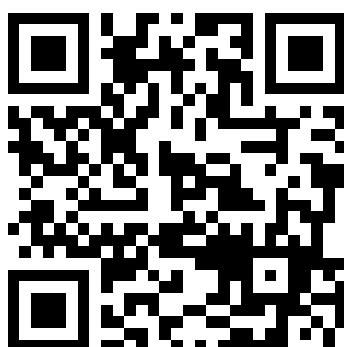


# A La Découverte De Traefik 2.0 (⛵)



[sf≡ir]

Lille - 2019/06/13



<https://containous.github.io/slides/meetup-sfeir-lille-2019>

# How To Use These Slides?

- **Browse the slides:** Use the arrows
  - Change chapter: Left/Right arrows
  - Next or previous slide: Top and bottom arrows
- **Overview of the slides:** keyboard's shortcut "o"
- **Speaker mode (and notes):** keyboard's shortcut "s"

# Whoami

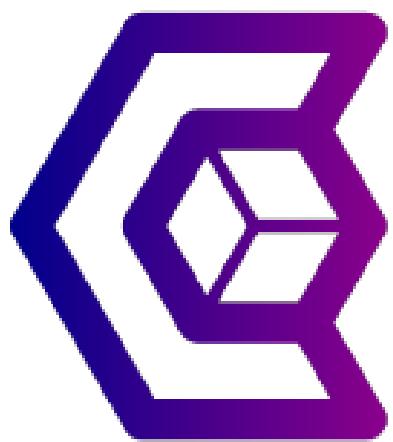
- Damien DUPORTAL:
  - Træfik's Developer  Advocate @ Containous
-  @DamienDuportal
-  dduortal



# Containous

<https://containo.us>

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



# Why Traefik?



Why, Mr Anderson?

# Evolution Of Software Design



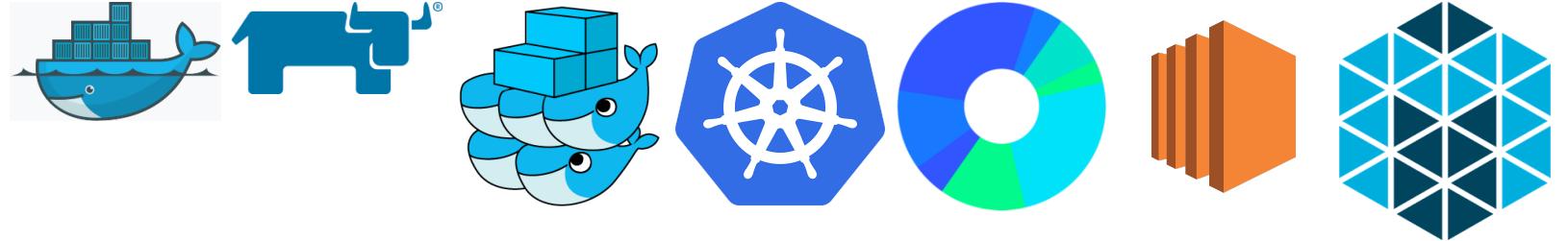
# The Premise Of Microservices...



