

# Easy HTTPS For Your Microservice Architectures - Julien Salleyron, Containous

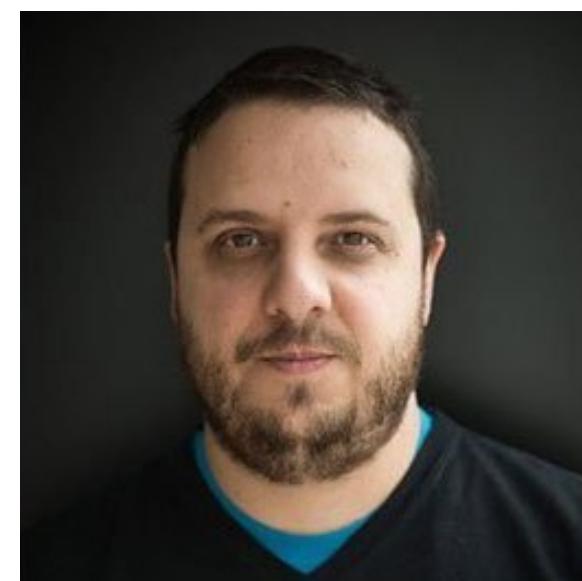


Open Source Summit Europe - Lyon 2019

# Whoami

Julien Salleyron

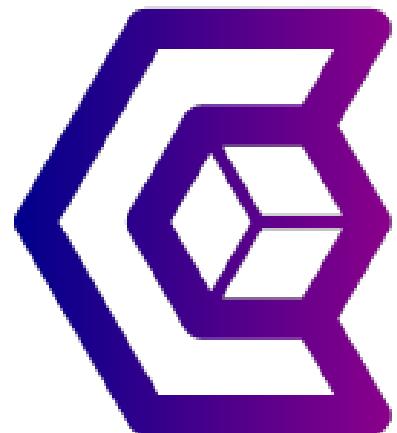
- Træfik's Senior Software Engineer @ Containous
  -  juliens



# Containous

<https://containo.us>

- We Believe in Open Source
- We Deliver Traefik and Traefik Enterprise Edition
- Commercial Support
- 30 people distributed, 90% tech



# Evolution Of Software Design

# THE EVOLUTION OF SOFTWARE ARCHITECTURE

## 1990's

SPAGHETTI-ORIENTED  
ARCHITECTURE  
(aka Copy & Paste)



## 2000's

LASAGNA-ORIENTED  
ARCHITECTURE  
(aka Layered Monolith)



## 2010's

RAVIOLI-ORIENTED  
ARCHITECTURE  
(aka Microservices)



## WHAT'S NEXT?

PROBABLY PIZZA-ORIENTED ARCHITECTURE

By @benorama

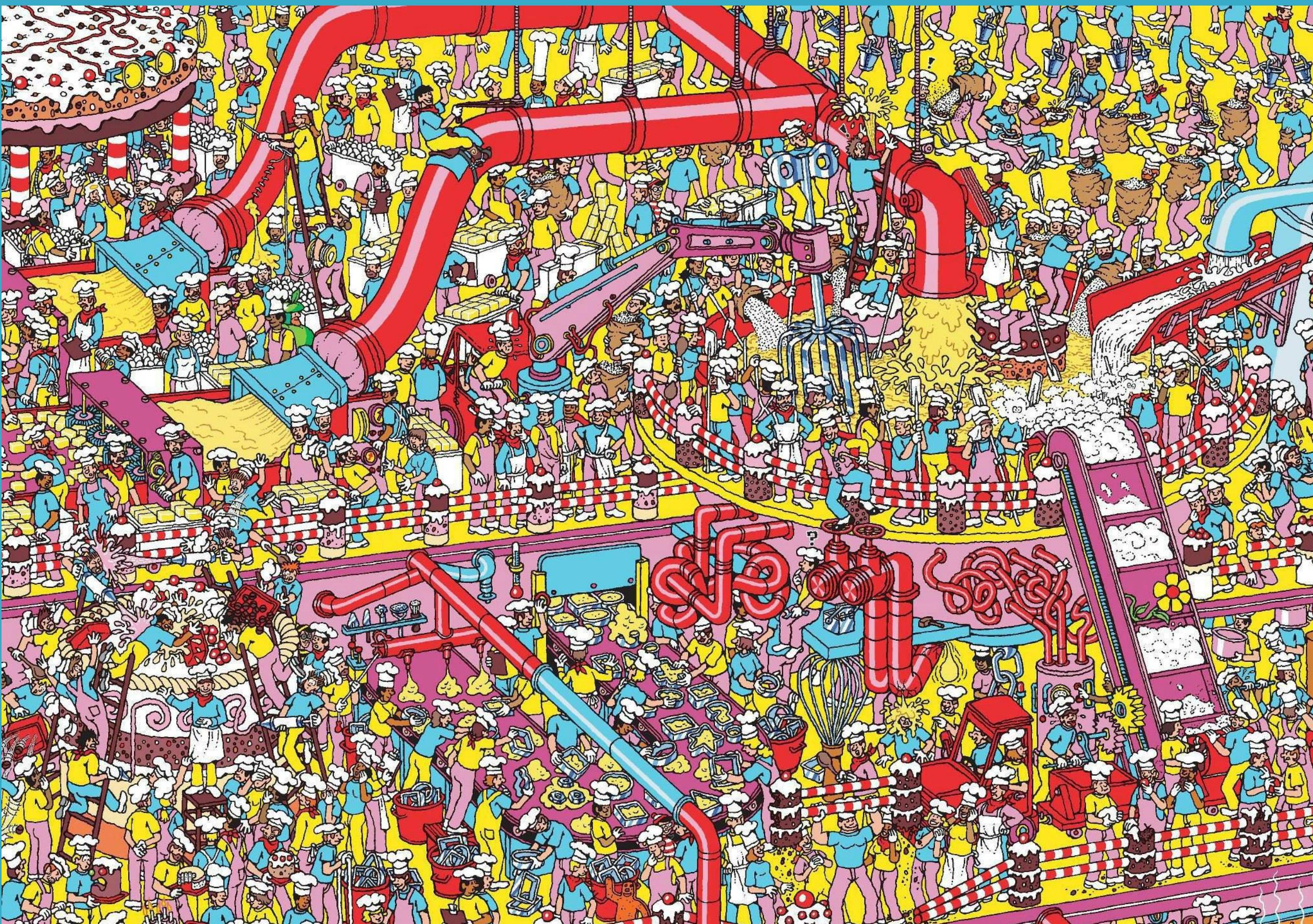
# The Premise Of Microservices...



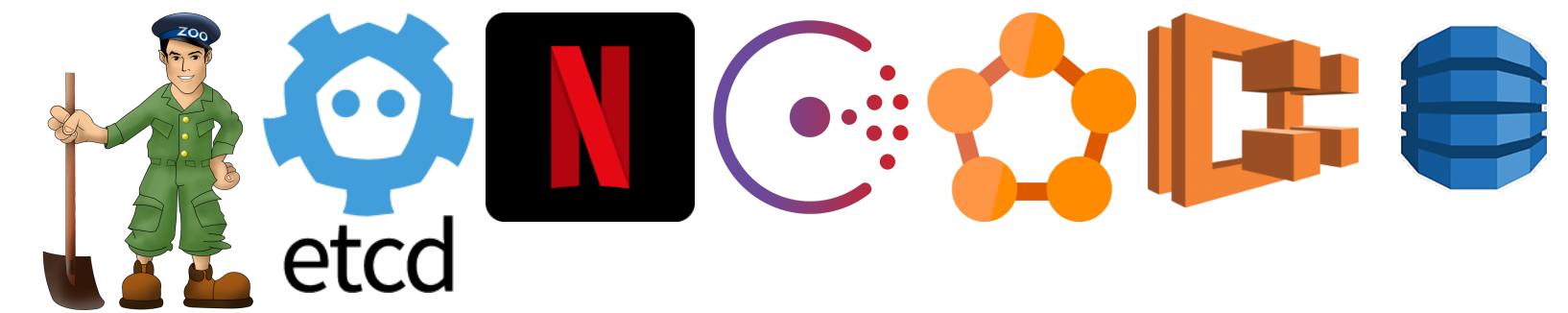
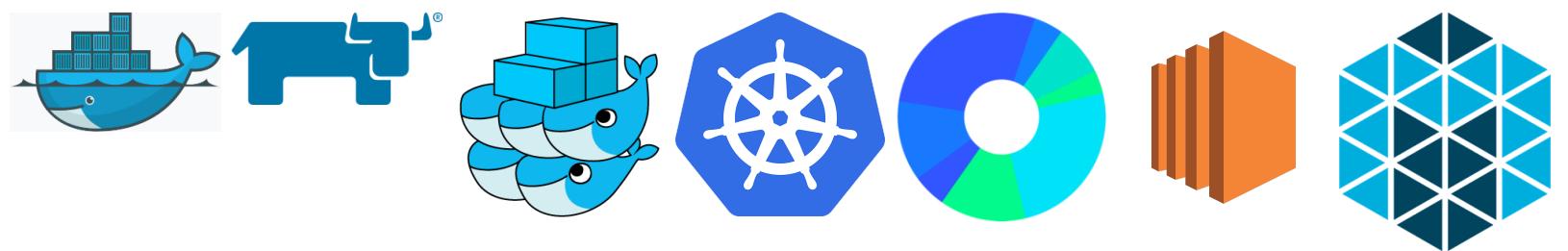
# ...And What Happens

