

There is only Zuul

Configuring and customizing the Zuul API gateway

Spencer Gibb
twitter: @spencerbgibb
email: sgibb@pivotal.io

**Shoutout to
Michael Minella
for some slides and theme**

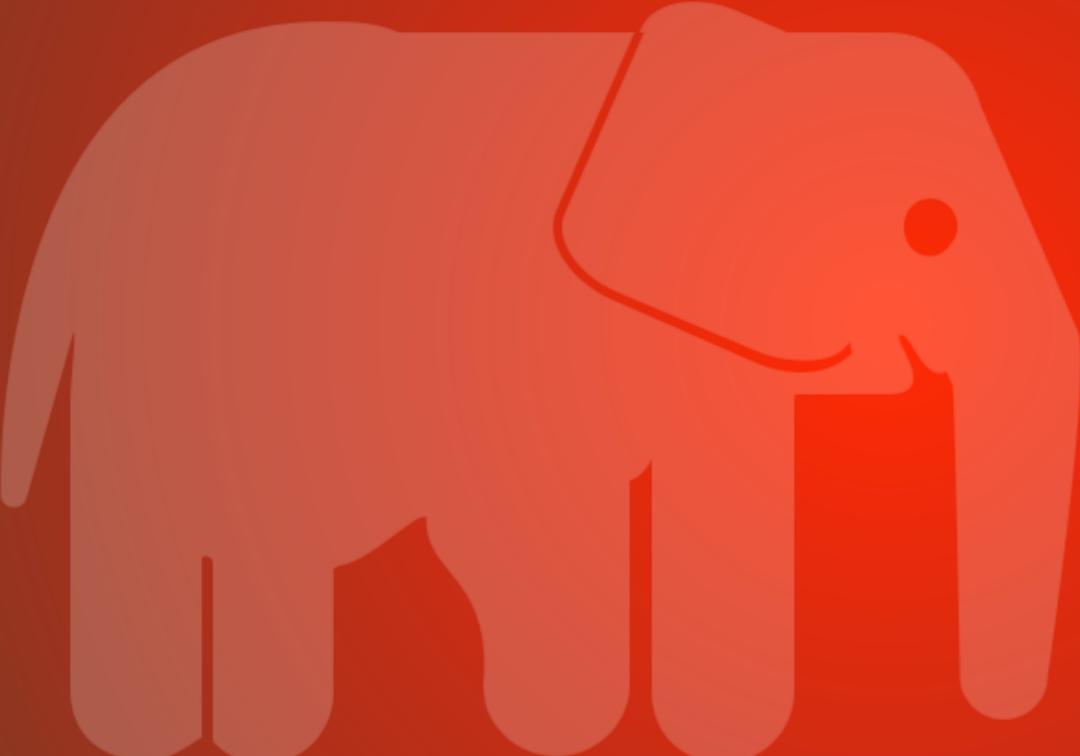
MONOLITHS



Pivotal™



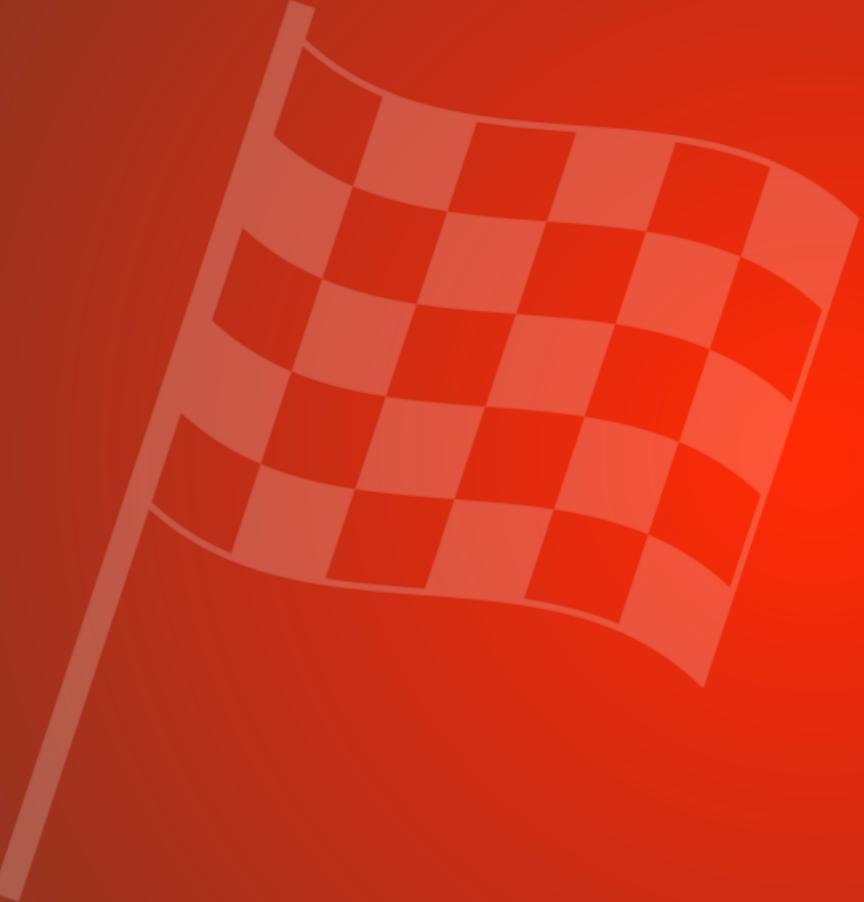
MULTIPLE ENDPOINTS & APPLICATIONS



LARGE COMPLEX ARTIFACTS