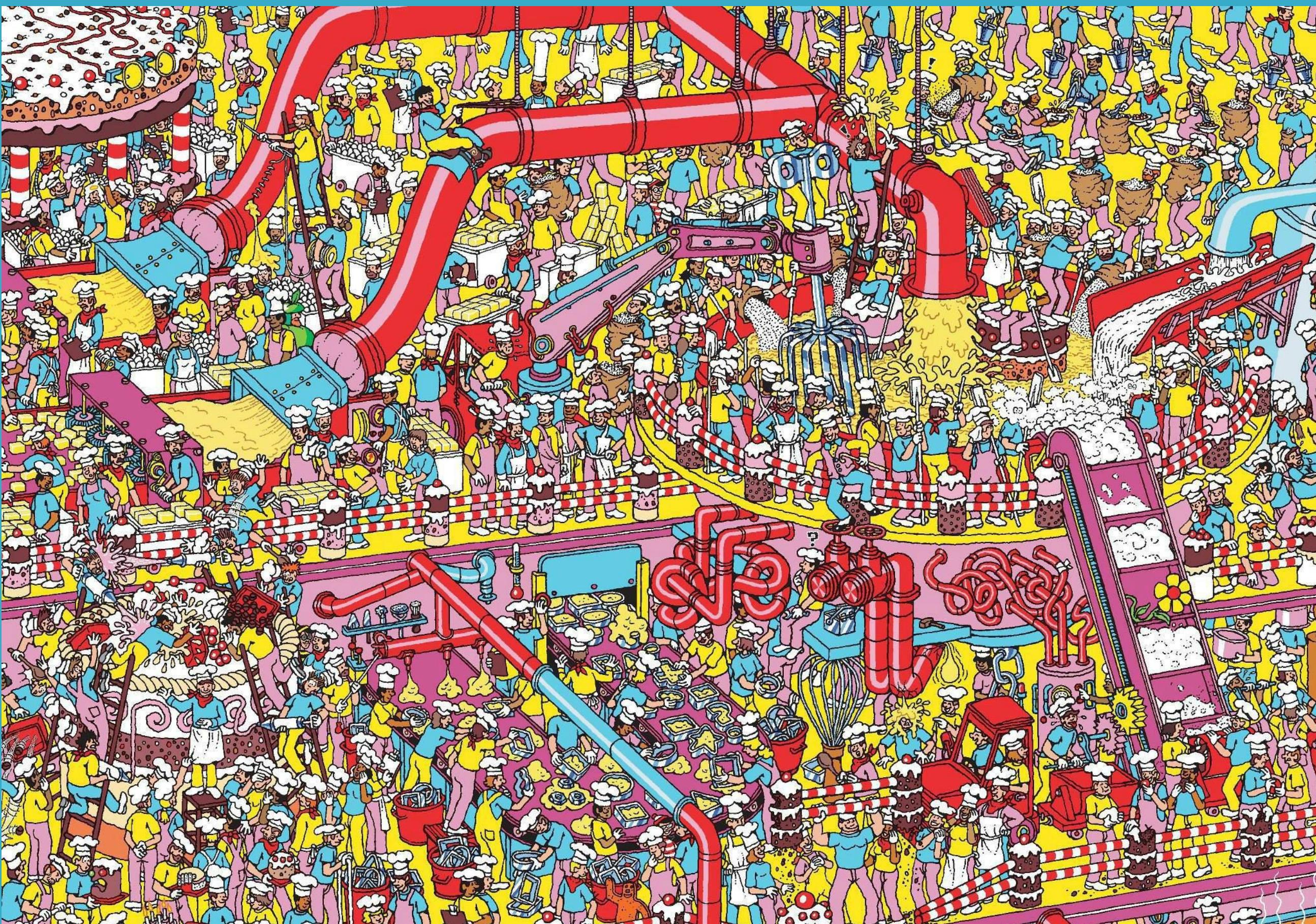
*...And What Happens*

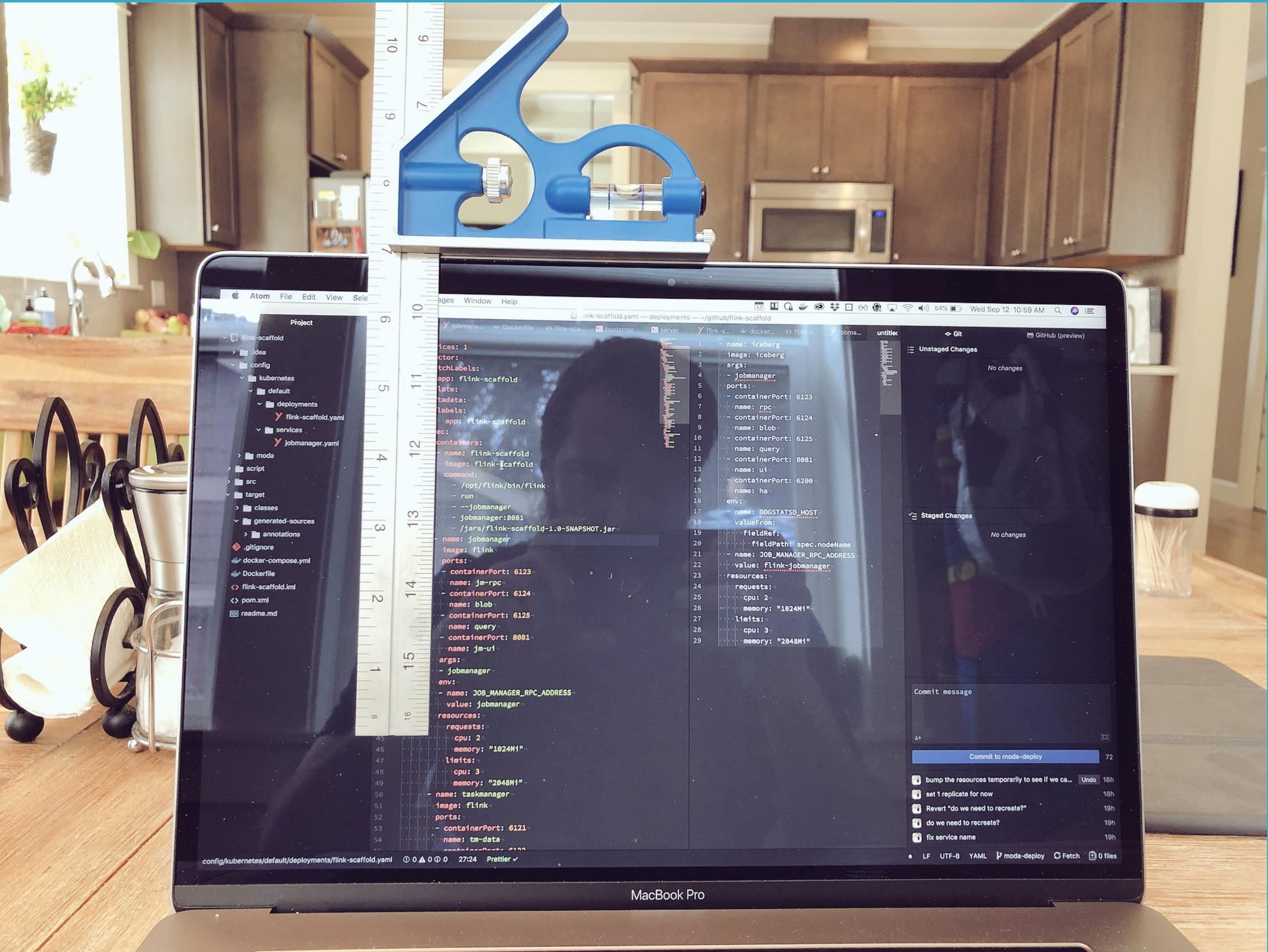


# Tools Of The Trade



# Where's My Service?





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

# 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
- 22,000+  750M+  350+ 
- Created in 2015
- Current stable branch: v1 . 7