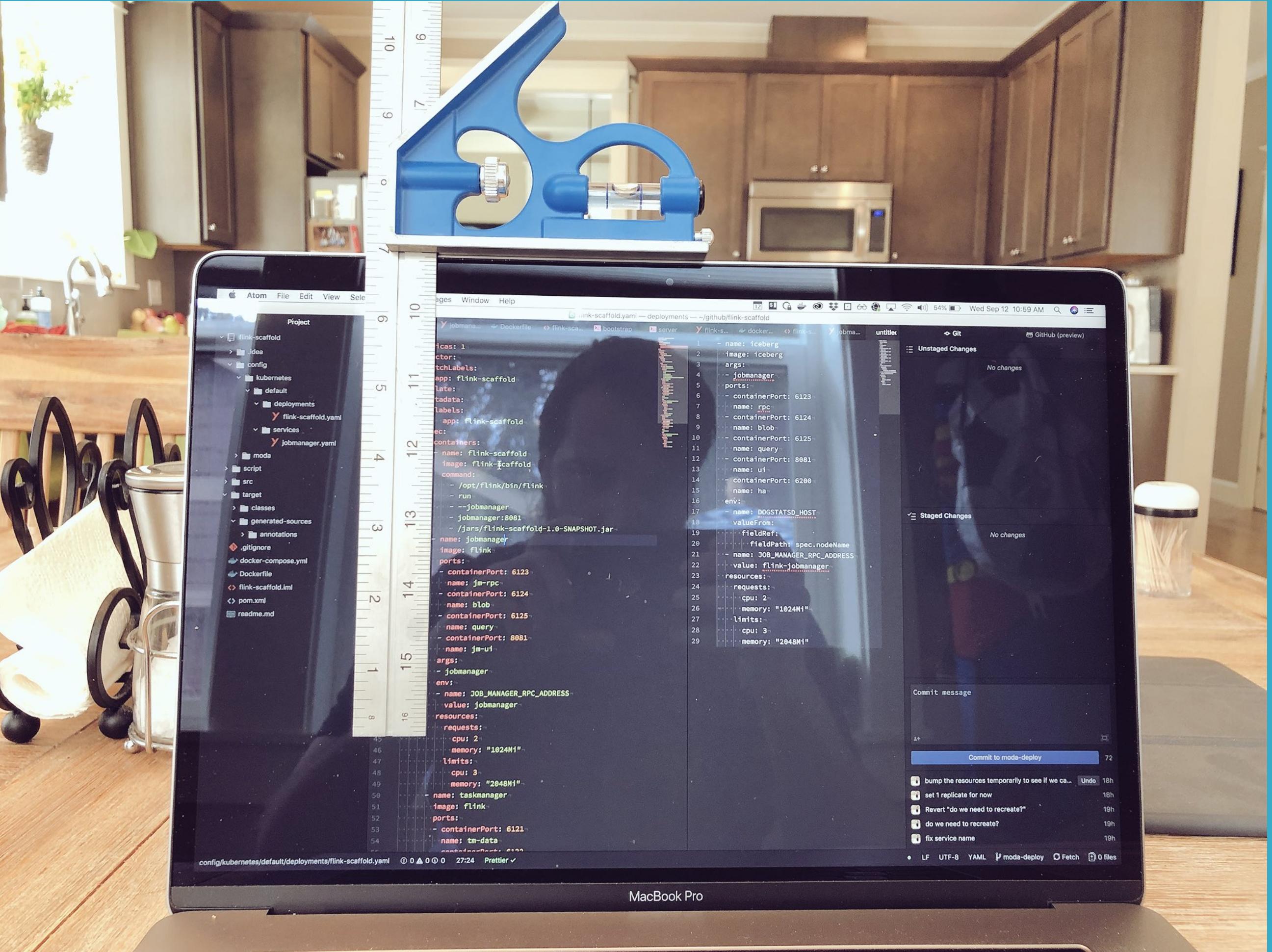


# Where's My Service?



# Tools Of The Trade





Source: <https://twitter.com/Caged/status/1039937162769096704>

# Why Traefik?



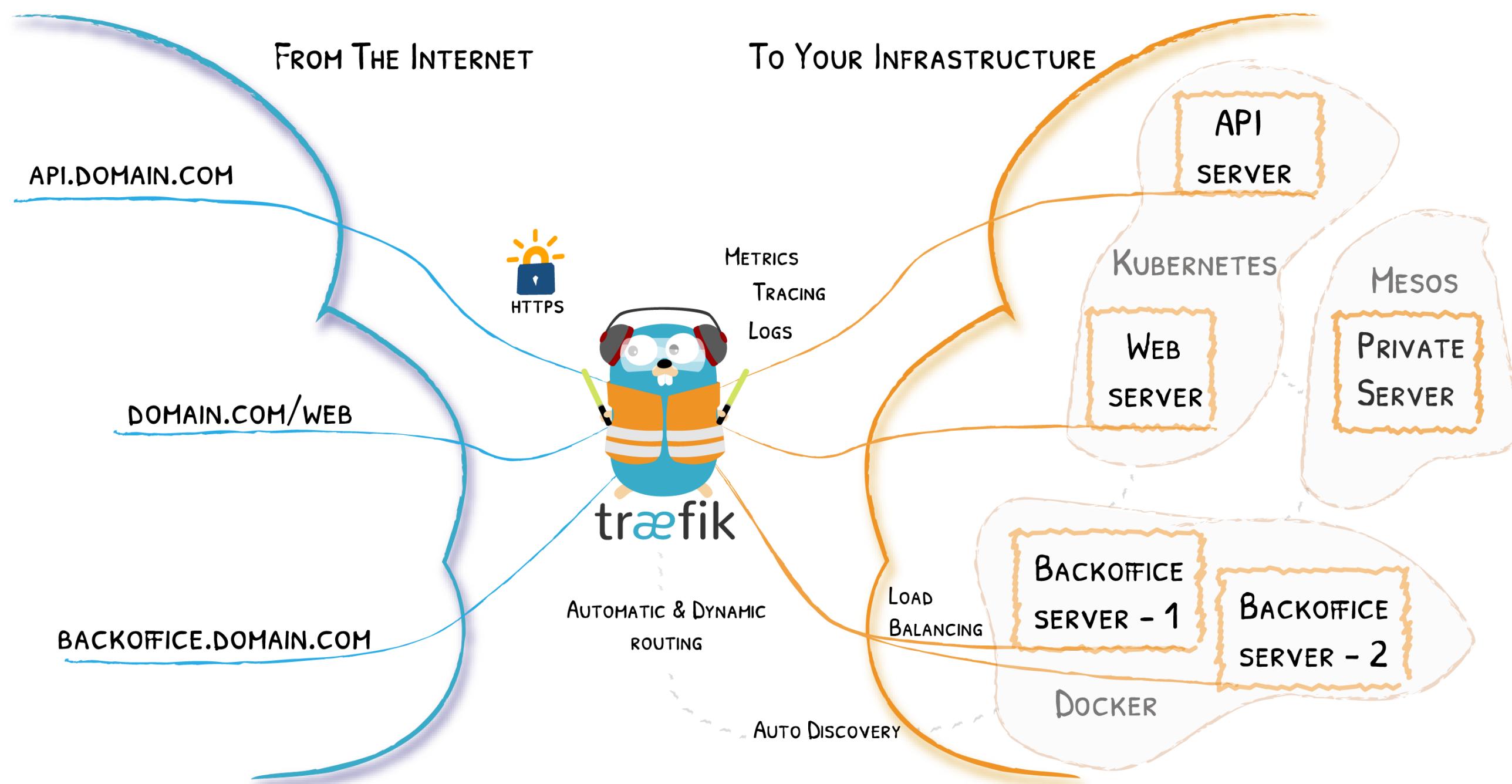
Why, Mr Anderson?

# What If I Told You?



That You Don't Have to Write This Configuration File…?

