



# StackSets

Simplifying application  
management in Kubernetes



Cloud Native Aarhus

November 6th 2018



meetup

MIKKEL LARSEN

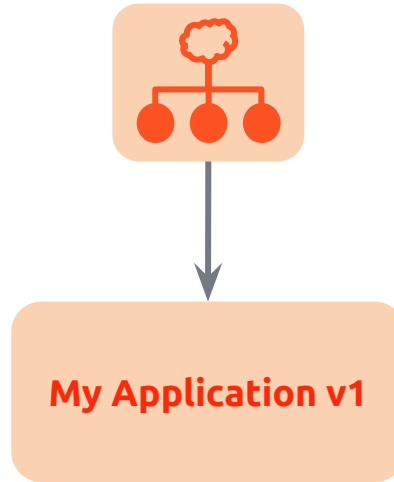
[@mikkeloscar](https://twitter.com/mikkeloscar)

2018-11-06



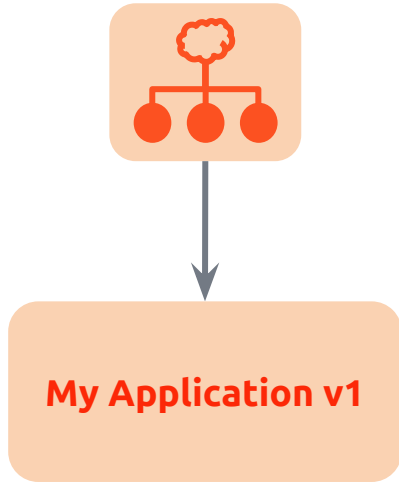
## DEPLOYING TO PRODUCTION

`https://my-application.io`

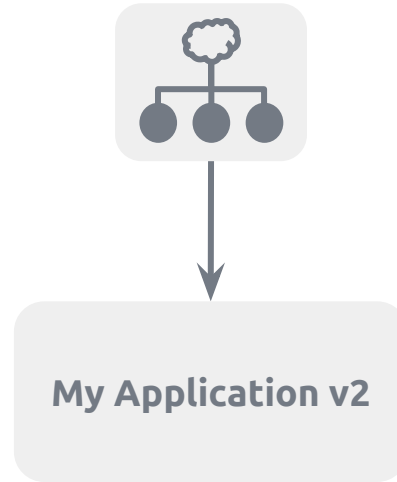


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`https://my-application.io`



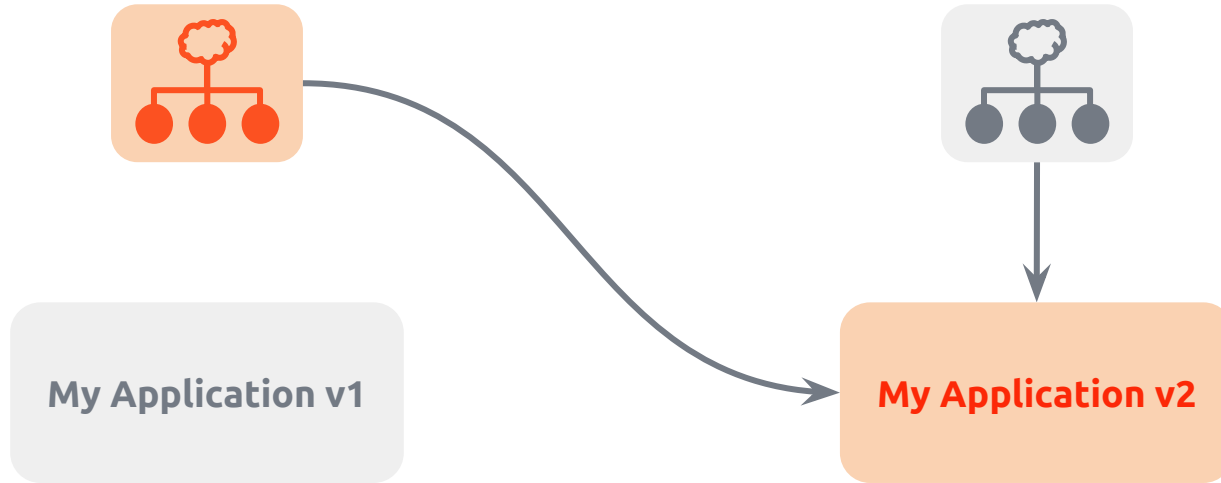
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## DEPLOYING TO PRODUCTION (BLUE/GREEN)