# BACK toTRAEFIK 2.0

Part →

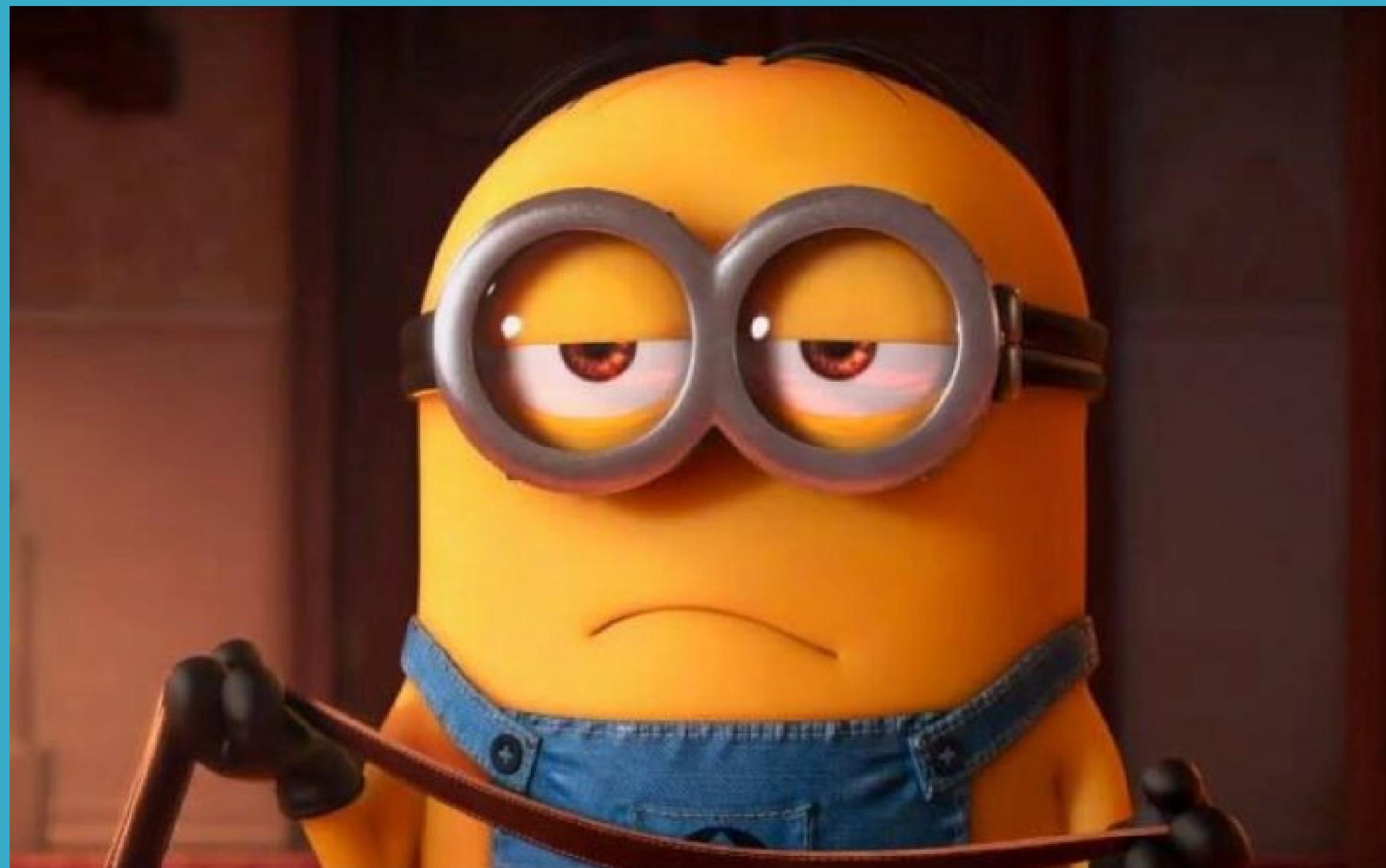


# Traefik 2.0 Quick Overview

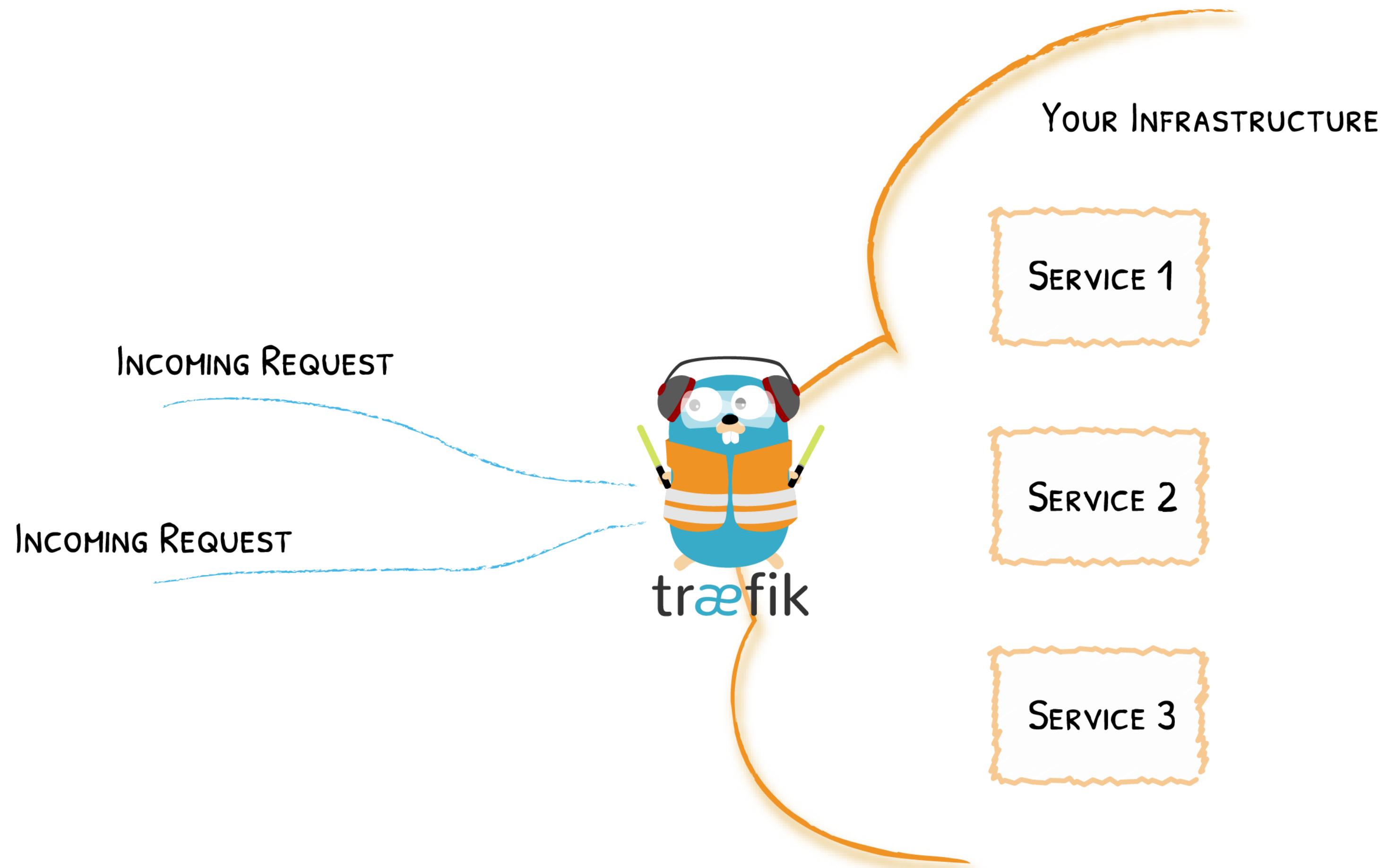
- Revamped Documentation
- Clarified Concepts
- Expressive Routing Rule Syntax
- Middlewares
- TCP Support
- And so Much More...

[Learn more on the blog post](#)