# Here Comes Traefik!



# Traefik Project

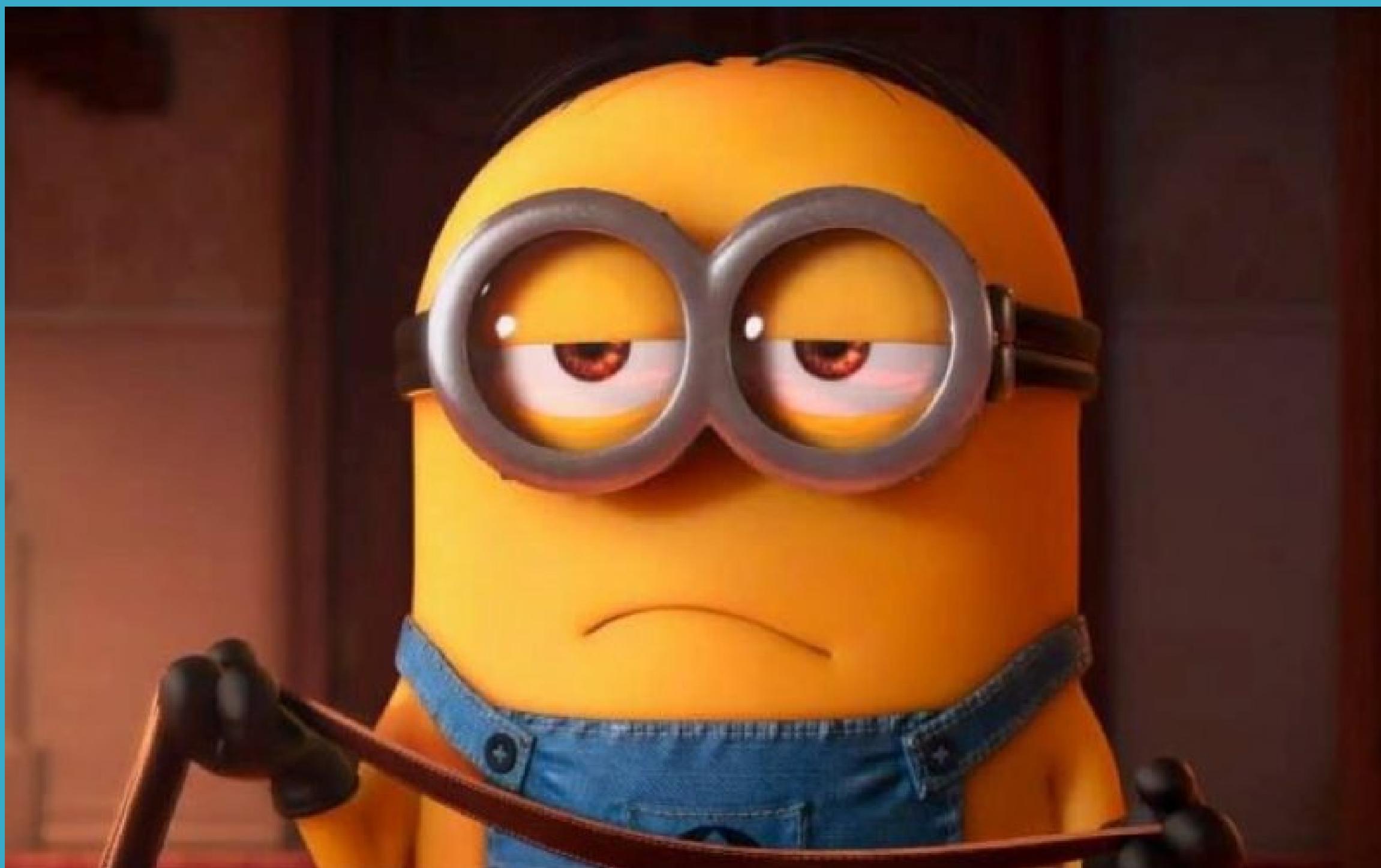
-  <https://github.com/containous/traefik>
- MIT License
- Written in Go
- 25,000+ ⭐ 1B+ ↓ 400+ 
- Created in 2015, 4Y 
- Current stable branch: v2 . 0

# Traefik 2.0 Quick Overview

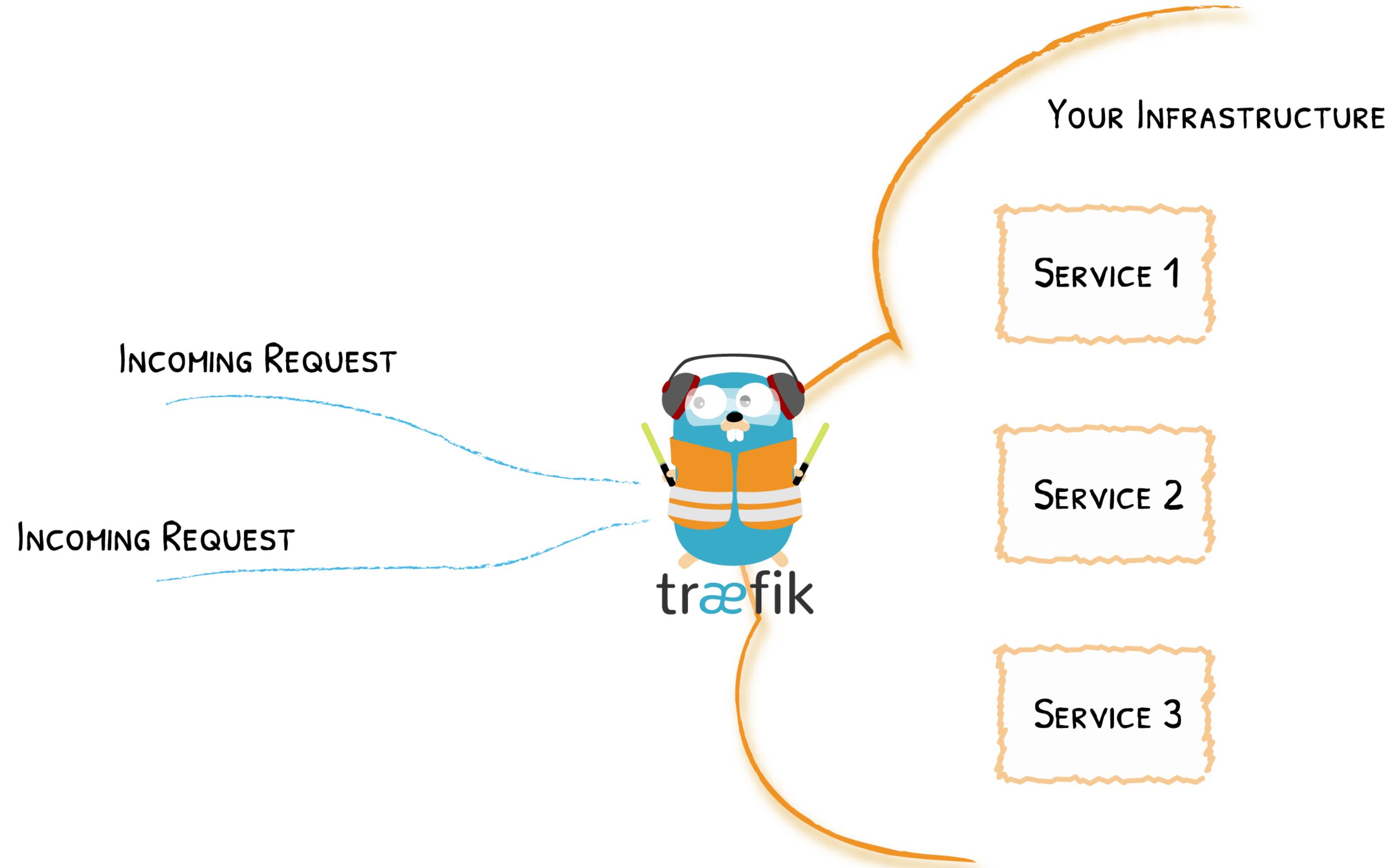
- Revamped Documentation
- Clarified Concepts
- Expressive Routing Rule Syntax
- Middlewares
- TCP Support
- Canary / Mirroring
- And so Much More…

[Learn more on the blog post](#)