**DIFFICULT
TO TEST**



**HARD TO GET
TO PRODUCTION**

MICROSERVICES





**CLOUD
NATIVE**



**DEVELOPED AND TESTED
IN ISOLATION**

INDEPENDANTLY SCALABLE



FAMILIAR DEVELOPMENT MODEL

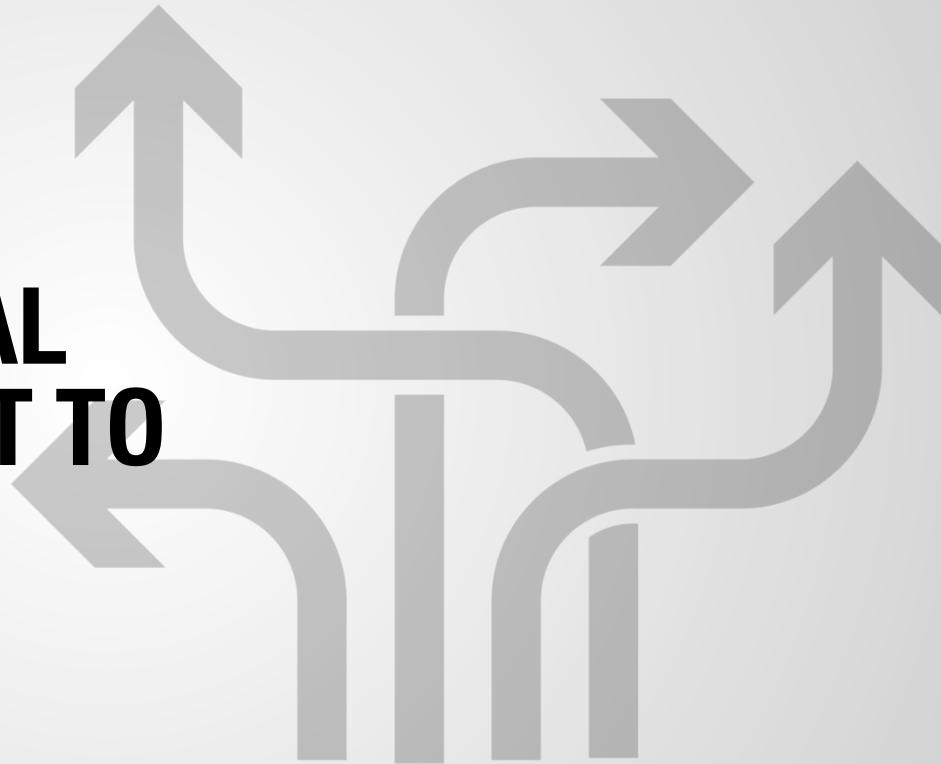


SMALL AND SIMPLE TO TEST



**OPERATIONALLY EASY TO
GOVERN**

HOW DO EXTERNAL CLIENTS CONNECT TO MICROSERVICES?

