



# CONTOUR

## Kubernetes Ingress Controller 101

FOSDEM '22  
Orlin Vasilev



**CLOUD NATIVE**  
COMPUTING FOUNDATION

# whoami

- Orlin Vasilev aka Orlix
- Father of two
- CNCF Ambassador
- SysAdmin/Developer/DevOps/SRE
- DIY person
- Community Manager for Contour (@VMware)



# Agenda

Intro to Contour - 101

Demo - install and configure

Community

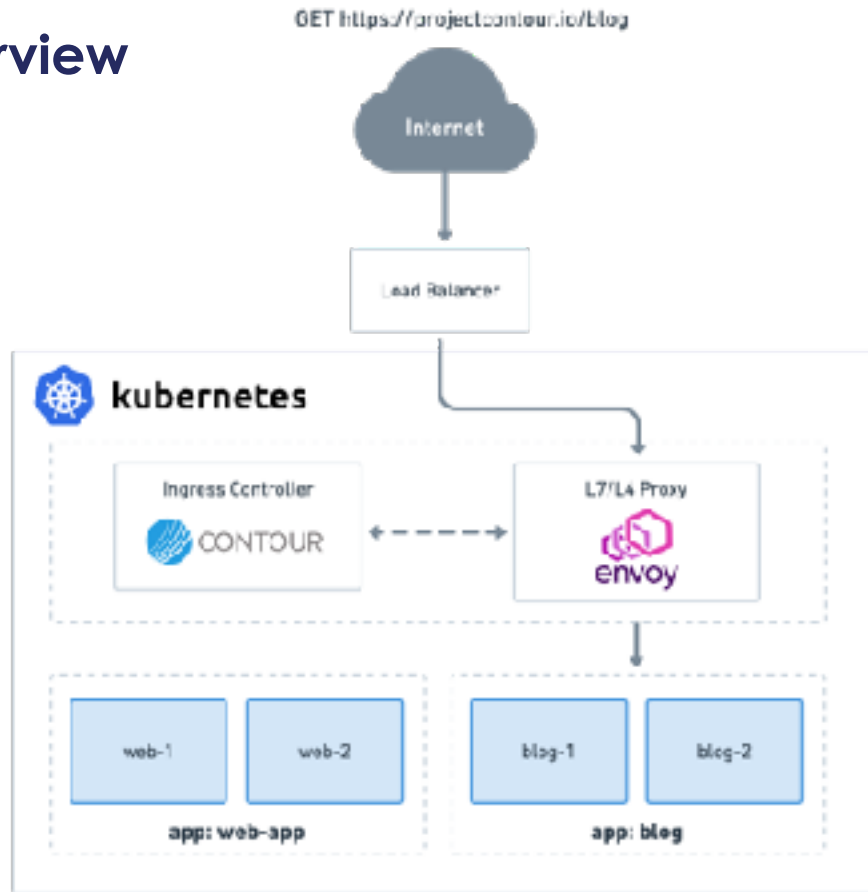


# Contour 101

- Created by Heptio in 2017 : [announcement](#) and [note from Dave](#)
- Contour is an open source Kubernetes ingress controller providing the control plane for the Envoy as a data plane.
- Contour supports dynamic configuration updates and multi-team ingress delegation.



# Architecture overview



## Key features

- Multi-team Kubernetes clusters, with the ability to limit which Namespaces may configure virtual hosts and TLS credentials.
- Enables including of routing configuration for a path or domain from another HTTPProxy, possibly in another Namespace.
- Accepts multiple services within a single route and load balances traffic across them.
- Validation of HTTPProxy objects at creation time and status reporting for post-creation validity.....etc

# Ingress vs (CRD)HTTPProxy

```
apiVersion: networking.k8s.io/v1
kind: Ingress
metadata:
  name: nginx
  namespace: fosdem
spec:
  rules:
  - host: local.projectcontour.io
    http:
      paths:
      - backend:
          service:
            name: web
            port:
              number: 80
          path: /
          pathType: Prefix
```

```
apiVersion: projectcontour.io/v1
kind: HTTPProxy
metadata:
  name: fosdem
  namespace: fosdem
spec:
  virtualhost:
    fqdn: local.projectcontour.io
  routes:
  - conditions:
    - prefix: /
    services:
    - name: web
      port: 80
```

# What hooked me up!

```
apiVersion: projectcontour.io/v1
kind: HTTPProxy
metadata:
  name: fosdem
  namespace: fosdem
spec:
  routes:
  - services:
    - name: web-v1
      port: 80
      weight: 80
    - name: web-v2
      port: 80
      weight: 20
```



