



# Contour

High performance ingress controller  
for Kubernetes

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[#contour](#) (K8s Slack)  
[projectcontour.io](https://projectcontour.io)

# Agenda

## What is Ingress?

Internet → Cluster → Apps

## Contour Overview

What is it? How does it work?

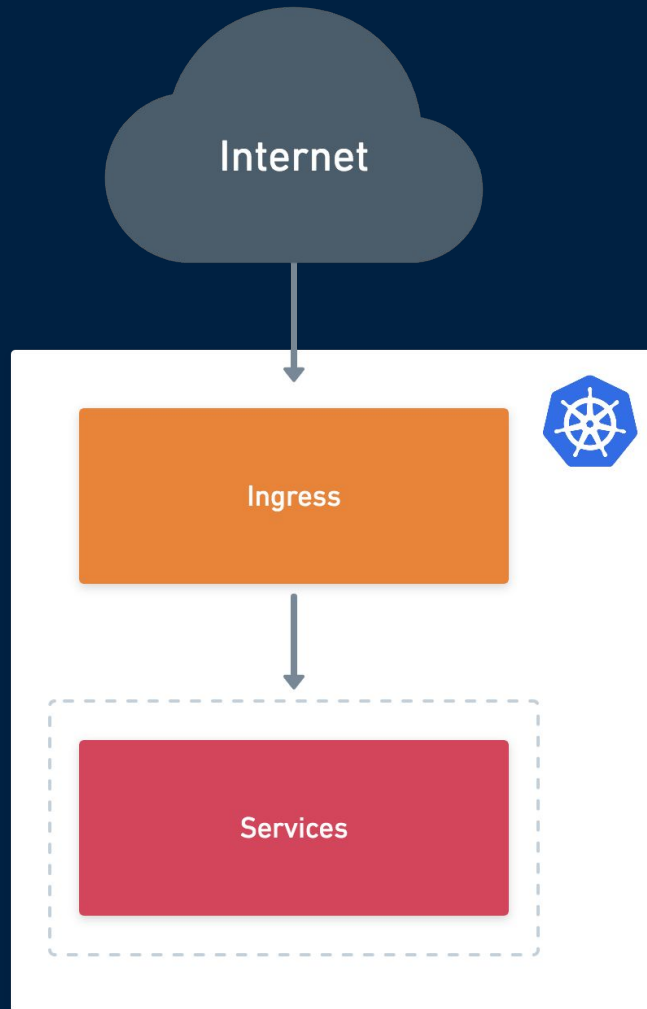
## HTTPProxy CRD

Our custom resource definition

## Demo(s)!

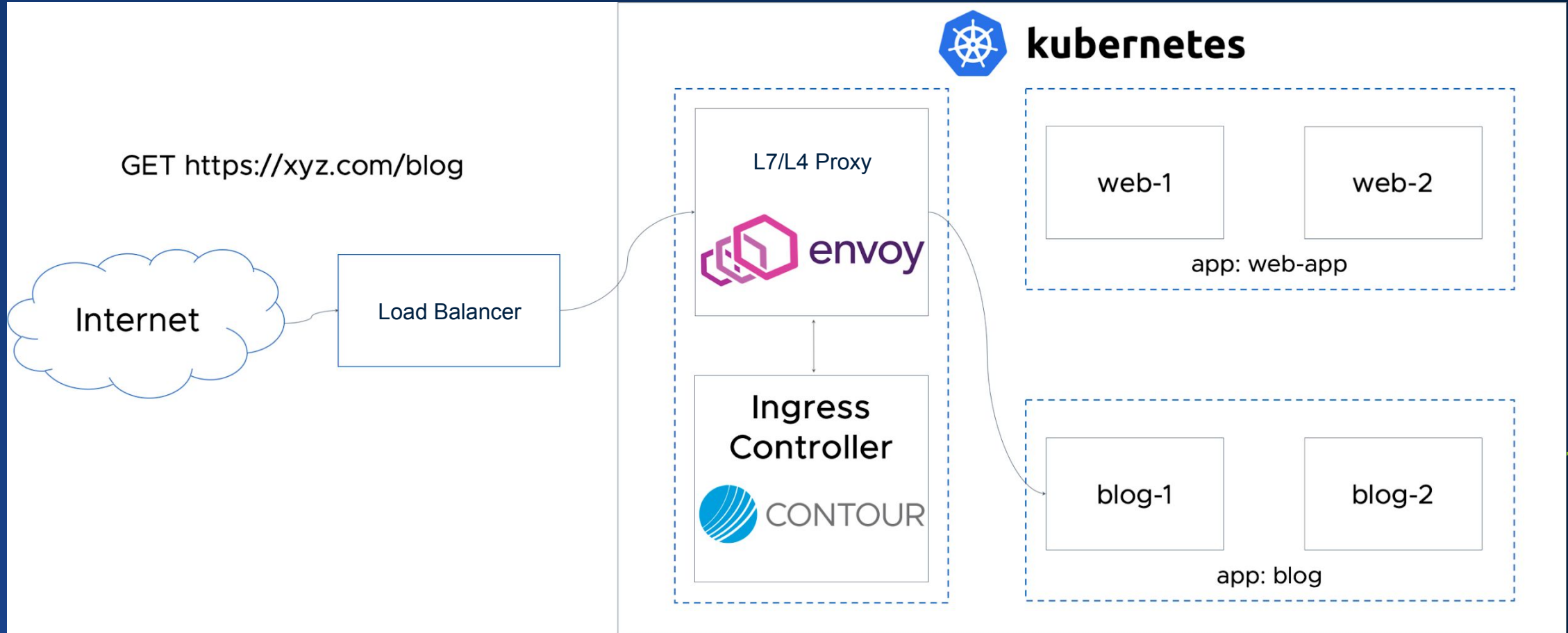
It's all live! =)