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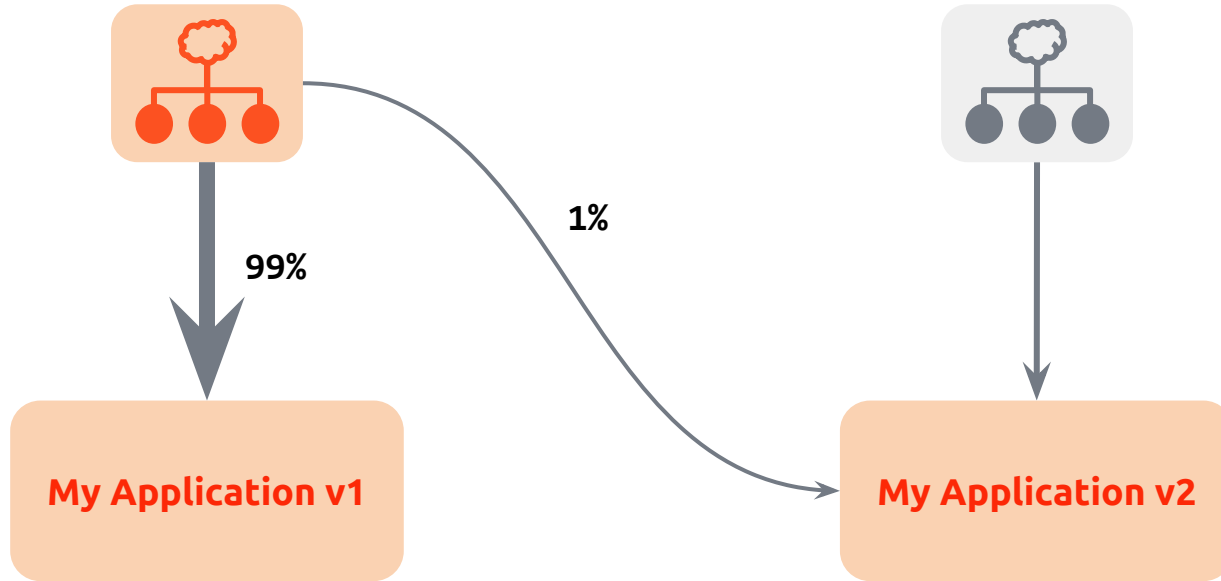
`https://preview-v2.my-application.io`