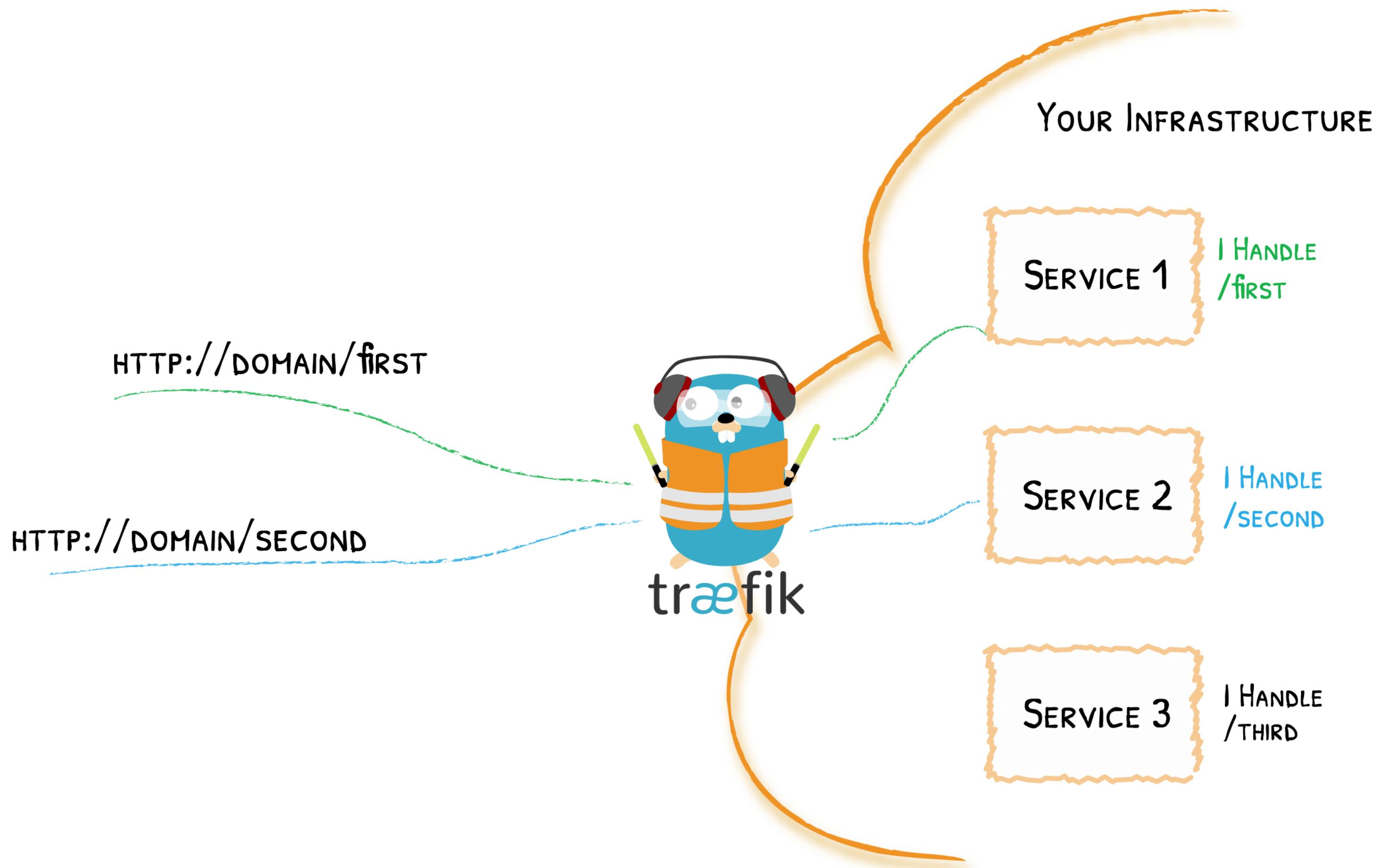
# Traefik (V2.0) Core Concepts



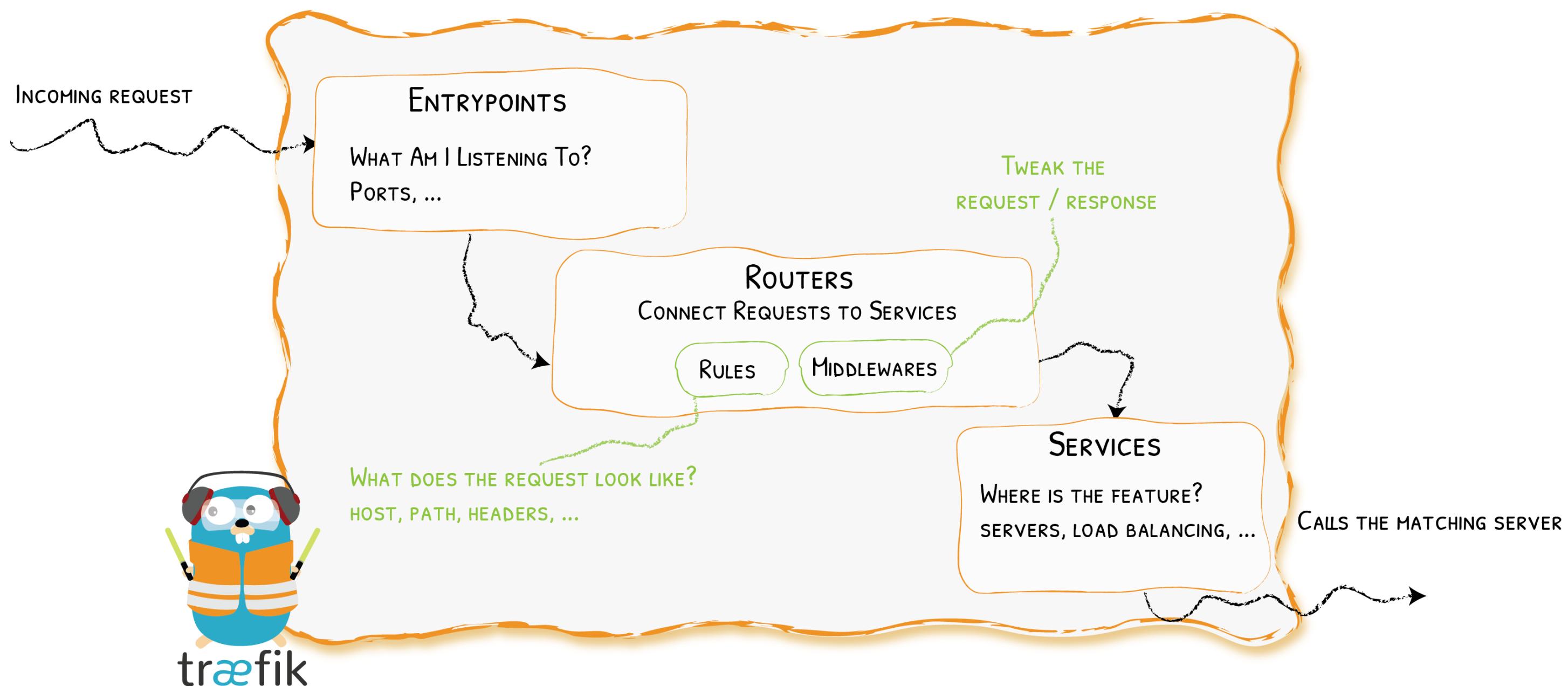
# Traefik Is An Edge Router



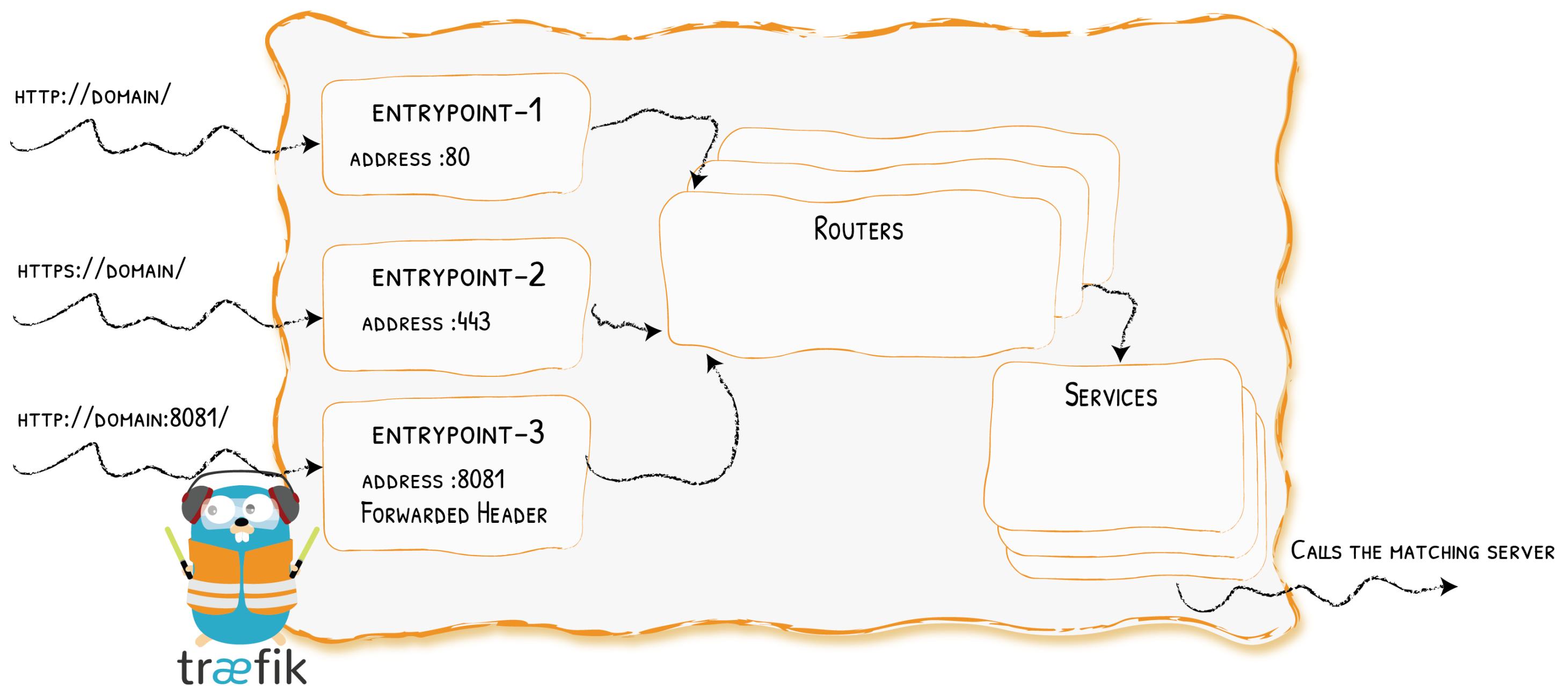
# Traefik Dynamically Discovers Services