# What is Ingress?

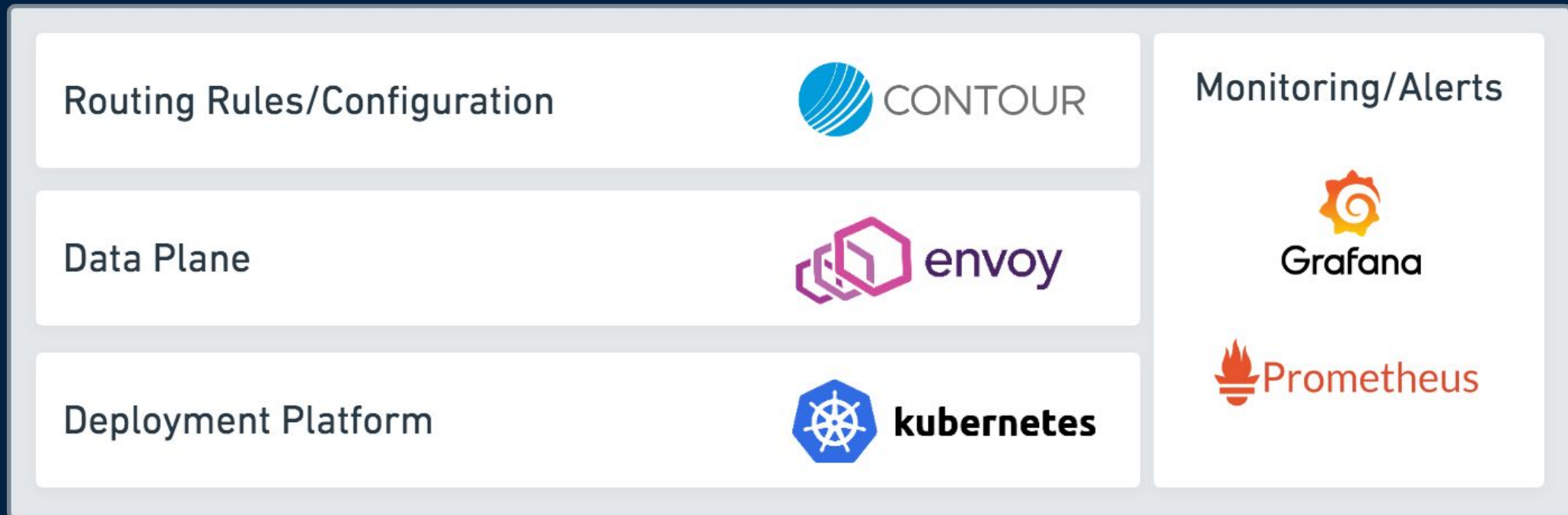


## Alternatives to Ingress:

- NodePorts / LoadBalancer
  - Quantity?
  - Cost?
- HostPorts
  - One per cluster



# Contour Components



# Contour Highlights

Deploy and manage Envoy as an incoming load balancer

Kubernetes Ingress Controller that leverages Envoy as the data plane:

- **Dynamically updates** load balancing configurations without dropping connections
- Safely supports ingress in **multi-team Kubernetes clusters**
- Enables **delegation of routing configuration** for path + header or domain to another Namespace
- Flexibly defines **service weighting and load balancing strategies** without annotations.
- Multiple Upstreams
- TLS Certificate Delegation to another Namespace

# Contour

## Why Envoy?



- **Dynamic configuration via API**
- **First-class support for HTTP/2 and gRPC**
- **Battle-tested in production**

What happens in  
the following  
situation?



# Multi-team Ingress

```
apiVersion: networking.k8s.io/v1beta1
kind: Ingress
metadata:
  name: kubernetes-blog
  namespace: teama
spec: wordpress-blog
rules:
- host: projectcontour.io
  http:
    paths:
    - path: /blog
      backend:
        serviceName: wordpress-blog
        servicePort: 80
```

```
apiVersion: networking.k8s.io/v1beta1
kind: Ingress
metadata:
  name: kubernetes-blog
  namespace: teamb
spec: wordpress-blog
rules:
- host: projectcontour.io
  http:
    paths:
    - path: /blog
      backend:
        serviceName: svc-new
        servicePort: 80
```

