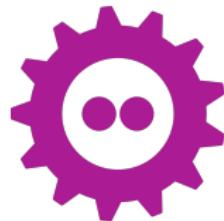


# A cloud native Kubernetes Global Balancer

## Introduction to k8gb

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This slide deck: [bit.do/fosdem-k8gb](https://bit.do/fosdem-k8gb)

# Outline

## 1 High-lvl Description

- Animation

## 2 Animation

- Components

## 3 Demo

# Animation

- TTL implications
- Trade-off
- Animation created in Manim, available at  
<https://github.com/k8gb-io/k8gb-manim>

# Components

- CoreDNS
- ExternalDNS
- Kubernetes controller
- Bundled together and deployed by Helm chart





- Own plugin
- DNSEndpoint - Custom Resource
- Based on k8s\_external plugin
- k8gb keeps updating the internal DNS records

# ExternalDNS



- K8s way to update the external edge DNS server
- Supports majority of cloud providers
- Also works with DNSEndpoint
- k8gb updates the records on the edge dns level
- No SPoF except the edge dns server, contains also TXT record with heart beats

# k8gb - the controller/operator



- Golang
- Acts on `gslb` Custom Resource
- or alternatively on custom annotation on Ingress resource
- Based on Kubebuilder - Operator SDK
- Started by Yury Tsarev

## gslb example

```
apiVersion: k8gb.absa.oss/v1beta1
kind: Gslb
metadata:
  name: test-gslb-failover
  namespace: test-gslb
spec:
  ingress:
    rules:
      - host: failover.cloud.example.com
        http:
          paths:
            - backend:
                serviceName: frontend-podinfo
                servicePort: http
                path: /
strategy:
  type: failover
  primaryGeoTag: eu
```

# Demo

Talk is cheap

gist with all the commands: [bit.do/fosdemo22](https://bit.do/fosdemo22)

# Summary

- DNS based load balancing
- Contribution is welcome, we are on Slack
- k8gb ❤️ *GitOps*

End



k8gb.io  
[github.com/k8gb-io/k8gb](https://github.com/k8gb-io/k8gb)