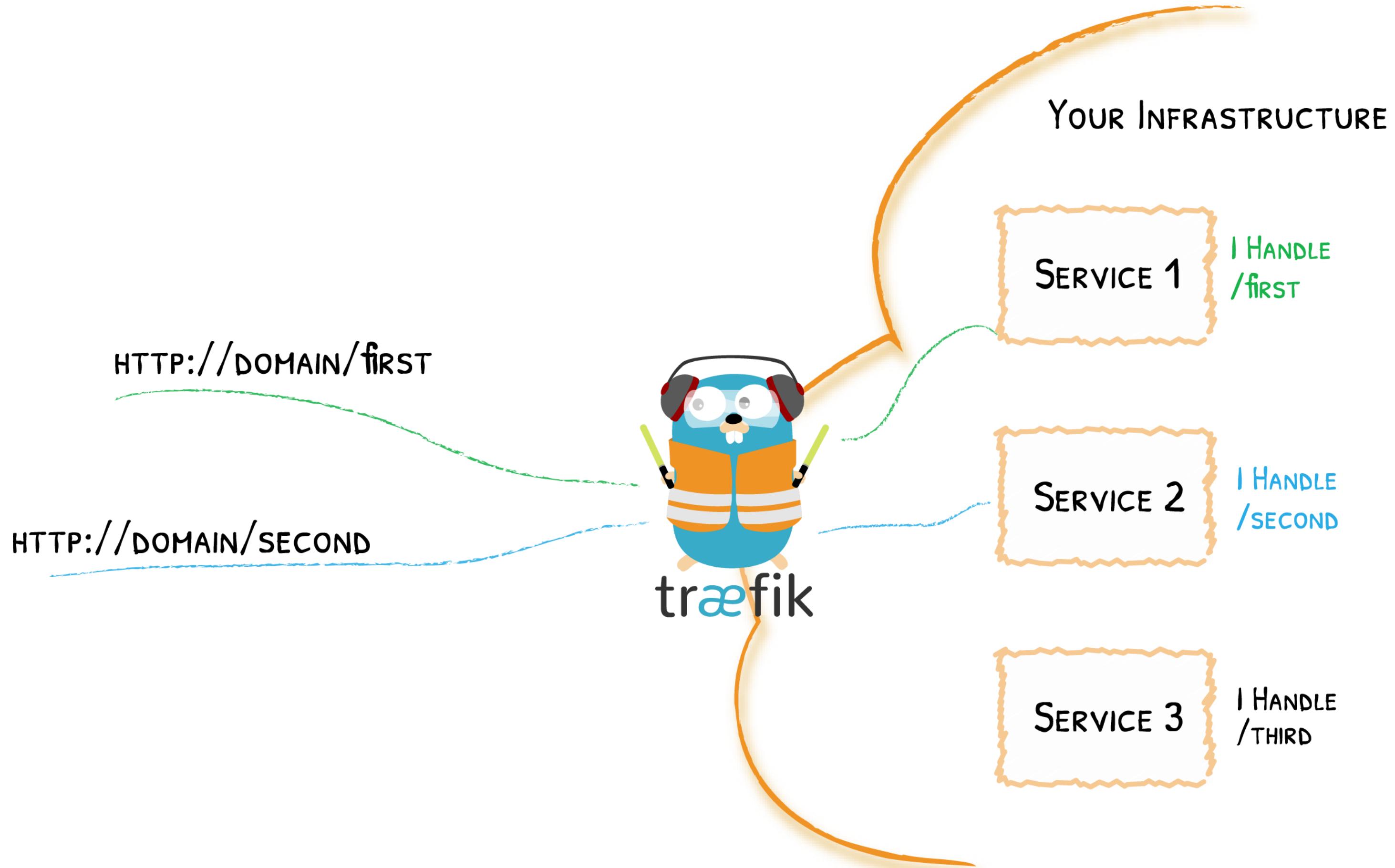
# Traefik (V2.0) Core Concepts



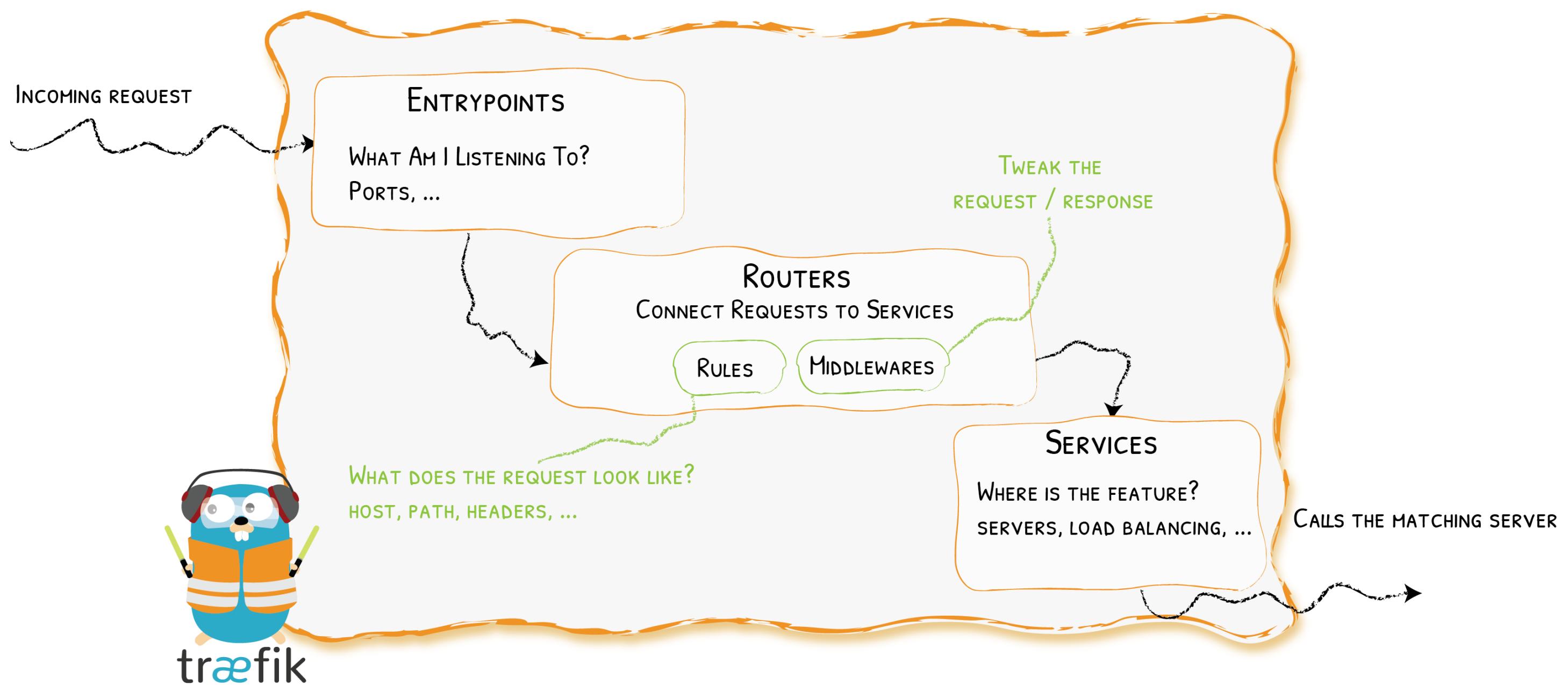
# Traefik Is An Edge Router



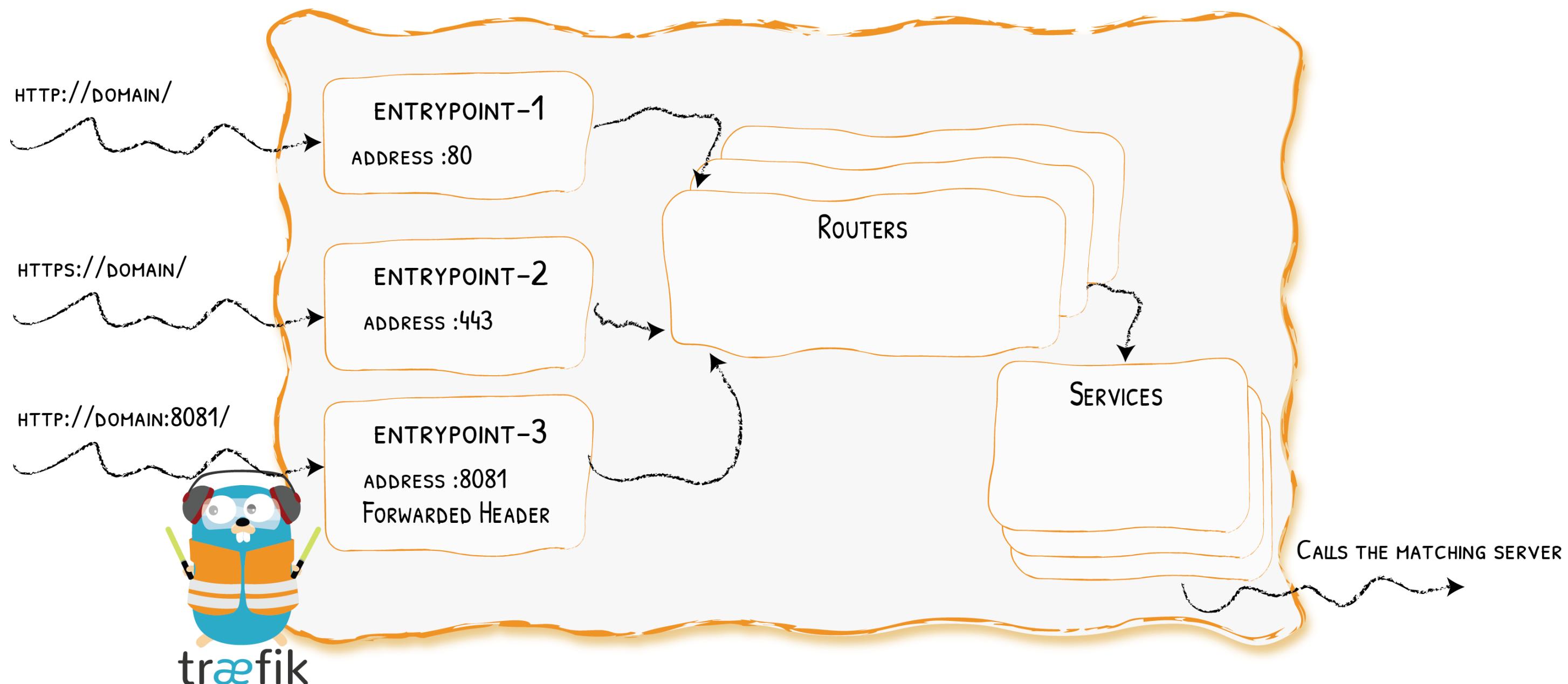
# Dynamically Discovers Services



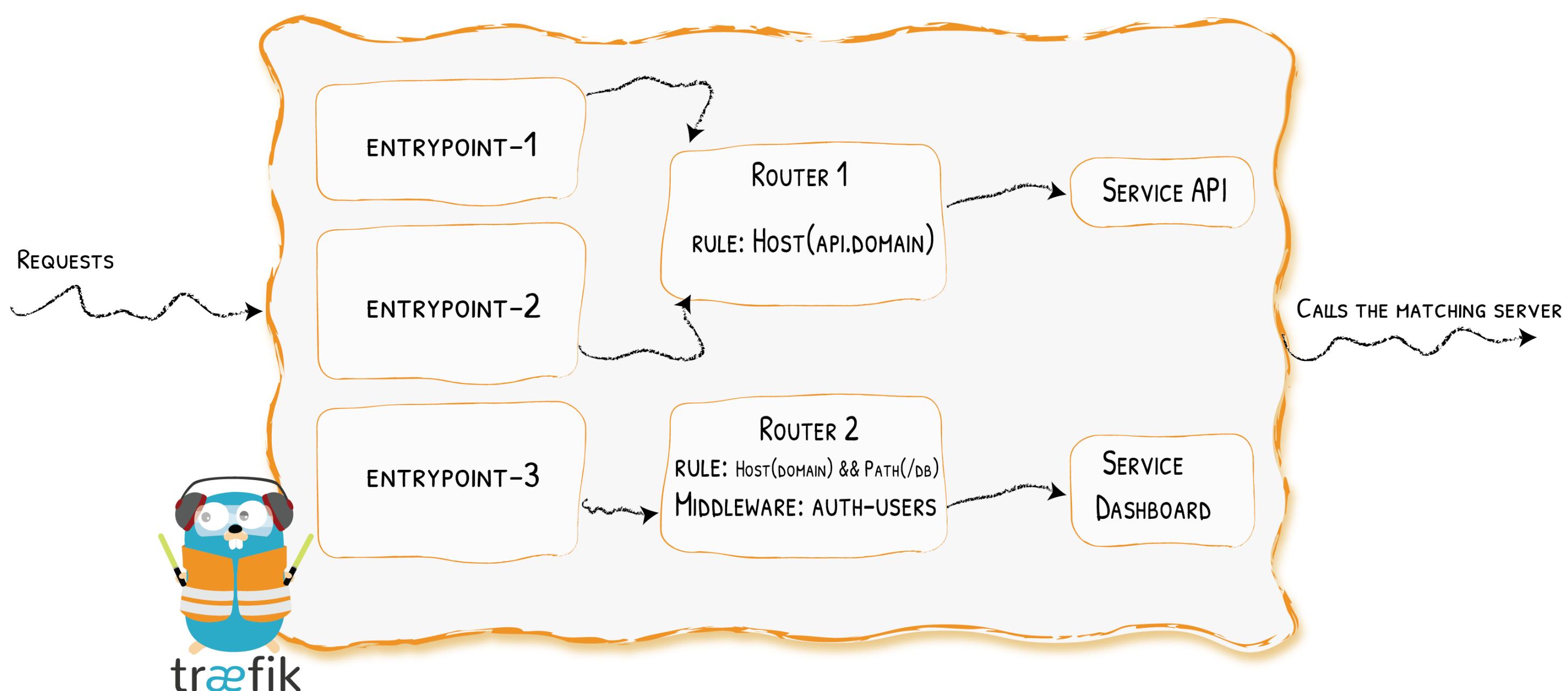