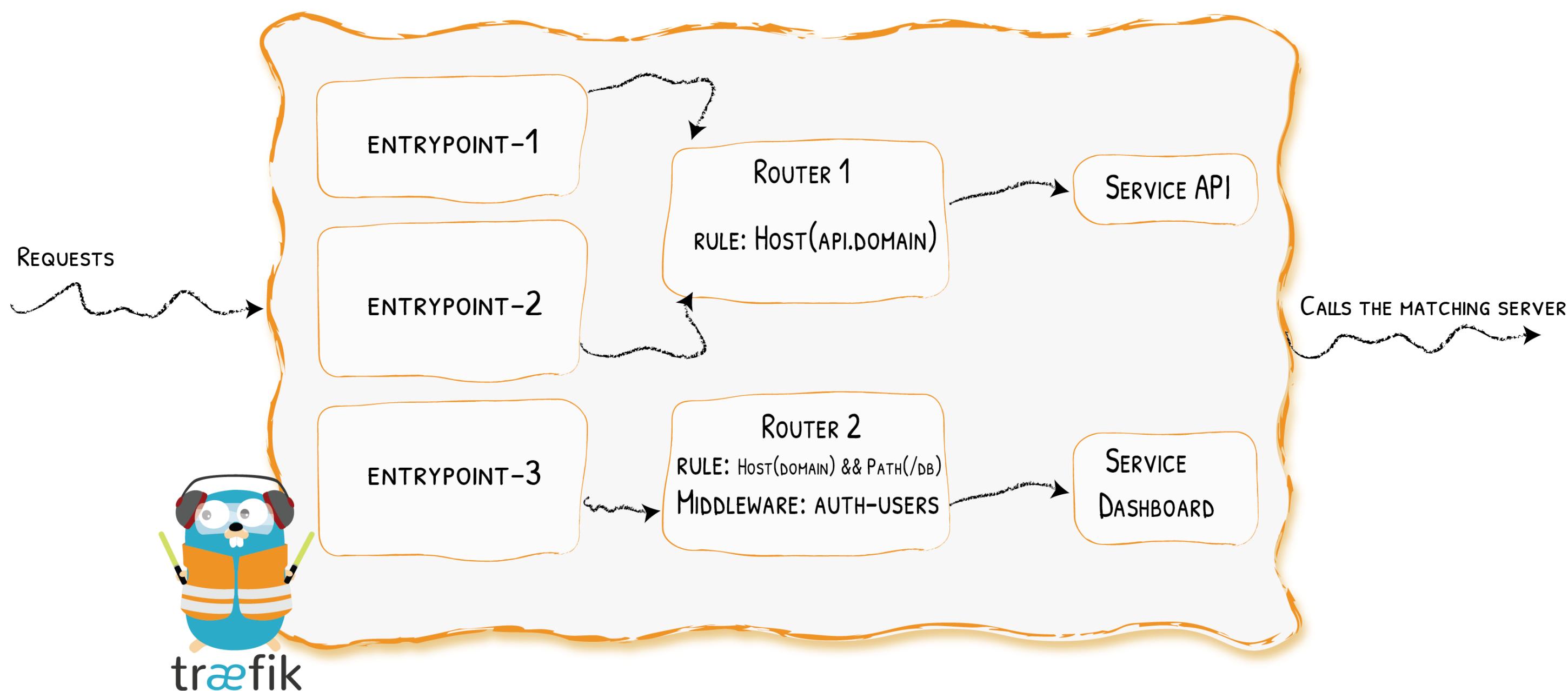
# Architecture (V2.0) At A Glance



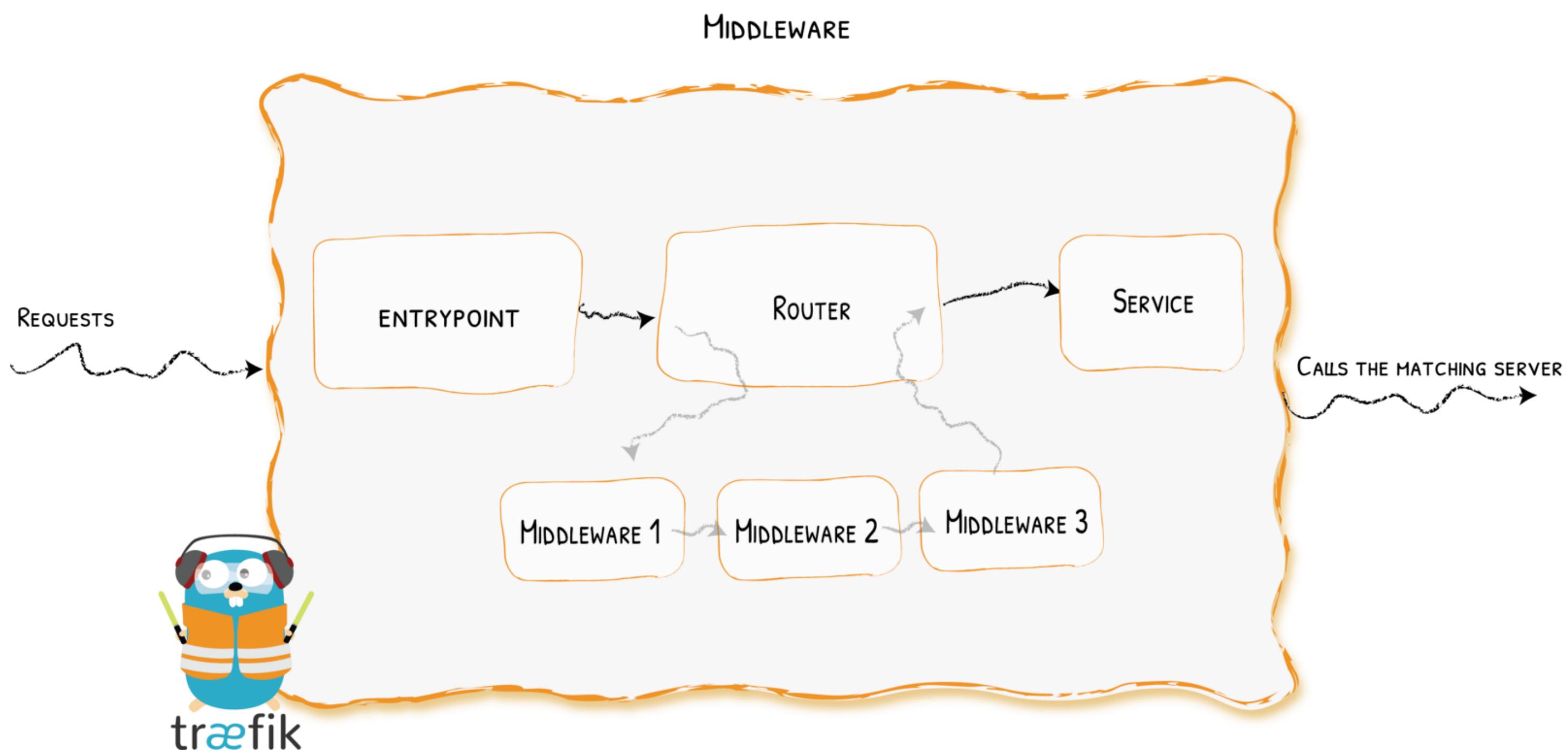
# Entrypoints



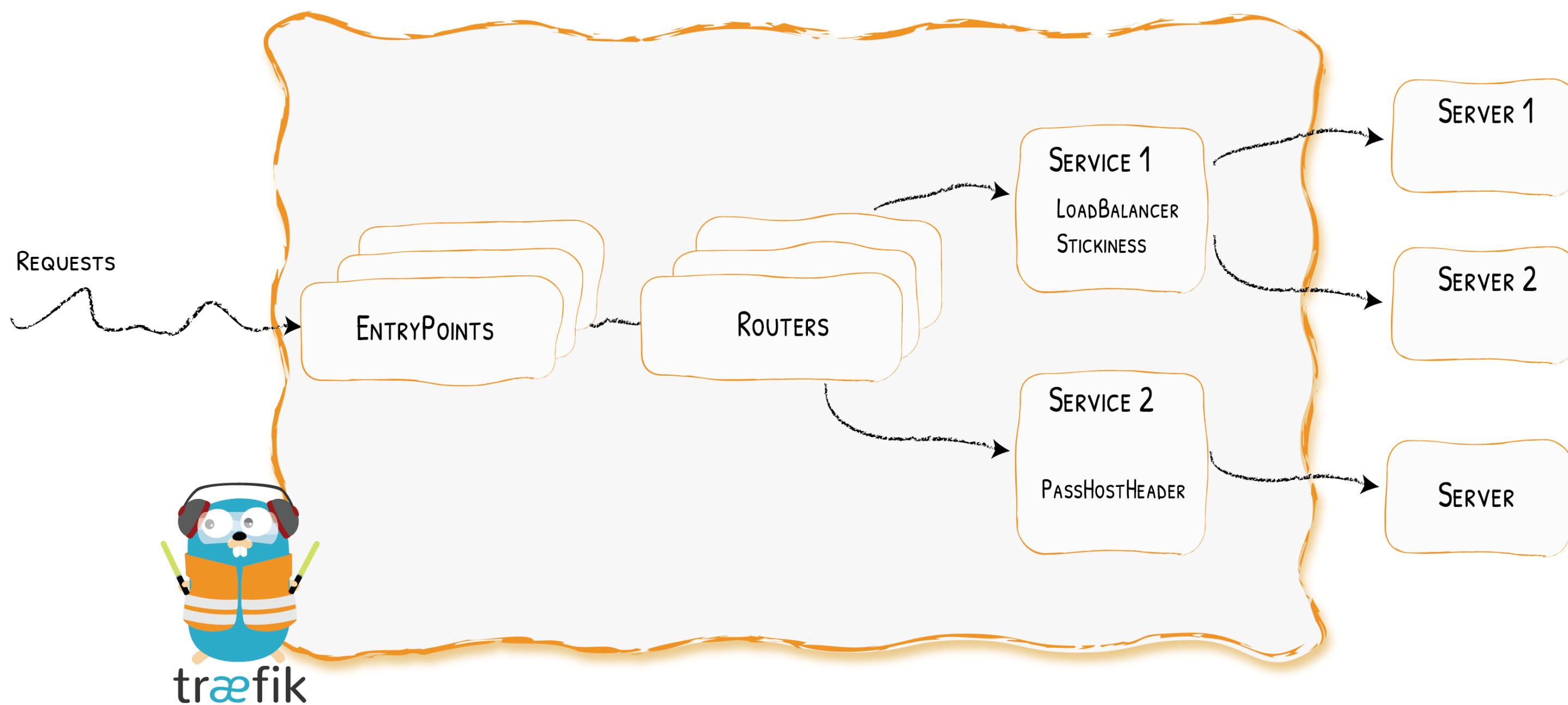
# Routers



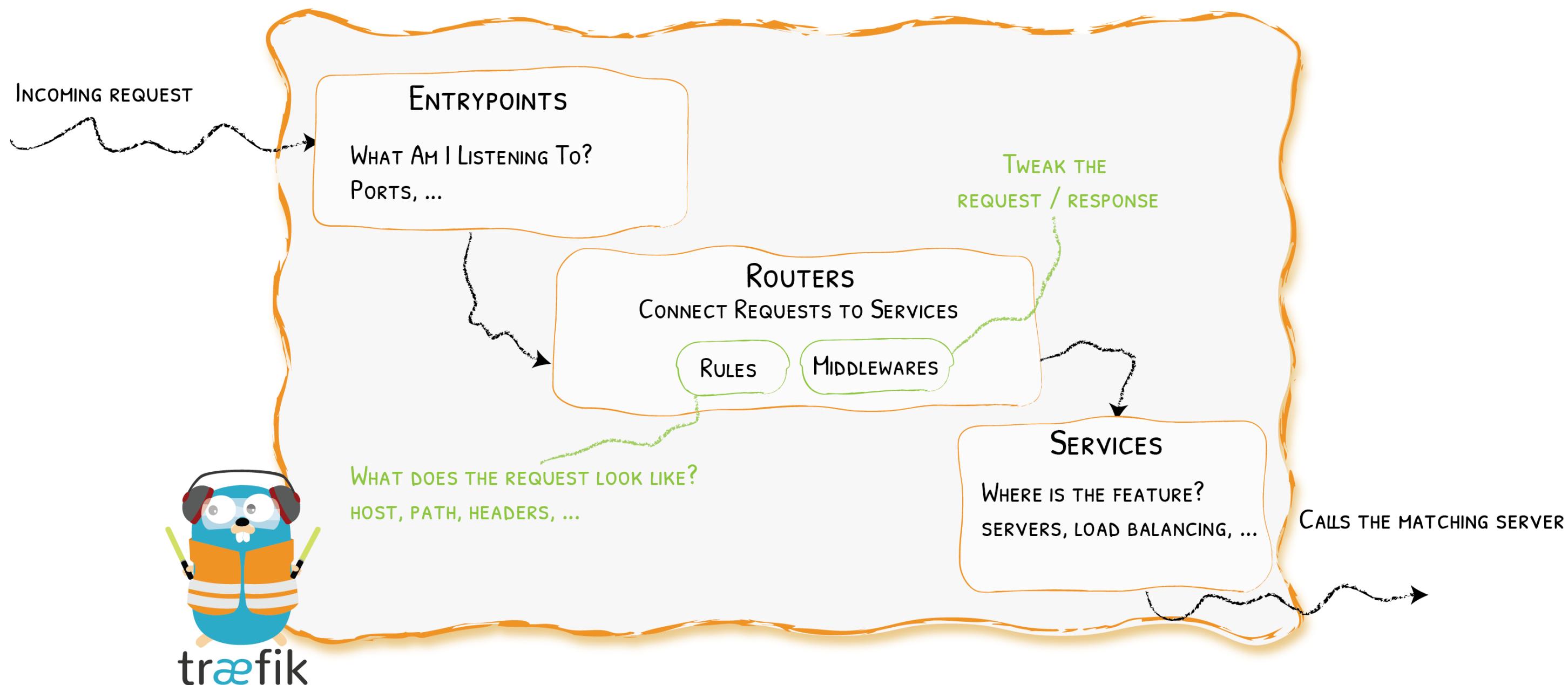