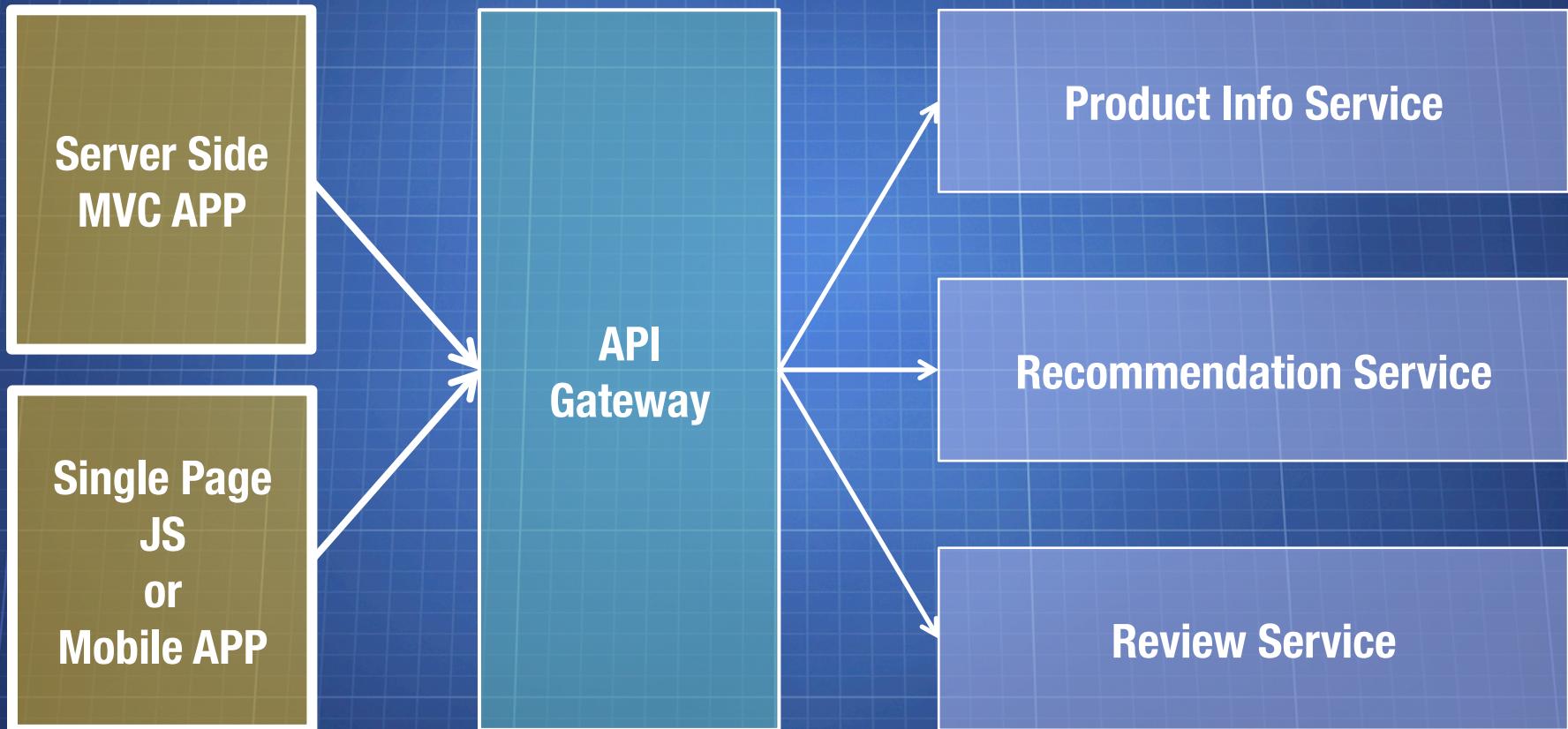


You shall not pass!