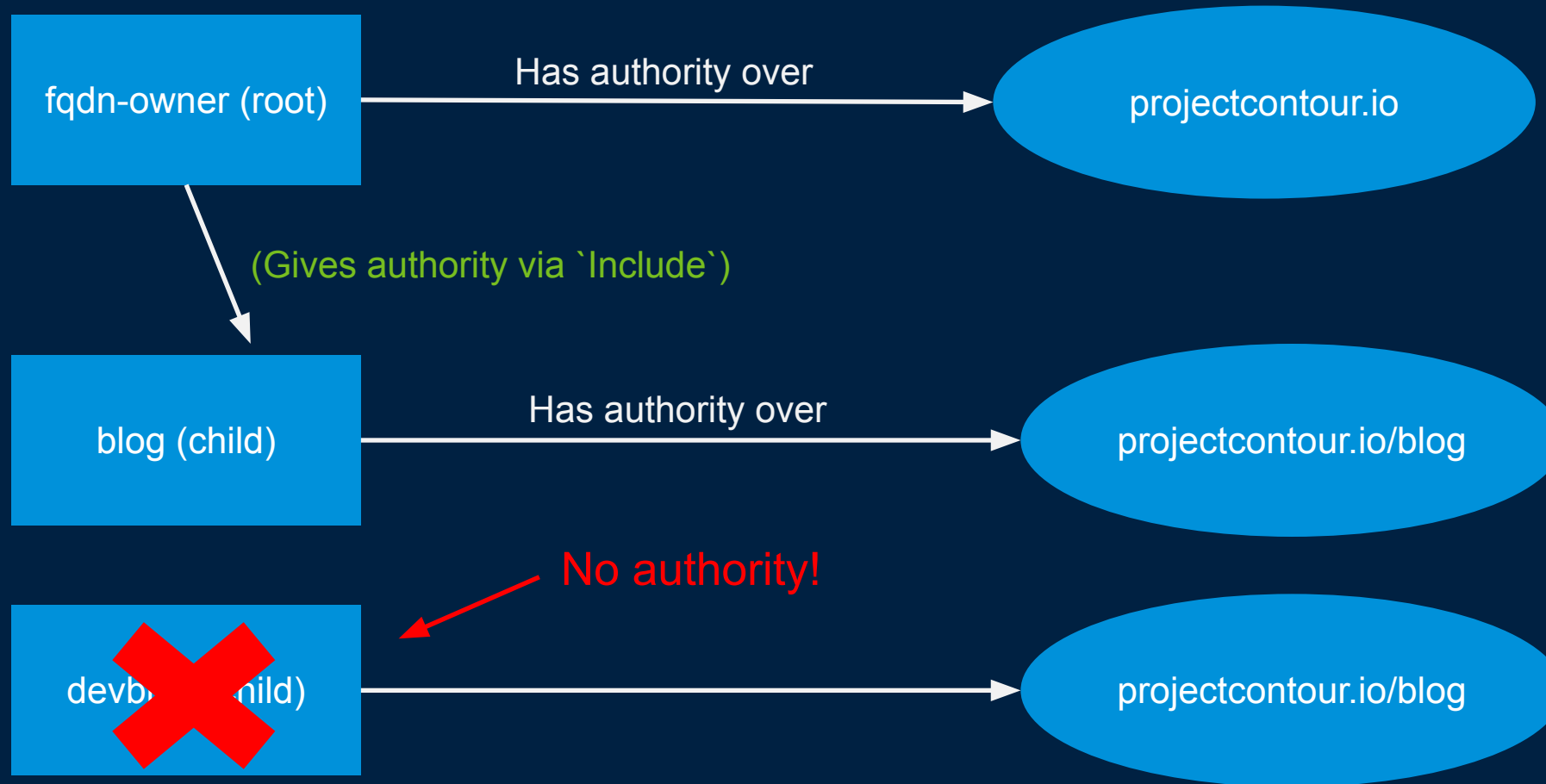
Undefined \\_(ツ)\_/

**...and this is dangerous!**

# Goals for HTTPProxy CRD

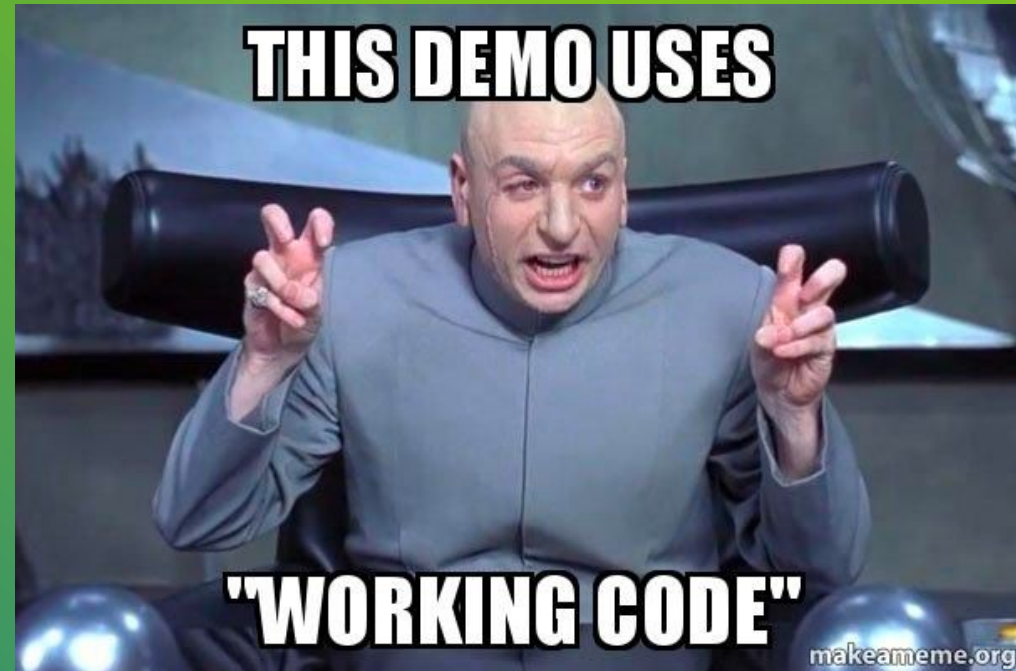
1. Safely support ingress in **multi-team Kubernetes clusters**
2. Enable **delegation of routing configuration** for a path+header(s) or domain to another Namespace
3. Provide a sensible home for common configuration parameters such as **service weighting and load balancing strategies** without annotations