# Architecture (V2.0) At A Glance



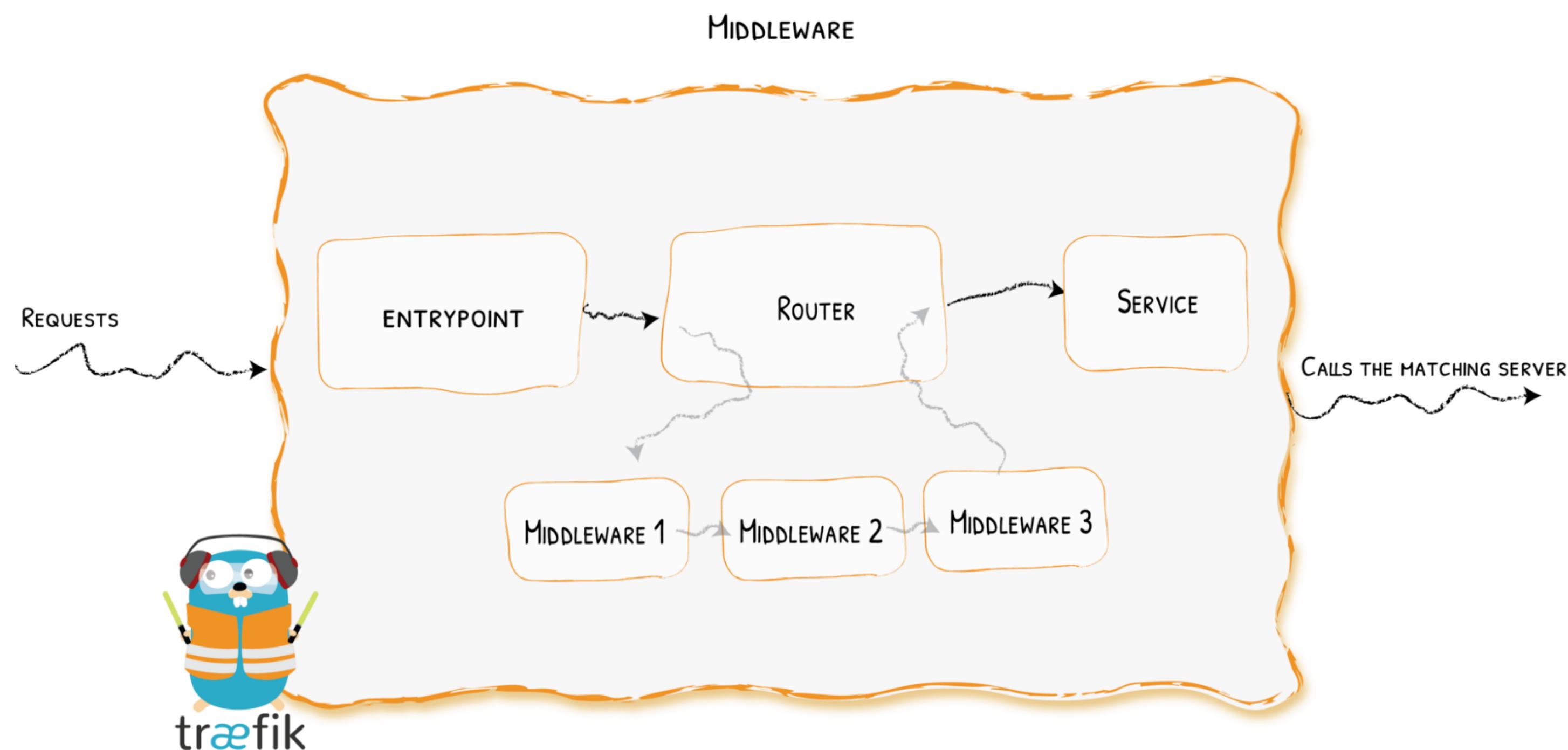
# Entrypoints



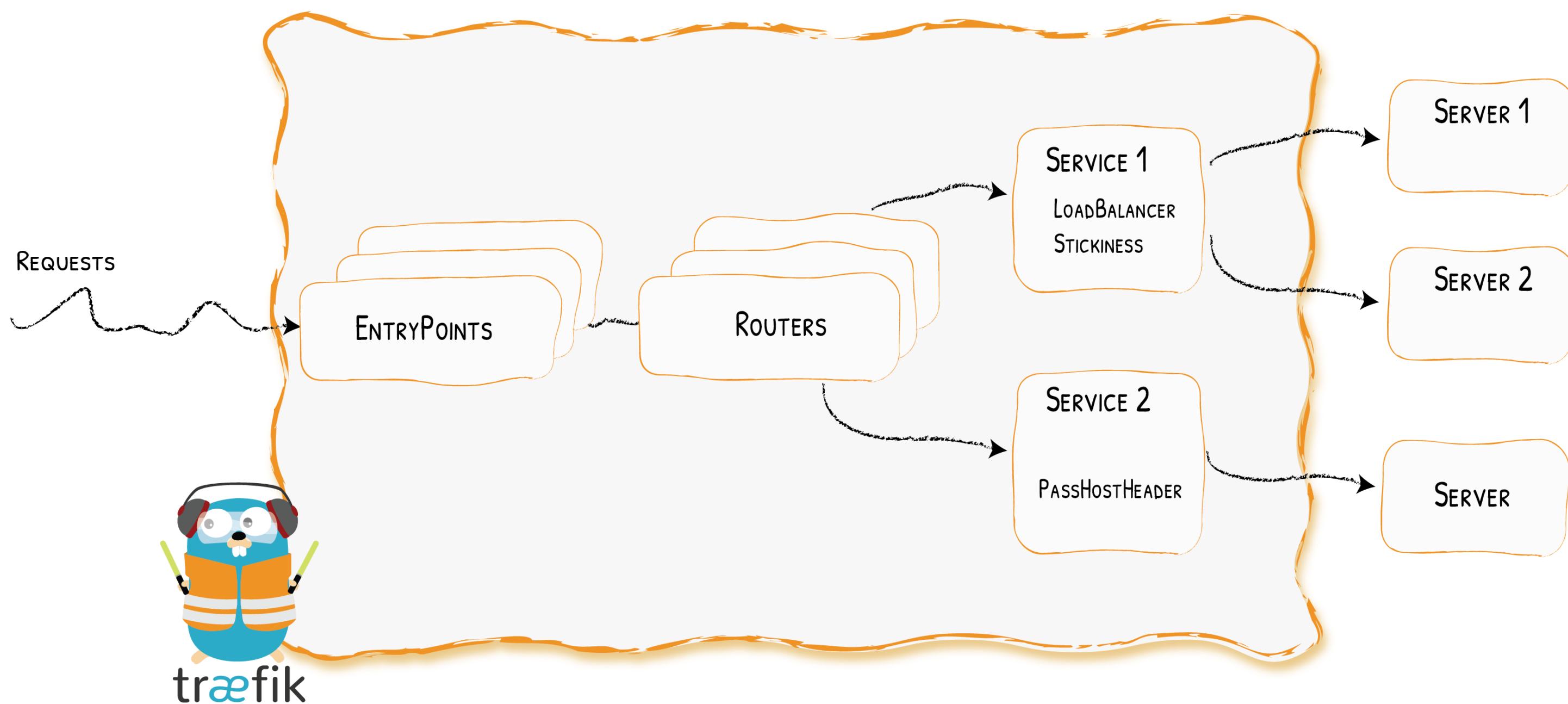
# Routers



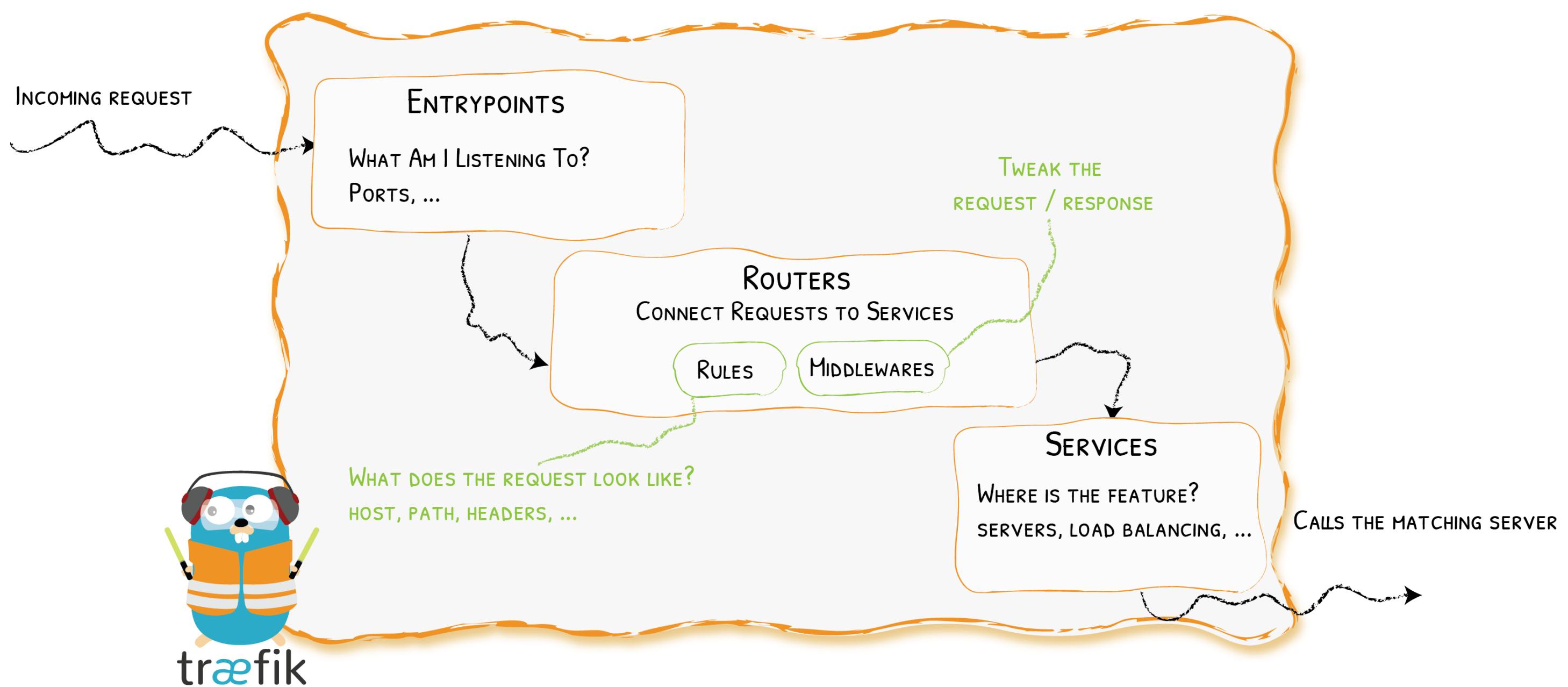
# Middlewares



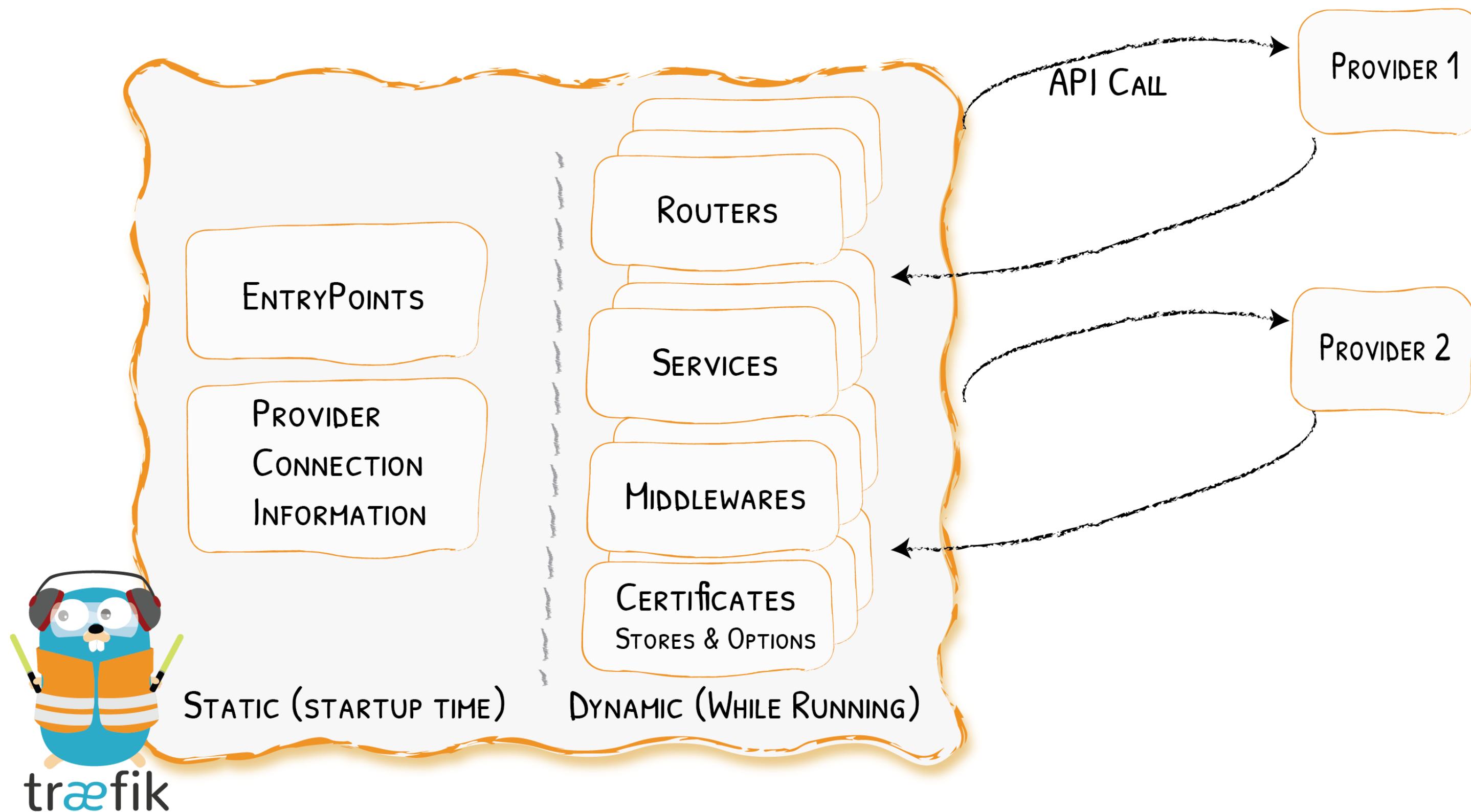
# Services



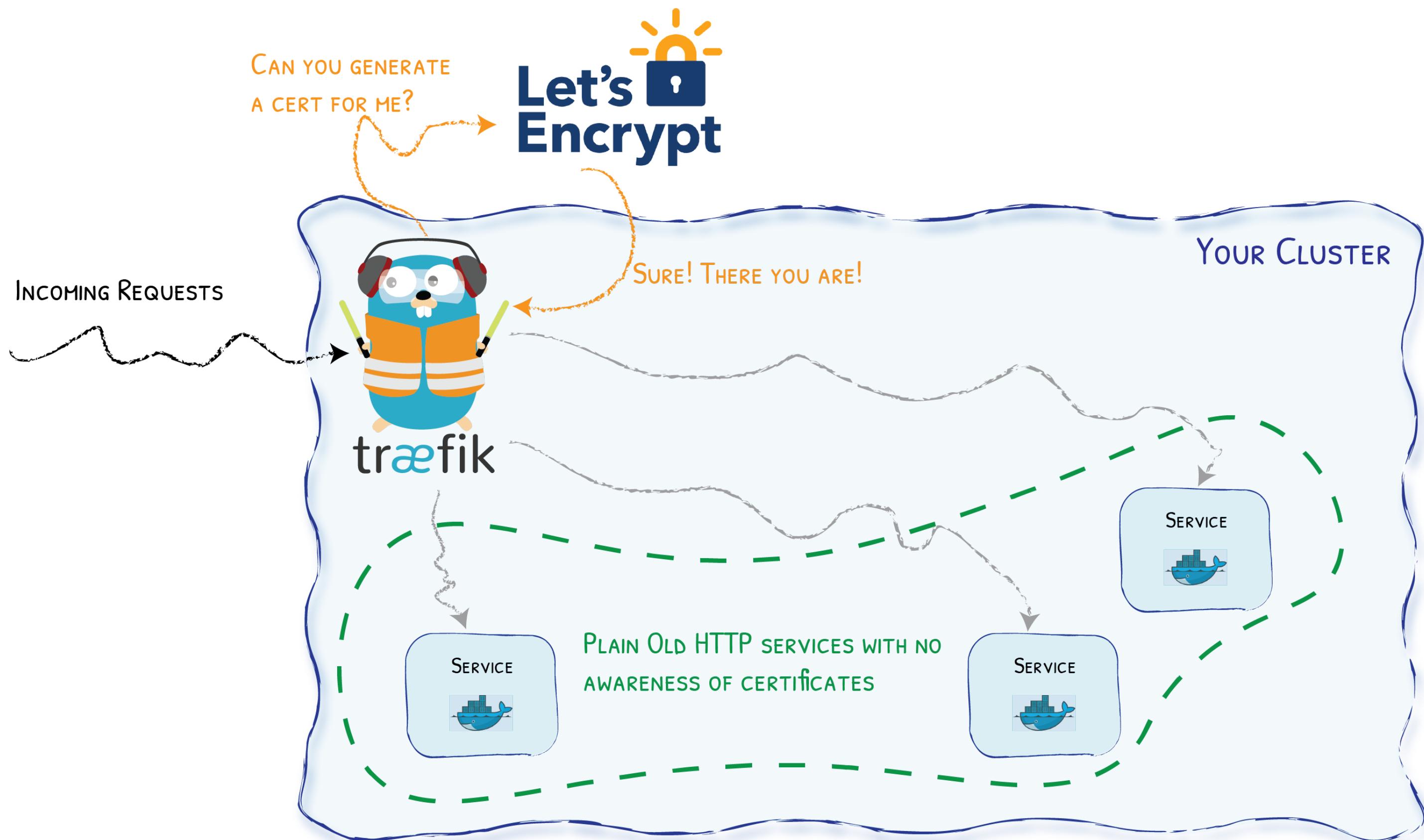