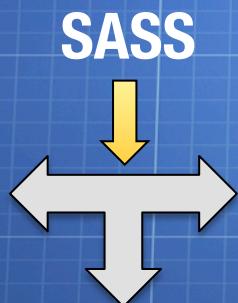
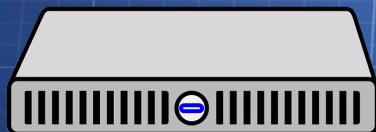


Unless I know you...

What is an API Gateway



Spectrum of API Gateways



There is no Dana, only Zuul!

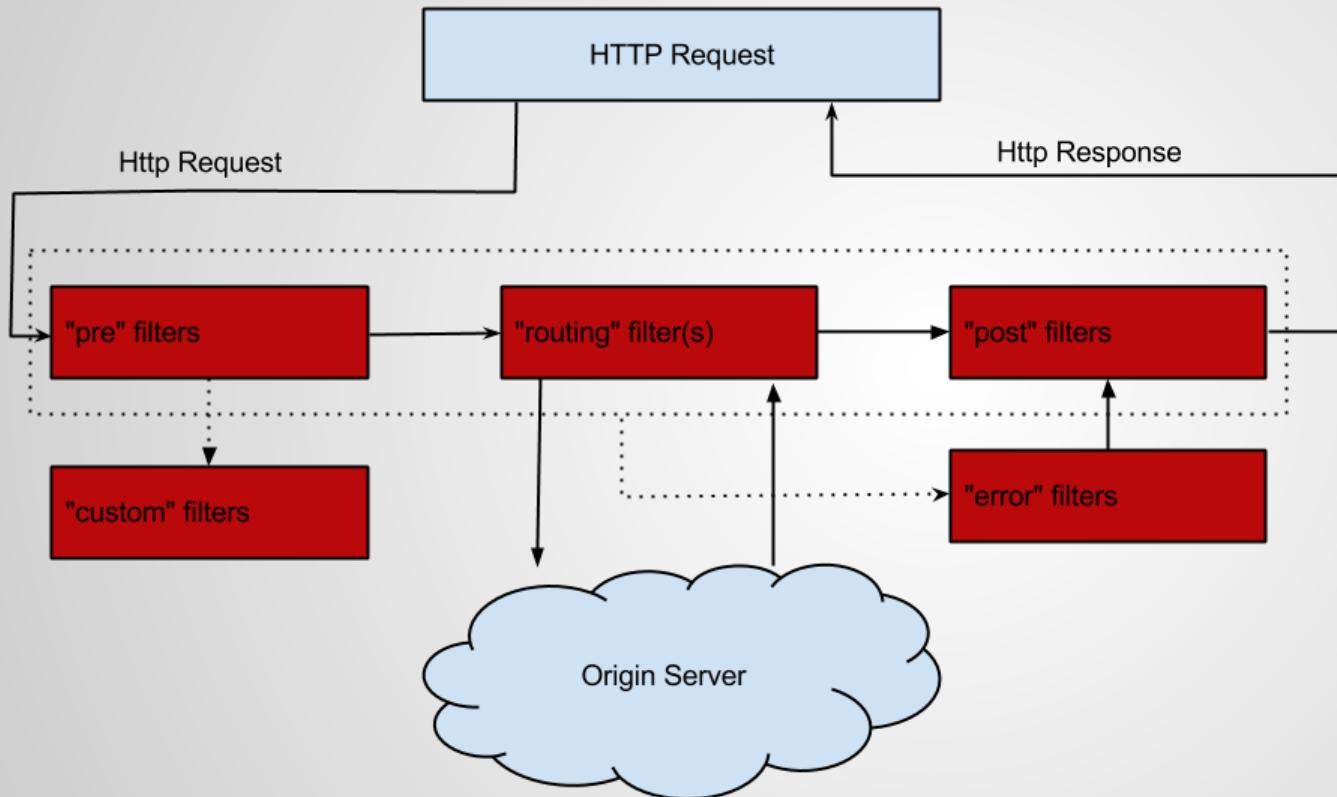




SPRING CLOUD **NETFLIX**

Pivotal

Zuul Design





@EnableZuulProxy

1 PreDecorationFilter

2 RibbonRoutingFilter

3 SendResponseFilter

```
zuul:  
  routes:  
    users: /users/**
```

DEMO



Pivotal

ZUUL 2

ADMIRAL ROPE



<http://techblog.netflix.com/2016/09/zuul-2-netflix-journey-to-asynchronous.html>