## DEPLOYING TO PRODUCTION (TRAFFIC SWITCHING)

`https://my-application.io`

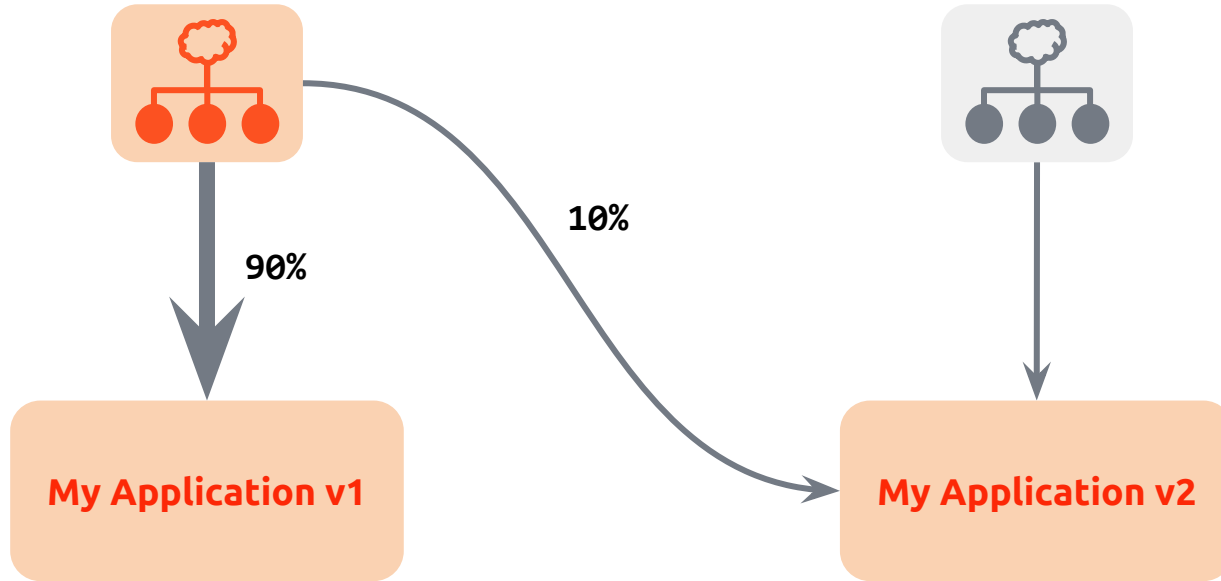
`https://preview-v2.my-application.io`



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`https://my-application.io`

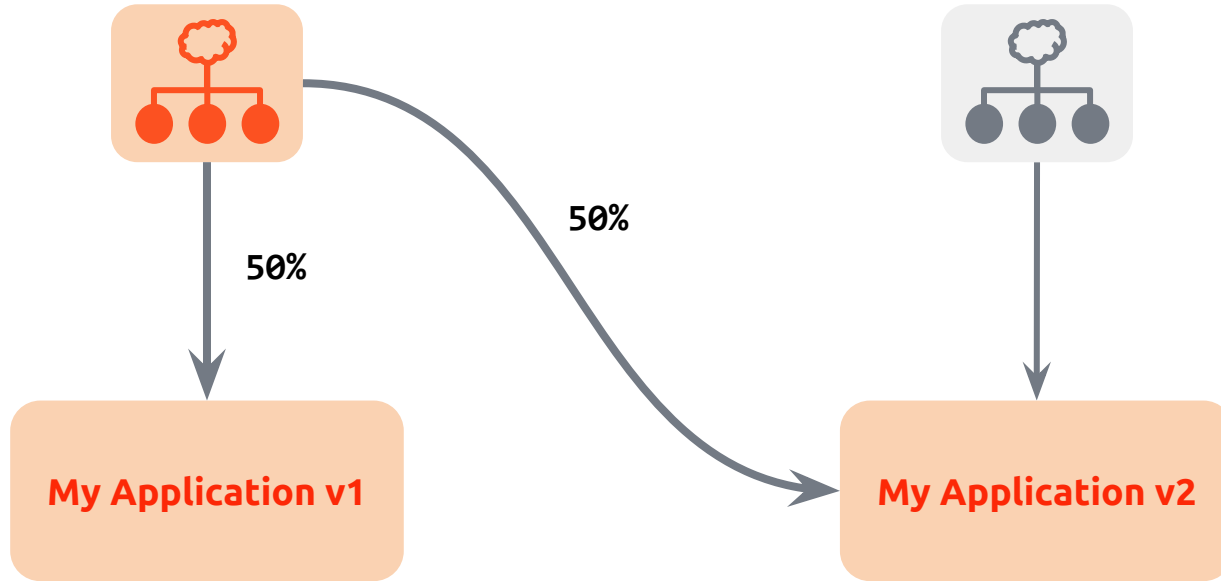
`https://preview-v2.my-application.io`



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`https://my-application.io`

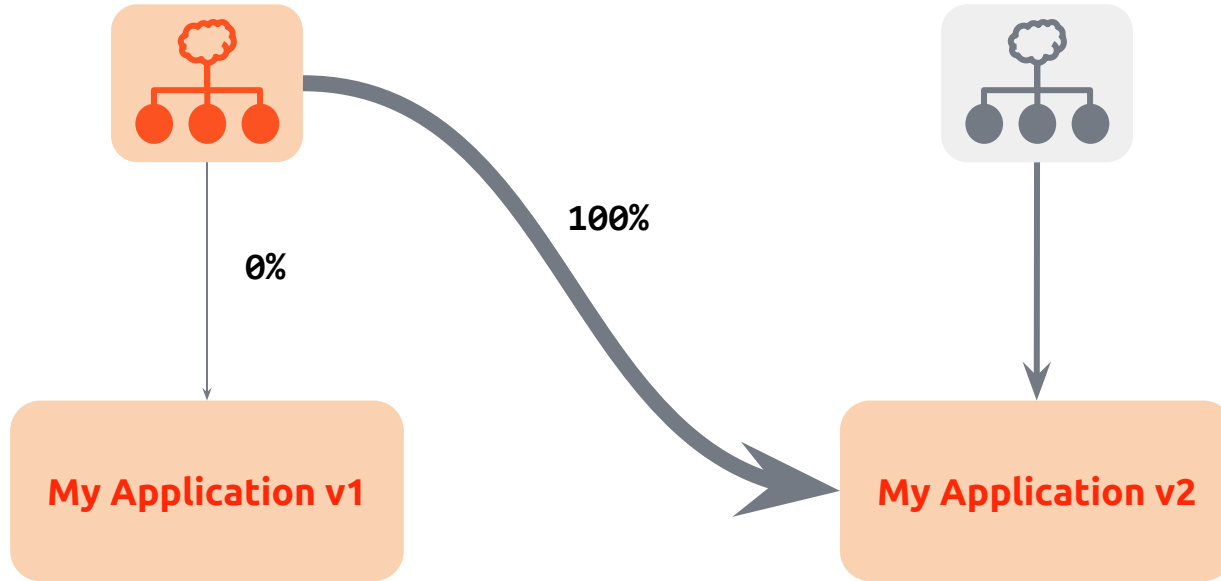
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## DEPLOYING TO PRODUCTION (TRAFFIC SWITCHING)

