.js",
  "scripts": {
    "test": "echo \"Error: no test specified\" && exit 1"
  },
  "dependencies": {
    // ここに依存ライブラリが増やせる
  },
  "keywords": [],
  "author": "",
  "license": "ISC"
}
```

package.json

基本的に実装するのはここだけ！



Template



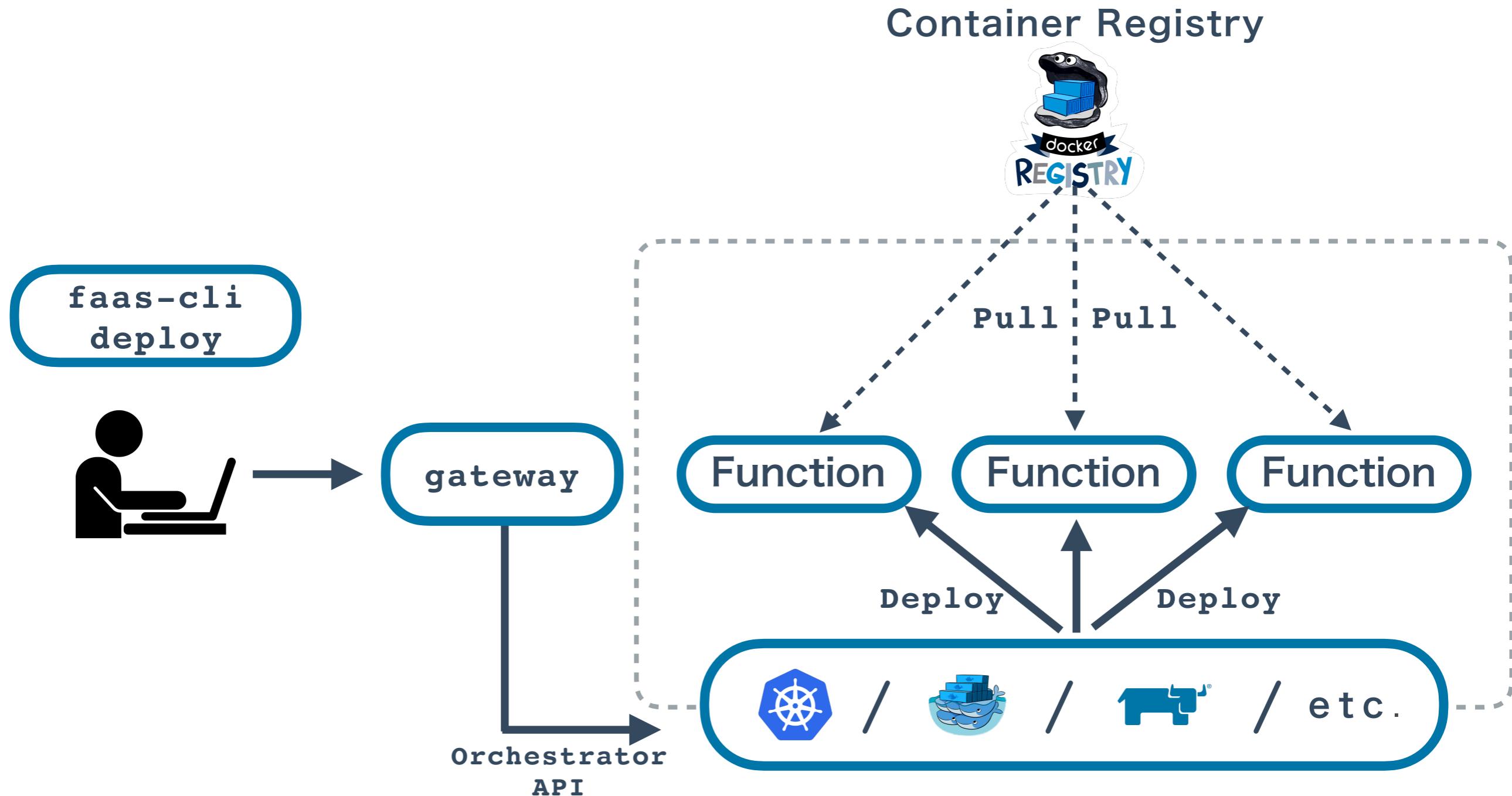
Docker  
Image



Container Registry

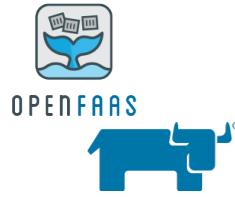


# Function のデプロイ





# DEMO



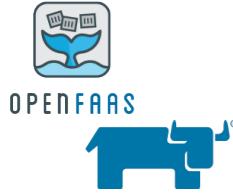
## 参考

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- <https://github.com/openfaas/faas>
  - OpenFaaSのコアプロジェクト
- <https://github.com/openfaas/faas-cli>
  - OpenFaaSを便利に使うためのCLI
- <https://github.com/openfaas/faas-netes>
  - kubernetes上でOpenFaaSを動かすためのコネクタ
- <https://github.com/openfaas-incubator/faas-rancher>
  - Rancher上でOpenFaaSを動かすためのコネクタ
- <https://github.com/faas-and-furious>
  - OpenFaaSのOSSなFunctionが集まっている場所



ヘルプ！



# ヘルプ！

日本語情報がほとんどありません。。。  
Qiitaでもまだ3件！

OpenFaaS フォロー中

3 投稿 5 フォロワー OpenFaaSに関する情報が集まっています。現在3件の投稿があります。また5人のユーザーがOpenFaaSタグをフォローしています。

### 最近いいねされた投稿

 TsuyoshiUshio@github が2017/09/22に投稿 Azure でとっても簡単に python のサーバレス環境を作ってみる 👍 10  
 Python  Azure  logicapps  OpenFaaS

 ynott が2017/10/13に投稿 Rancher の カタログ (Catalog) で OpenFaaS を試してみる 👍 7  
 rancher  serverless  OpenFaaS  rancherjp

 gocoka が2017/10/21に投稿 OpenFaaSを使ってGo言語でFunctionを書いて、AWSに展開したDocker環境にデプロイするまで 👍 30  
 AWS  golang  docker  OpenFaaS

ぜひ使ってみてフィードバックをアウトプットしてください！



ご清聴ありがとうございました！