# Architecture (Again) At A Glance



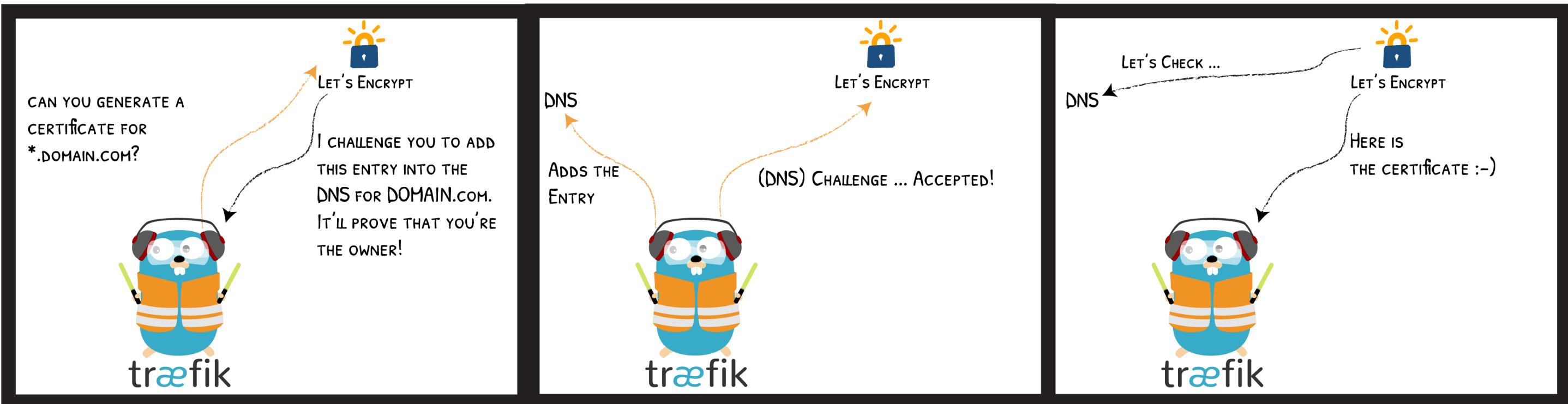
# Static & Dynamic Configuration



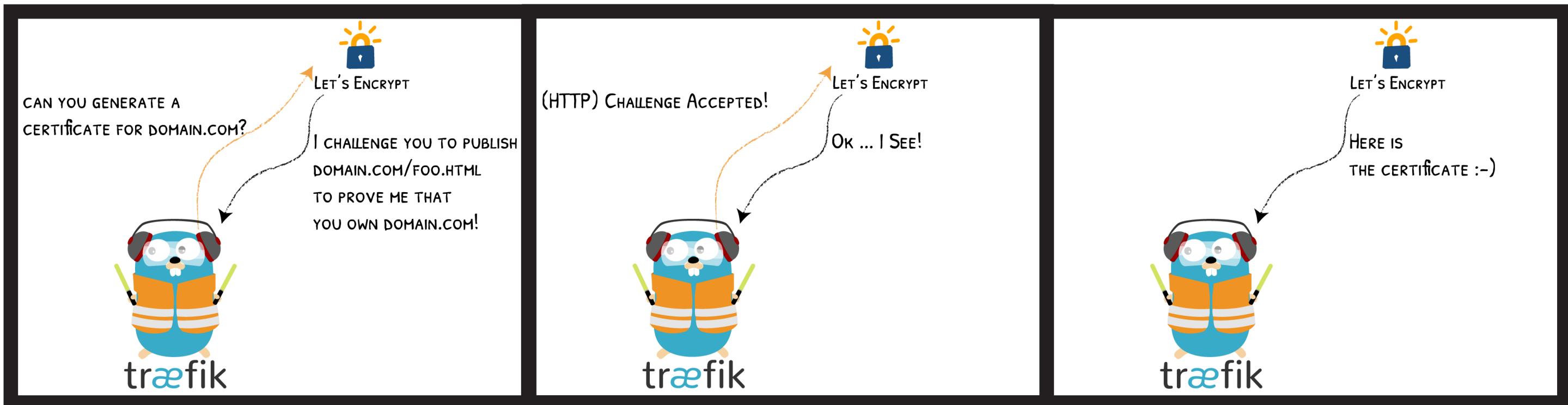
# HTTPS & Let's Encrypt



# Let's Encrypt DNS Challenge



# Let's Encrypt HTTP Challenge



# Let's Encrypt TLS Challenge



# Demo



# Demo Menu

1. Deploying Traefik and configure a service
2. Configure a dashboard
3. Configure the load balancing for scaled service
4. Configure a service on a specific path
5. Configure Let's encrypt in Traefik
6. Generate certificates for our services