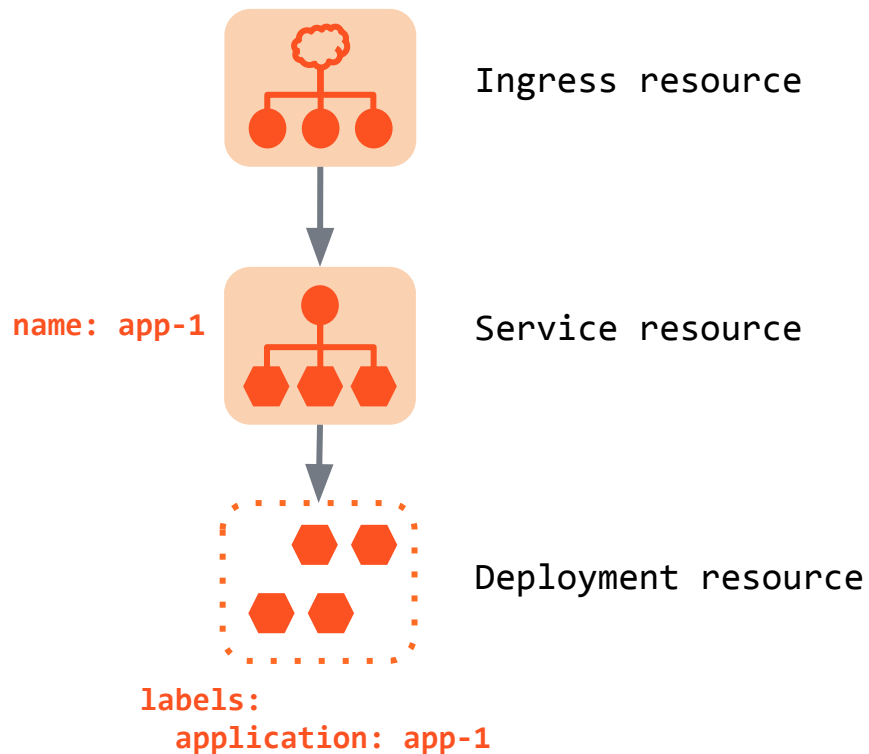
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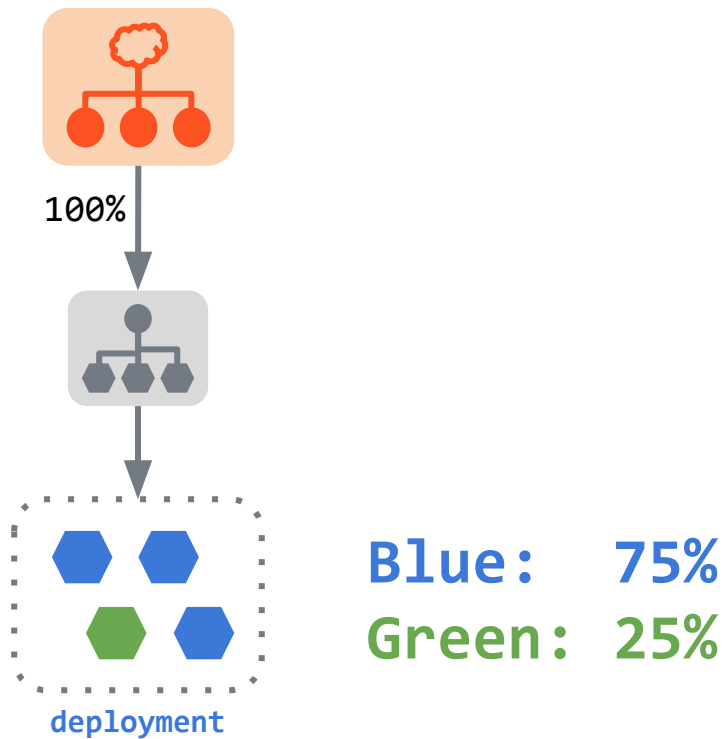