Pivotal



MAJOR REWRITE

WELL THEN

**THIS JUST GOT A LITTLE
AWKWARD**

SPRING CLOUD GATEWAY





SPRING CLOUD GATEWAY

1 ROUTE MGMT API

2 ROUTE: VIA CONFIG

2 ROUTE: VIA DISCOVERY

2 ROUTE: VIA DB

3 ROUTE SCOPED FILTERS

4 FLEXIBLE

5 SIMPLIFIED

```
spring.cloud.gateway.routes:
```

```
- id: users
```

```
  uri: http://users-xyz:80
```

```
  predicates:
```

```
  - Host=*.example.org
```

```
  - Path=/users/{segment}
```

```
  filters:
```

```
  - SetPath={segment}
```

```
spring.cloud.gateway.routes:
```

```
- id: users
```

```
  uri: http://users-xyz:80
```

```
  predicates:
```

```
  - Host=*.example.org
```

```
  - Path=/users/{segment}
```

```
  filters:
```

```
  - SetPath={segment}
```

```
spring.cloud.gateway.routes:
```

```
- id: users
```

```
  uri: http://users-xyz:80
```

```
  predicates:
```

```
- Host=*.example.org
```

```
- Path=/users/{segment}
```

```
  filters:
```

```
- SetPath={segment}
```

```
spring.cloud.gateway.routes:
```

```
- id: users
```

```
  uri: lb://users
```

```
  predicates:
```

```
  - Host=*.example.org
```

```
  - Path=/users/{segment}
```

```
  filters:
```

```
  - SetPath={segment}
```

```
spring.cloud.gateway.routes:
```

```
- id: users
```

```
  uri: lb://users
```

```
  predicates:
```

```
  - Host=*.example.org
```

```
  - Path=/users/{segment}
```

```
  filters:
```

```
  - SetPath={segment}
```

```
spring.cloud.gateway.routes:
```

```
- id: users
```

```
  uri: lb://users
```

```
  predicates:
```

```
  - Host=*.example.org
```

```
  - Path=/users/{segment}
```

```
  filters:
```

```
  - SetPath={segment}
```

```
spring.cloud.gateway.routes:
```

```
- id: users
```

```
  uri: lb://users
```

```
  predicates:
```

```
  - Host=*.example.org
```

```
  - Path=/users/{segment}
```