## So why Contour?

- Dynamically update the ingress configuration with minimal dropped connections
- Safely support multiple types of ingress config in multi-team Kubernetes clusters
- Improve on core ingress configuration methods using our HTTPProxy custom resource
- v1.20.0 Kubernetes Gateway API support - [v1alpha2](#) (FOSDEM'23 :)
- Community and community support & Free and OpenSource - supported by CNCF



## Used in



<https://github.com/knative>



<https://github.com/flyteorg/flyte>



<https://github.com/kinvolk/lokomotive>



<https://github.com/vmware-tanzu/community-edition>



etc...



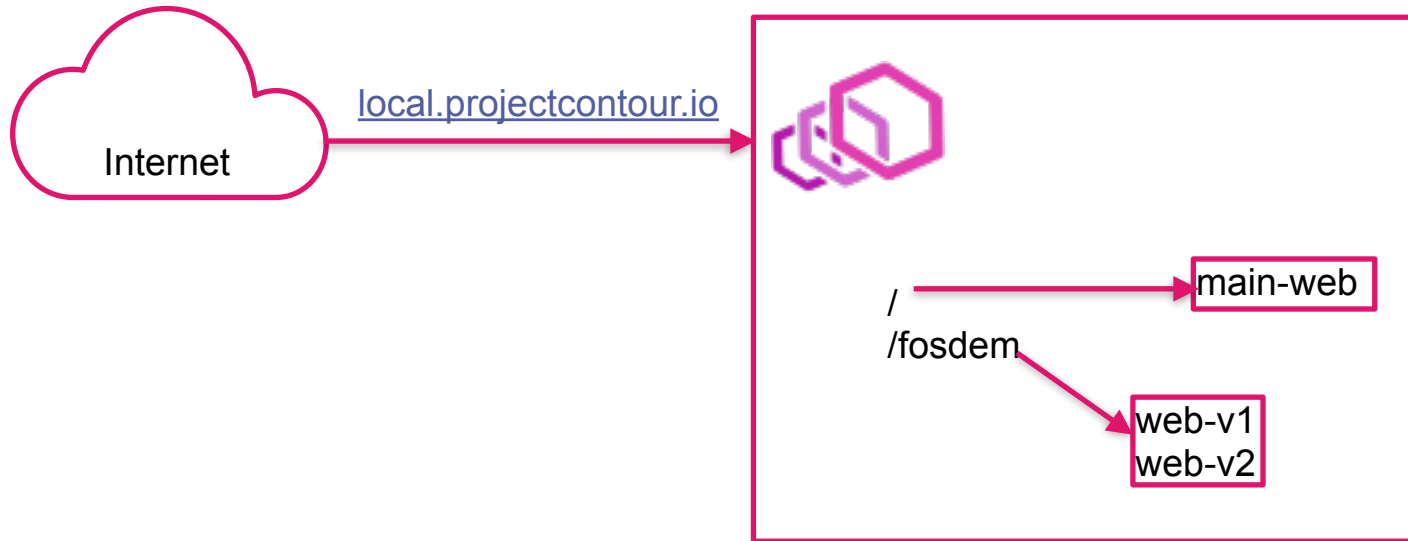
# DEMO

Install Contour

Delegation

Blue-green & Canary Deployments

## Demo setup(super simplified)



# COMMUNITY

JOIN US!

# Community



Stars

**3000+**



Forks

**300**



Commits

**~4000**



Contributors

**300+**



Members

**1000+**



Maintainers

**6**

# Contributors & Maintainers



# Adopters





# Community

Web: [projectcontour.io](https://projectcontour.io)

Github: [github.com/projectcontour](https://github.com/projectcontour)

Slack: [#contour](https://kubernetes.slack.com)

Twitter: [@projectcontour](https://twitter.com/projectcontour)

Community Meetings and office hours: <https://projectcontour.io/community/>

Mailing List: [lists.cncf.io/g/cncf-contour-users/](https://lists.cncf.io/g/cncf-contour-users/)



# Really Join us! :)

## #GoodFirstIssue

-> [Contour Technical Documentation Working Group](#)

Great way to start your open source and CNCF Journey

Full support of the team to get you set up and ready to create your first PR

**MAKE SHURE YOU SIGN UP:** [lists.cncf.io/g/cncf-contour-users](https://lists.cncf.io/g/cncf-contour-users)

## CONTRIBUTING.md



## Get in touch

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