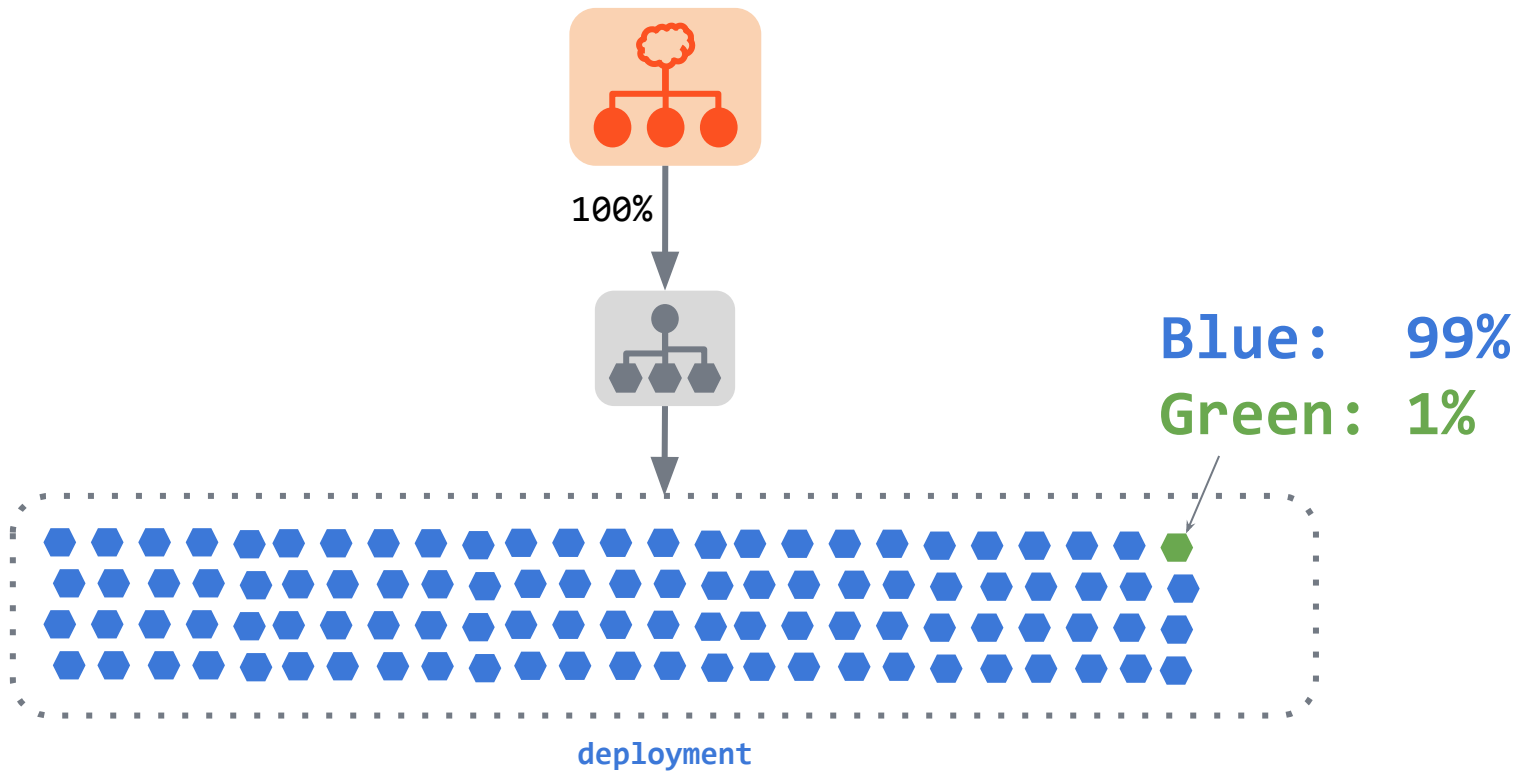
## APPLICATION STACK IN KUBERNETES



## TRAFFIC SWITCHING ROLLING UPDATE DEPLOYMENT



## TRAFFIC SWITCHING ROLLING UPDATE DEPLOYMENT



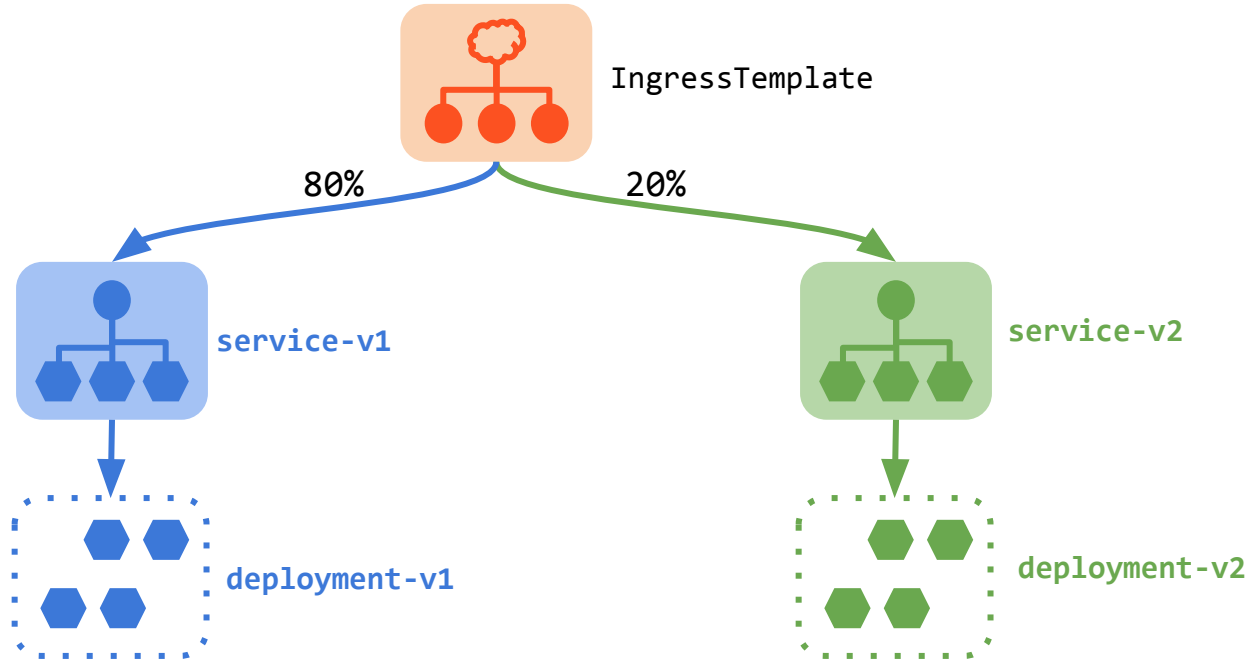
## SKIPPER TRAFFIC SUPPORT

```
apiVersion: extensions/v1beta1
kind: Ingress
metadata:
  name: my-app
  annotations:
    zalando.org/backend-weights: |
      {"my-app-v1": 90, "my-app-v2": 10}
spec:
  rules:
    - host: my-app.io
    ...
```