# Deploying Traefik And Configure A Service

# Configure A Dashboard

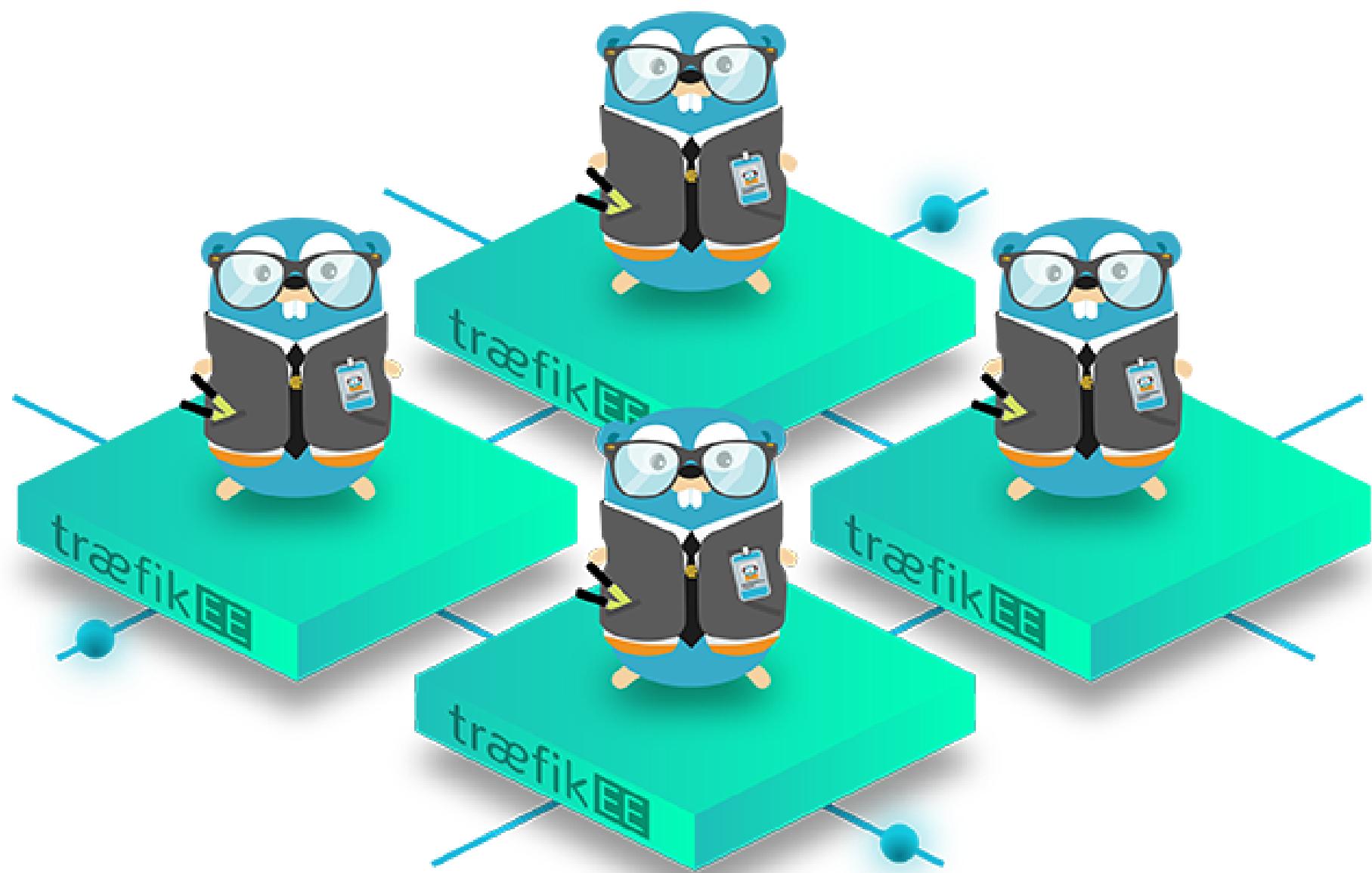
# Configure The Load Balancing For Scaled Service

# Configure A Service On A Specific Path

# Configure Let's Encrypt In Traefik

# Generate Certificates For Our Services

# Traefik Also Comes In Herd





HIGH AVAILABILITY

traefik ENTERPRISE EDITION



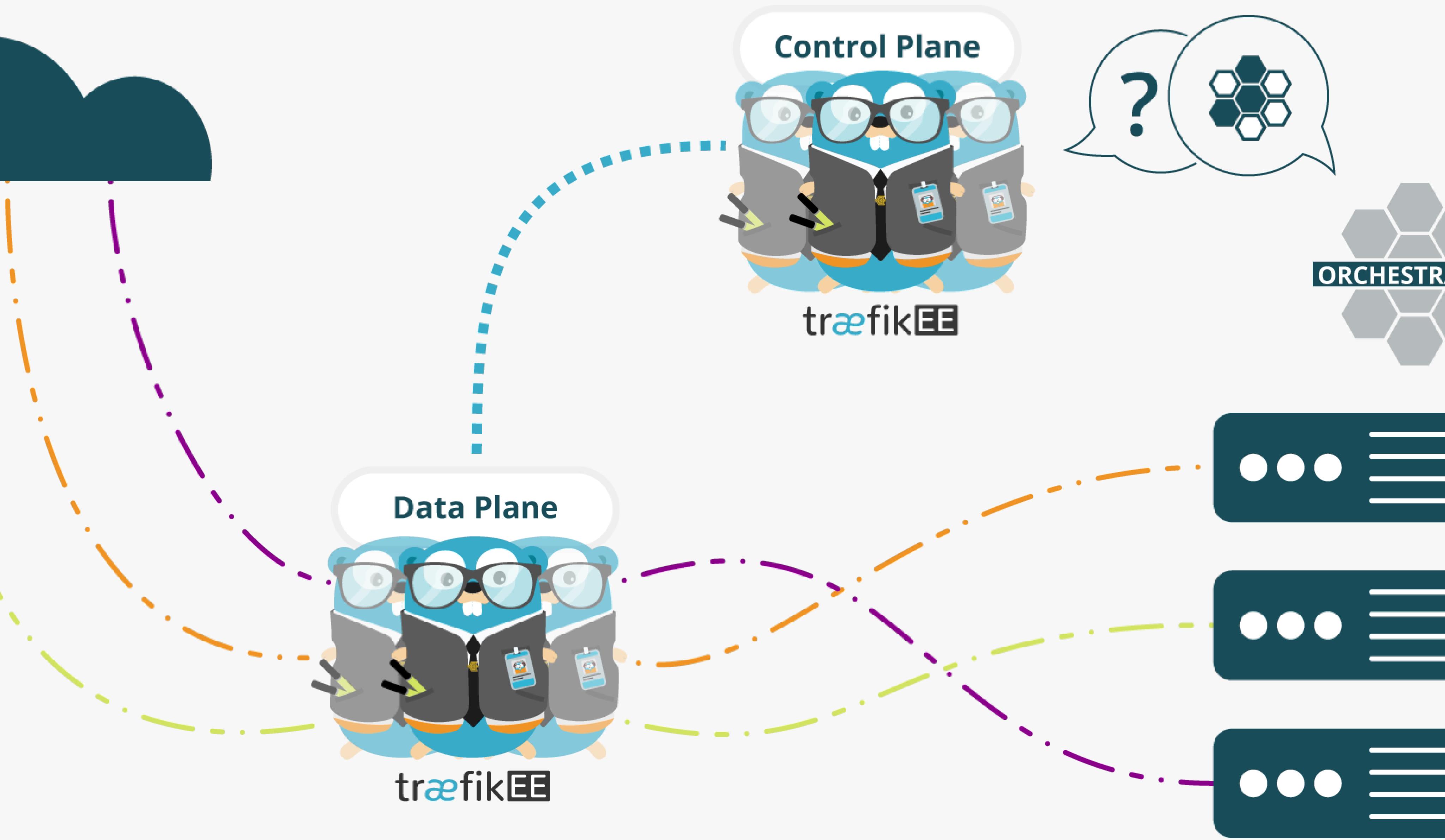
SECURITY

traefik ENTERPRISE EDITION



SCALABILITY

traefik ENTERPRISE EDITION



# As Simple As Traefik

- Install it:

```
# Cluster Installation
traefikeectl install \
  --licensekey="SuperSecretLicence" \
  --dashboard \
  --kubernetes # Or --swarm
```

- Configure it:

```
# Routing Configuration, same as Traefik's
traefikeectl deploy \
  --acme.email=ssl-admin@mycompany.org
  --acme.tlsChallenge
  ...
```

# Free Trial

<https://containo.us/traefikee>

# We Also Missed Talking About ...

A circular word cloud centered around the word "CIRCUIT-BREAKERS". The words are arranged in a circle and include: mesos, ZIPKIN, LIMITING, KUBERNETES, Dynamic, Metrics, CERTIFICATE, HTTP, ERROR, TLS, Reverse-Proxy, HEADERS, GRPC, DYNAMIC/WILDCARD, Security, Configurations, Tracing, PROXY, SECRETS, PROMETHEUS, JAEGER, WEBSOCKETS, SSL, FORWARD, REDIRECTS, DOCKER, CHECKS, PROTOCOL, HEALTH, HSTS, CLUSTER, AUTH, RATE, CONSUL, SWARM, MODE.

# What's Next

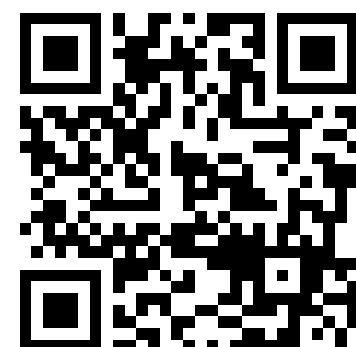
- KV Store
- UDP
- And More...

# More Info

- Back to Traefik 2.0
- Community Forum
- Official Documentation

# Thank You!

•  juliens



- Slides (HTML): <https://containous.github.io/slides/master>
- Slides (PDF): <https://containous.github.io/slides/master/slides.pdf>
- Source on : <https://github.com/containous/slides/tree/master>