# HTTPProxy Delegation



# Demo Time!

- Simple HTTPProxy
- Delegation to Teams
- Request requirements
- Canary Deployments
- Blue/Green Deployments



# Demo Overview

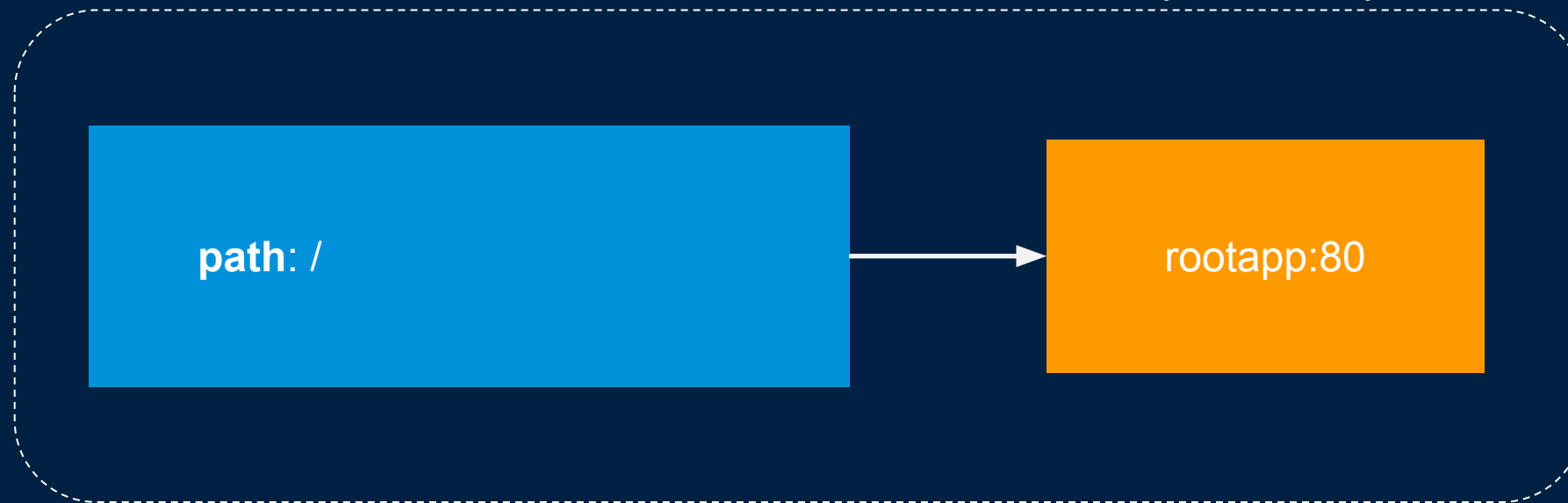
## Basic

fqdn: demo.projectcontour.io

 HTTPProxy

 Kubernetes Service

Namespace: root-proxies



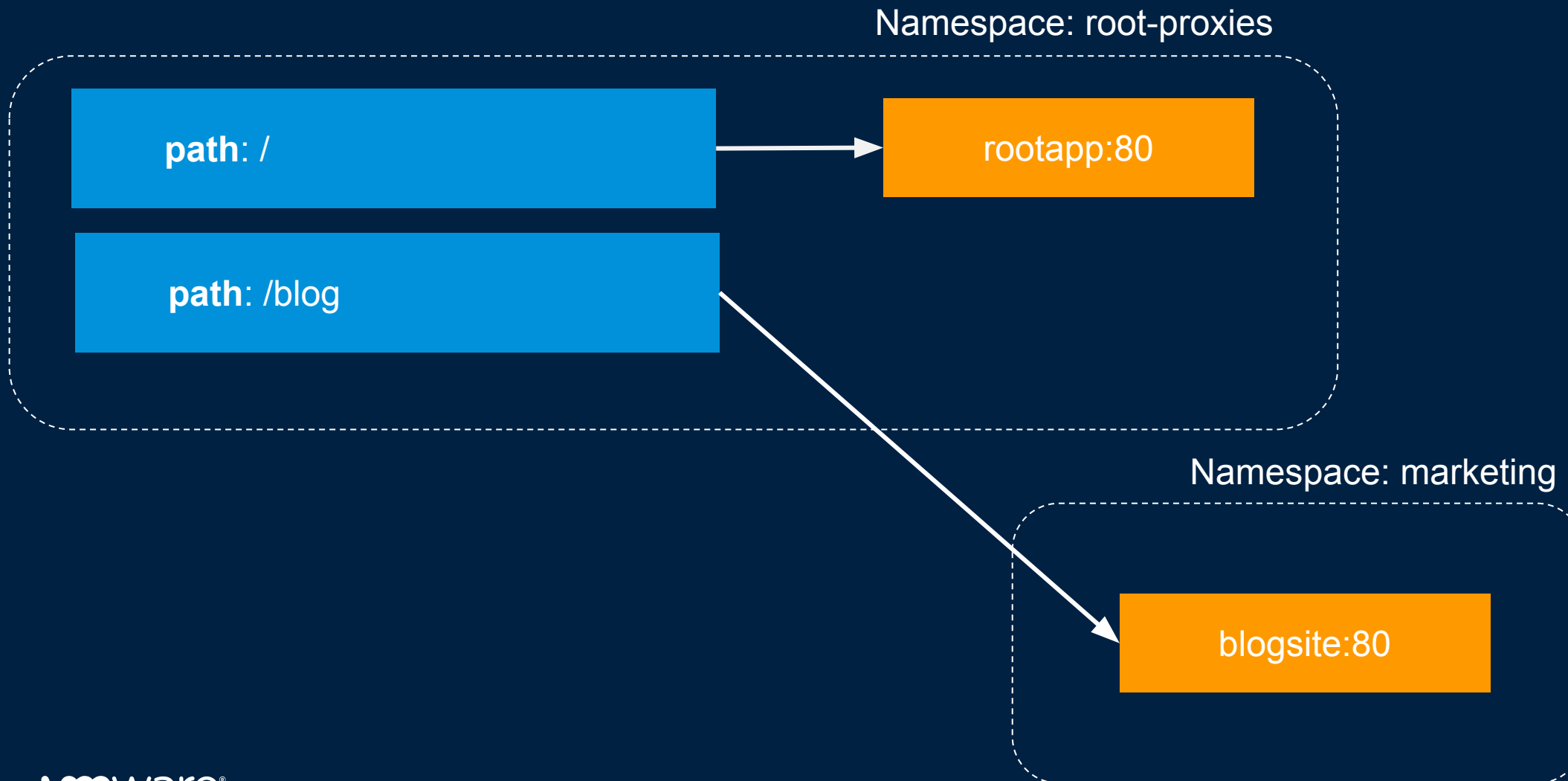
# Demo Overview

## Delegation to Teams

fqdn: demo.projectcontour.io

HTTPProxy

Kubernetes Service



# Contour Roadmap

- Contour 1.0 RC1 (10/9/19)
- Contour 1.0 RC2 (10/25/19)
- **Contour 1.0** Early November, before KubeCon!





# Do you want to help build Contour?



Get the latest news on [projectcontour.io](https://projectcontour.io)



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Follow us on Twitter at [@projectcontour](#)



Join the [Contour Community Meetings](#), every third Tuesday at 6PM ET / 3PM PT

If you're a newcomer and want to dive into the code, check out the "[Good first issue](#)" and "[Help wanted](#)" labels in the Contour repository!

# Thank You

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