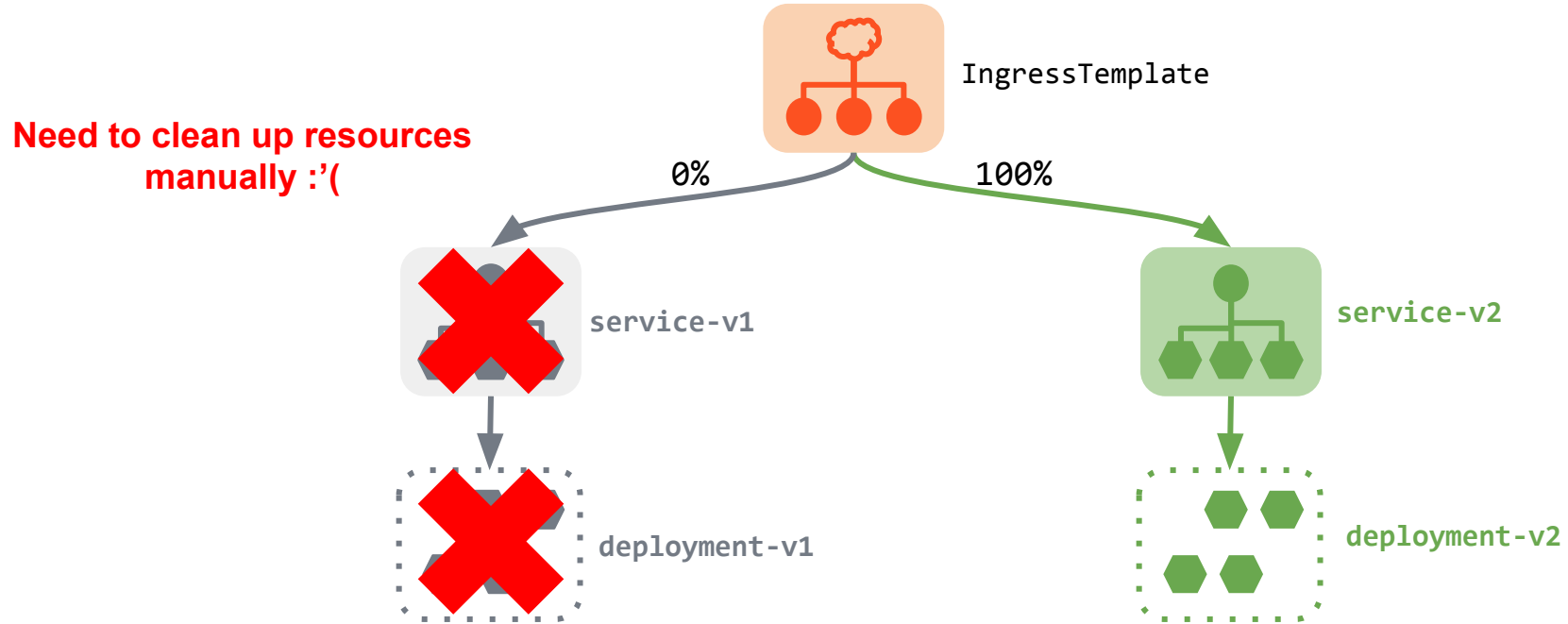


[github.com/zalando/skipper](https://github.com/zalando/skipper)