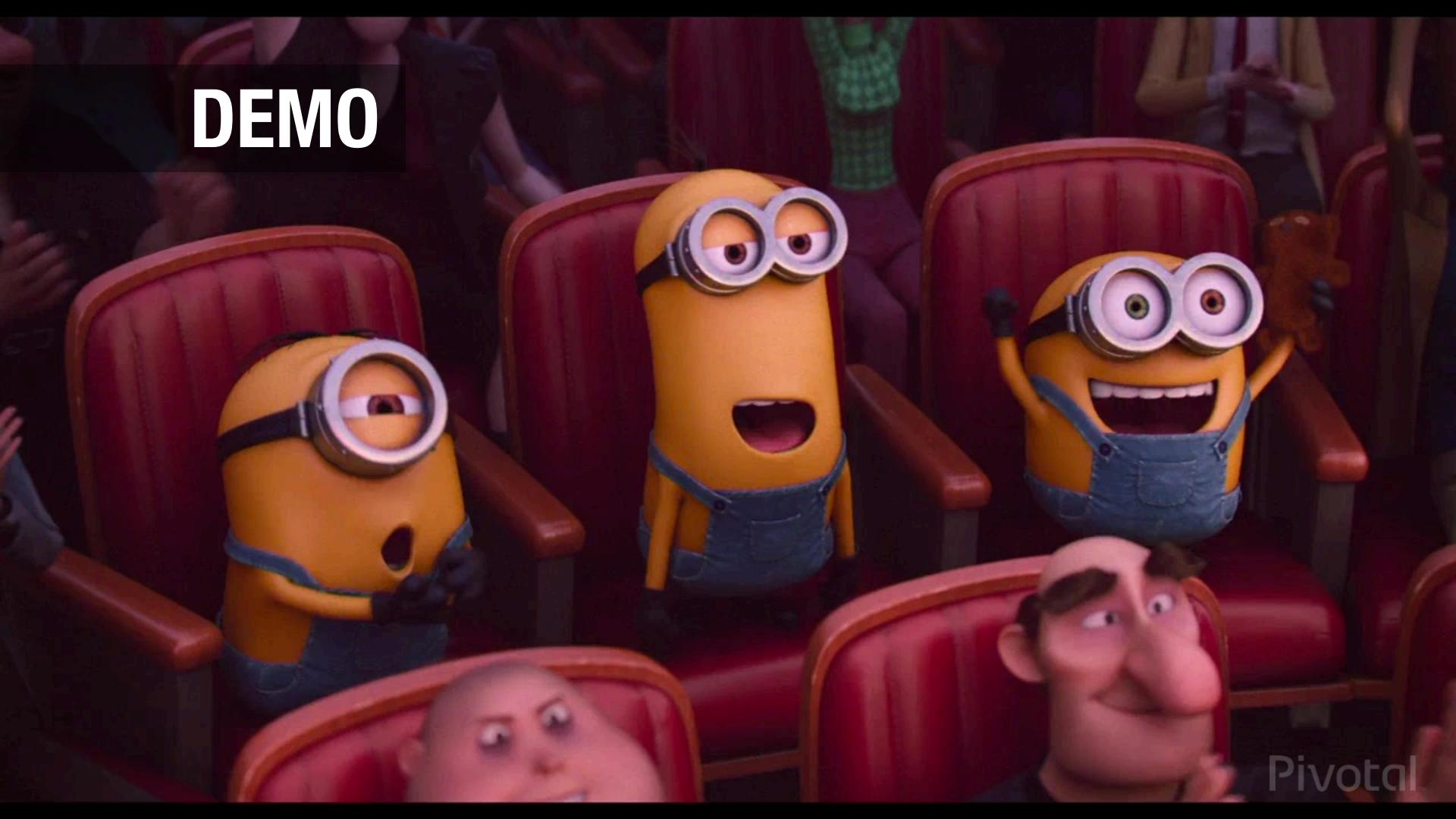
```
  filters:
```

```
  - SetPath=/{{segment}}
```

spring.cloud.gateway.routes: filters:

- AddResponseHeader=X-Response-Foo, Bar
- RemoveResponseHeader=X-Foo
- SecureHeaders
- RewritePath=/foo/(?<part>.*), /\$\\{part}
- Hystrix=foocmd

DEMO



Pivotal

SPRING CLOUD GATEWAY

A large, semi-transparent graphic of a leaf or plant, rendered in various shades of green, occupies the right side of the slide. It has several distinct leaf shapes and a thin stem.

MILESTONE 1 END OF MAY

SPRING CLOUD GATEWAY

A large, semi-transparent graphic of a green leaf with veins, positioned behind the title text.

RELEASE DECEMBER 2017

WHAT HAPPENS TO ZUUL 1?



Learn More. Stay Connected.



Spencer Gibb

Blog: spencer.gibb.us

Twitter: @spencerbgibb

Spring Cloud Zuul Samples

github.com/spring-cloud-samples/sample-zuul-filters

Spring Cloud Gateway

github.com/spring-cloud-incubator/spring-cloud-gateway

Pivotal: pivotal.io

Twitter: twitter.com/springcloud

YouTube: spring.io/video

LinkedIn: spring.io/linkedin

Google Plus: spring.io/gplus

QUESTIONS?



The End