# Middlewares



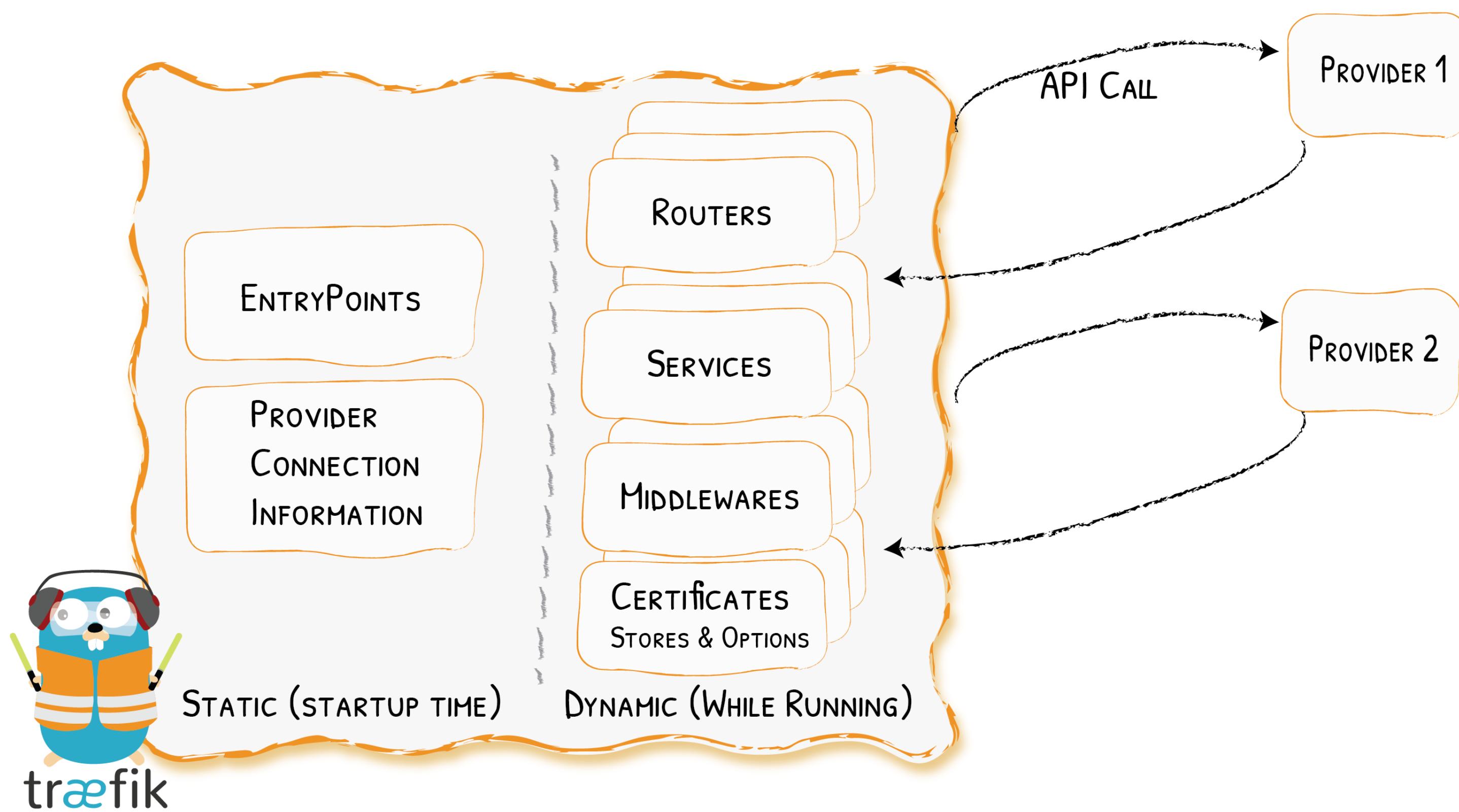
# Services



# Architecture (Again) At A Glance



# Static & Dynamic Configuration



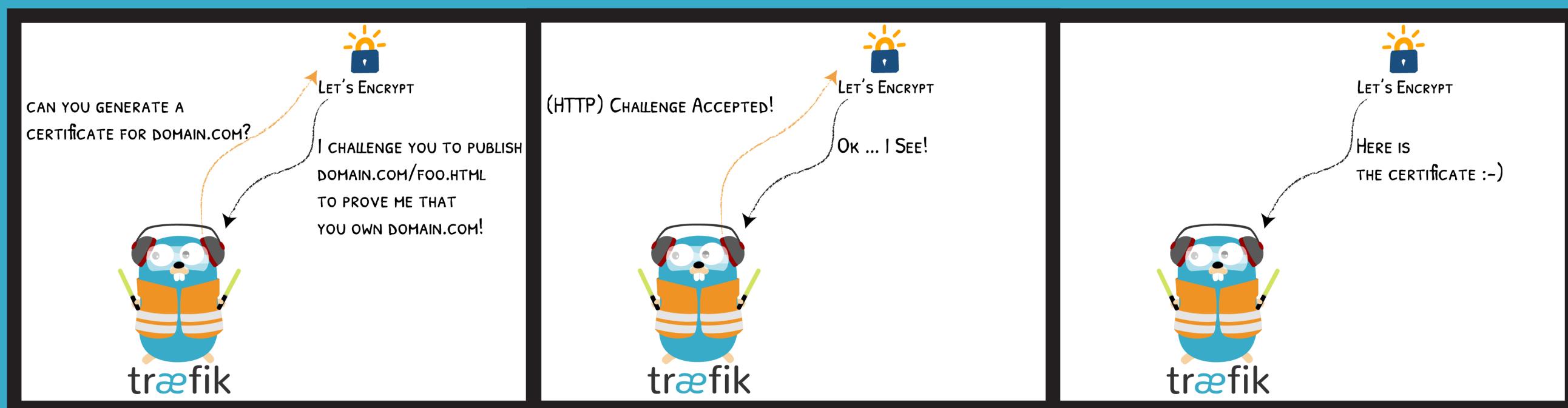
Show Me The Configuration!