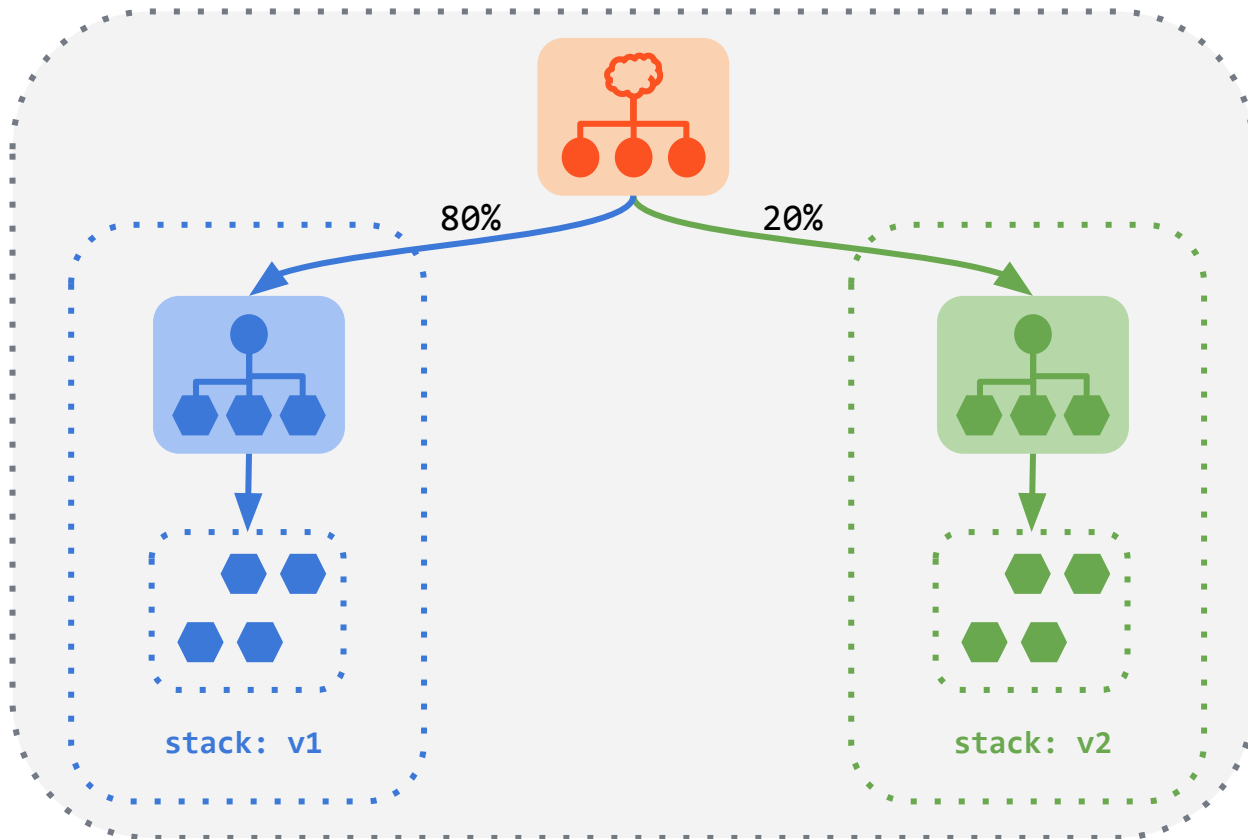
## MANUAL TRAFFIC SWITCHING BLUE/GREEN DEPLOYMENT



## MANUAL TRAFFIC SWITCHING BLUE/GREEN DEPLOYMENT



## TRAFFIC SWITCHING BLUE/GREEN DEPLOYMENT (StackSet)



## STACKSET DEFINITION

```
apiVersion: zalando.org/v1
kind: StackSet
metadata:
  name: my-app
spec:
  ingress:
    host: [my-application.io]
  stackTemplate:
    spec:
      version: v1
    podTemplate:
      spec:
        containers:
          ...
```

[github.com/zalando-incubator/stackset-controller](https://github.com/zalando-incubator/stackset-controller)