# Keep It Simple

- With 

```
entrypoint:  
  image: traefik:v1.7  
  command:  
    - "--docker"  
    - "--docker.domain=mycompany.org"  
    - "--acme.email=ssl-admin@mycompany.org"  
    - "--acme.httpChallenge.entryPoint=http"  
  # Or you could use a TOML file with "--configFile=/etc/traefik/traefik.toml  
volumes:  
  - /var/run/docker.sock:/var/run/docker.sock
```

# HTTPS For Everyone With Let's Encrypt



- TLS, DNS and HTTP challenges supported

# With 🐳: Simple Backend

```
# https://www.mycompany.org -> http://webserver:80/
webserver:
  image: nginx:alpine
  labels:
    - "traefik.frontend.rule=Host:www.mycompany.org"
```

# With Context

```
# https://mycompany.org/jenkins -> http://jenkins:8080/jenkins
jenkins:
  image: jenkins/jenkins:lts
  labels:
    - "traefik.frontend.rule=PathPrefix:/jenkins"
    - "traefik.port=8080" # Because 50000 is also exposed
  environment:
    - JENKINS_OPTS=--prefix=/jenkins
```

# With 🐟: Rewrites

```
# https://mycompany.org/gitserver -> http://gitserver:3000/
gitserver:
  image: gitea/gitea:1.5
  labels:
    - "traefik.frontend.rule=PathPrefixStrip:/gitserver"
    - "traefik.port=3000" # Because 22 is also exposed
```

# With 🐳: Websockets

```
# https://mycompany.org/webterminal -> http://webterminal:7681/
webterminal:
  image: ts10922/ttyd
  labels:
    - "traefik.frontend.rule=PathPrefixStrip:/webterminal"
  expose:
    - "7681"
```

# Traefik With ⚓

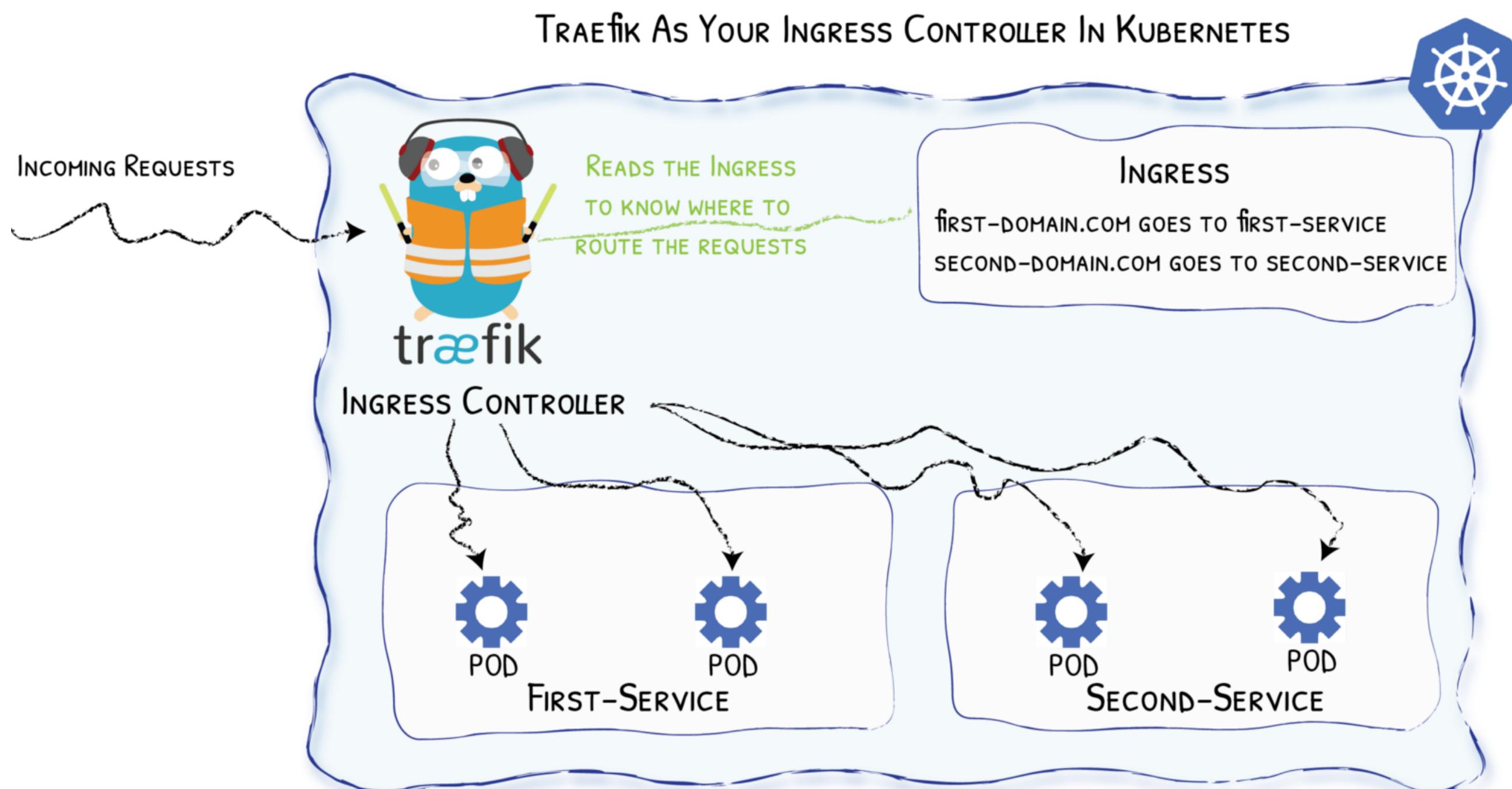


Diagram from <https://medium.com/@geraldcroes>

# Did You Say YAML?

```
apiVersion: extensions/v1beta1
kind: Ingress
metadata:
  annotations:
    # kubernetes.io/ingress.class: 'nginx'
    kubernetes.io/ingress.class: 'traefik'
spec:
  rules:
  - host: mycompany.org
    http:
      paths:
      - path: "/whoami"
        backend:
          serviceName: whoami
          servicePort: 80
```

# We Missed Talking About...

A cloud of network and infrastructure terms in various colors, including:

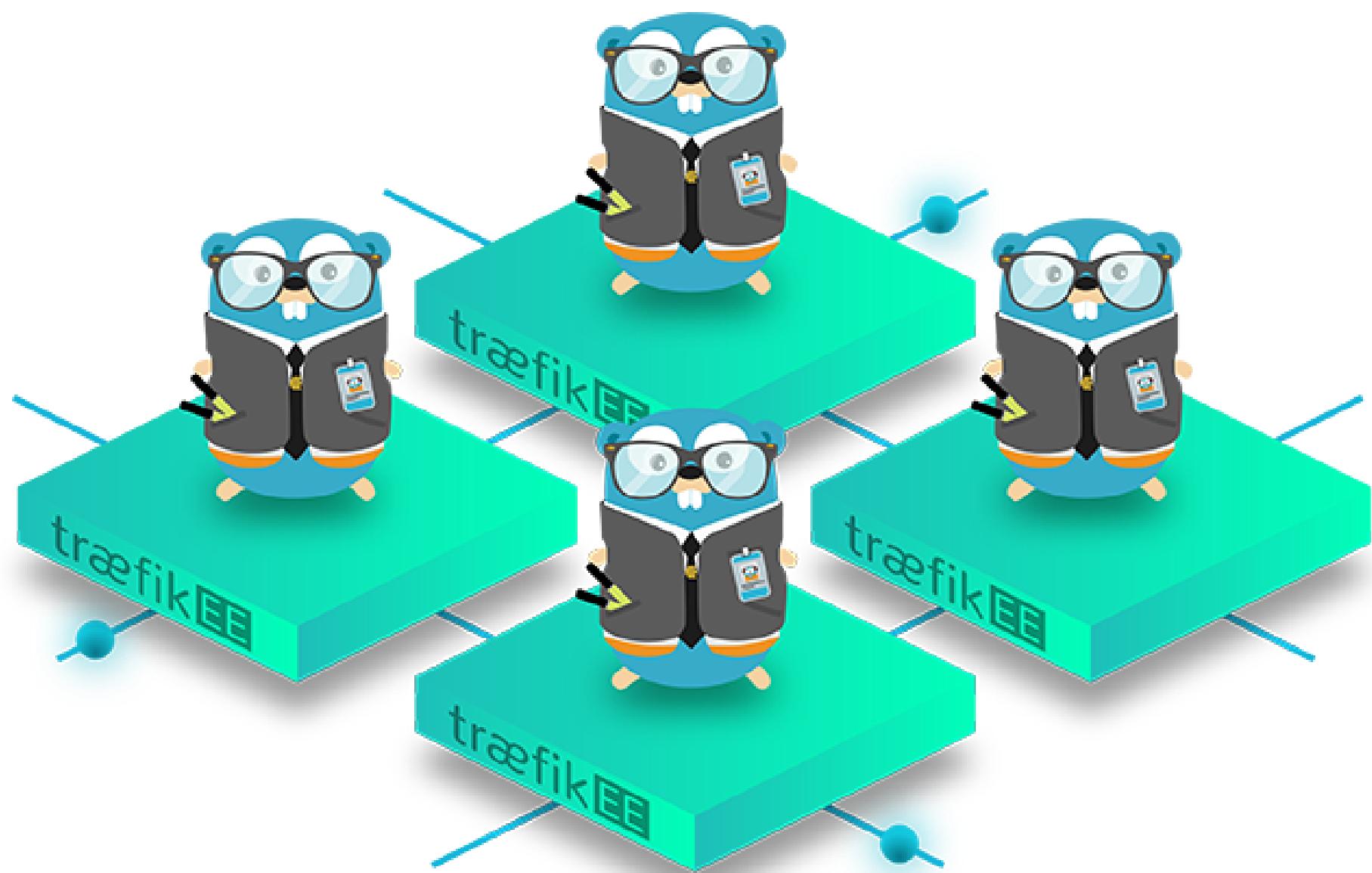
- MESOS
- ZIPKIN
- LIMITING
- KUBERNETES
- Dynamic Metrics
- HTTP ERROR
- CERTIFICATE
- TLS Reverse-Proxy
- HEADERS
- GRPC
- DYNAMIC/WILDCARD
- Security Configurations
- Tracing PROXY
- SECRETS
- PROMETHEUS
- JAEGER
- WEBSOCKETS
- SSL
- FORWARDING
- REDIRECTS
- DOCKER
- PROTOCOL
- CHECKS
- CLUSTER AUTH
- HSTS
- RATE
- CONSUL
- SWARM MODE
- SWARM
- MODE

# The Herd



You came to the wrong neighbour

# Traefik Comes In Herd



High Availability



# HIGH AVAILABILITY

traefik ENTERPRISE EDITION

# SECURITY

traefik ENTERPRISE EDITION

Scalability

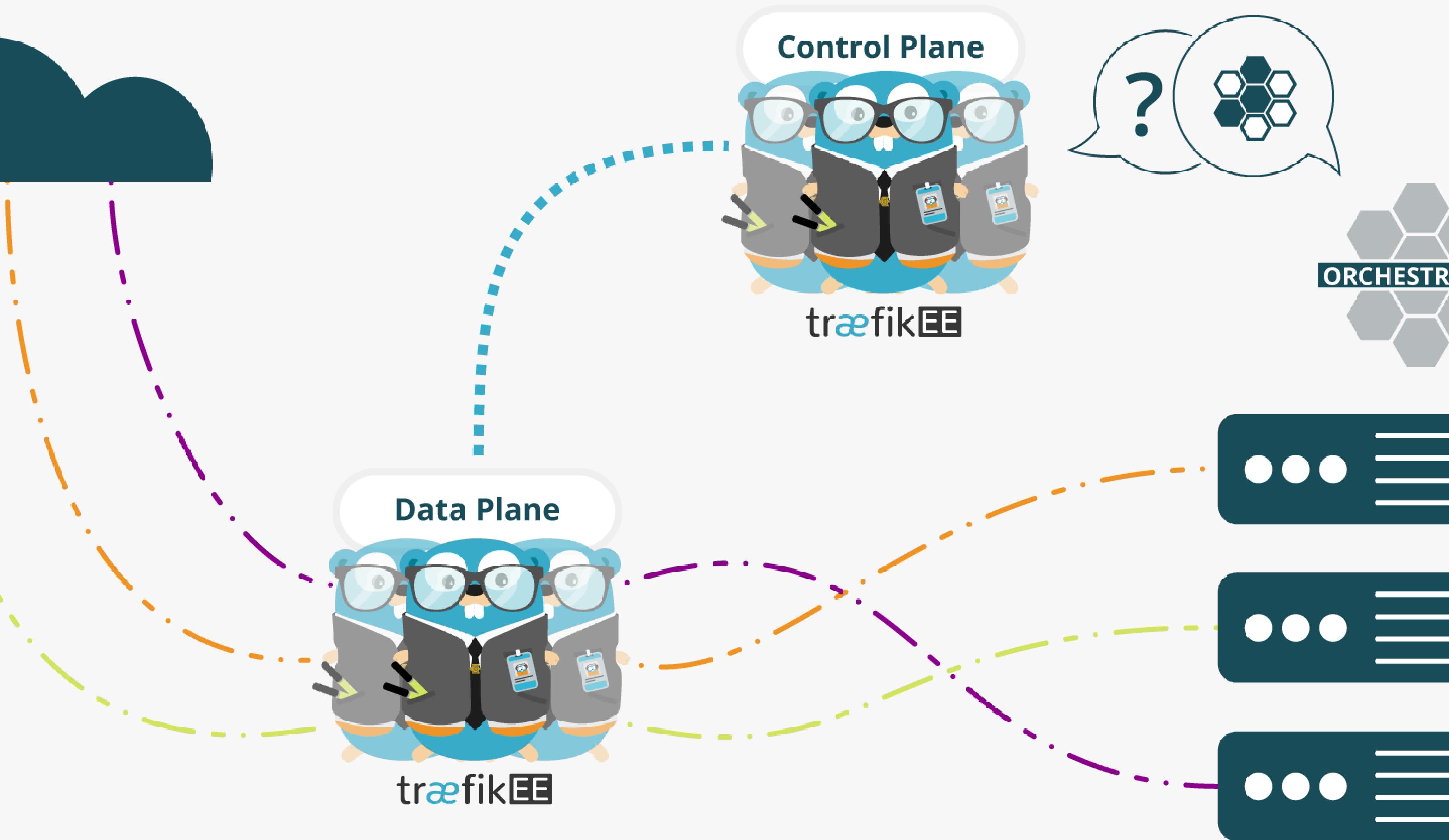


# SCALABILITY

traefik ENTERPRISE EDITION

INTERNET

TO YOUR INFRA



# 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
...
```

# Early (Free) Access

<https://containo.us/traefikee>

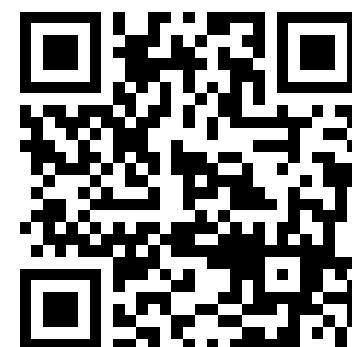
But  
What About Open Source?



# Thank You!

 @DamienDuportal

 dduportal



- Slides (HTML): <https://containous.github.io/slides/meetup-sfeir-lille-2019>
- Slides (PDF): <https://containous.github.io/slides/meetup-sfeir-lille-2019/slides.pdf>
- Source on : <https://github.com/containous/slides/tree/meetup-sfeir-lille-2019>