# DEMO

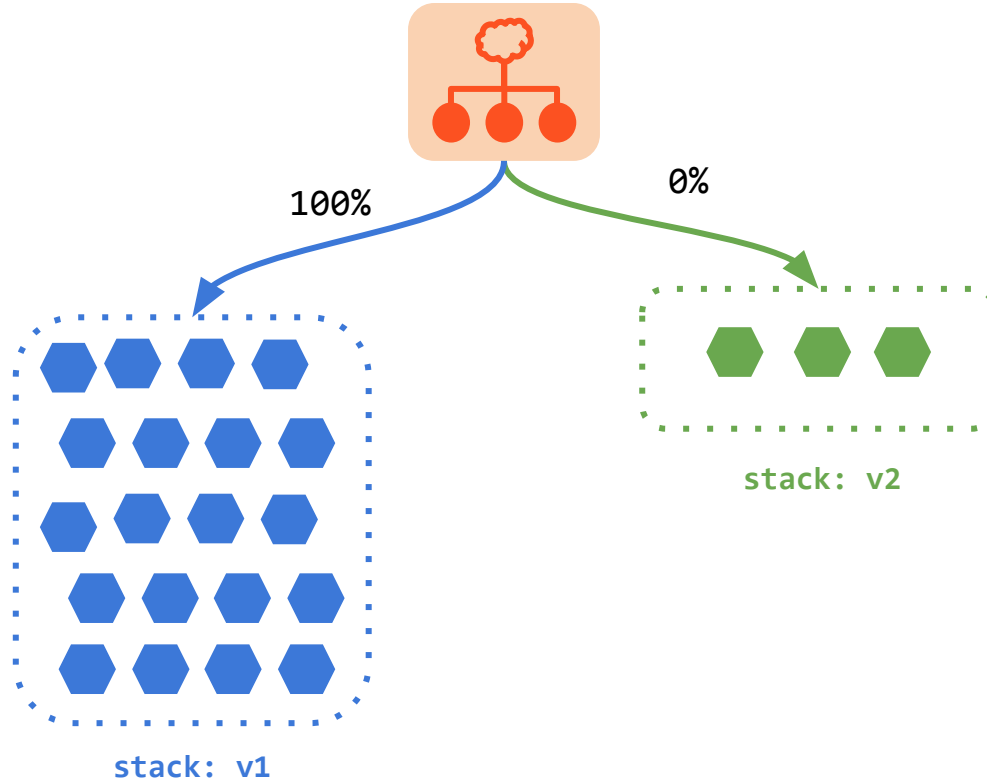




NEXT STEPS

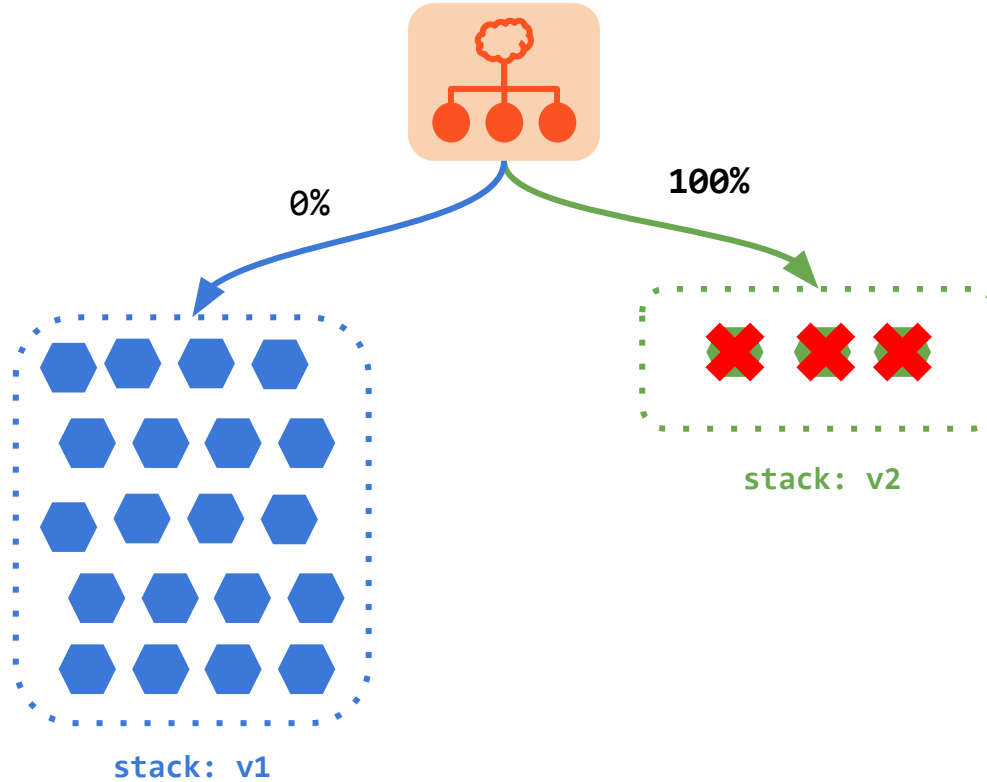
## PRESCALE STACKS

HPA:  
minReplicas: 3  
maxReplicas: 30



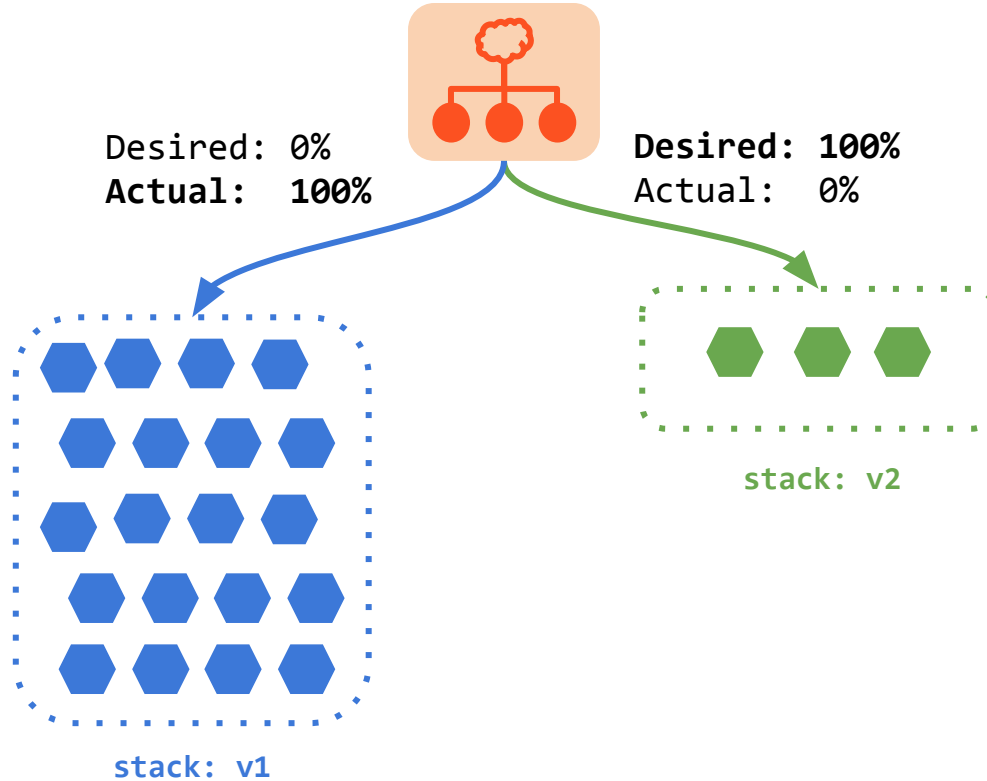
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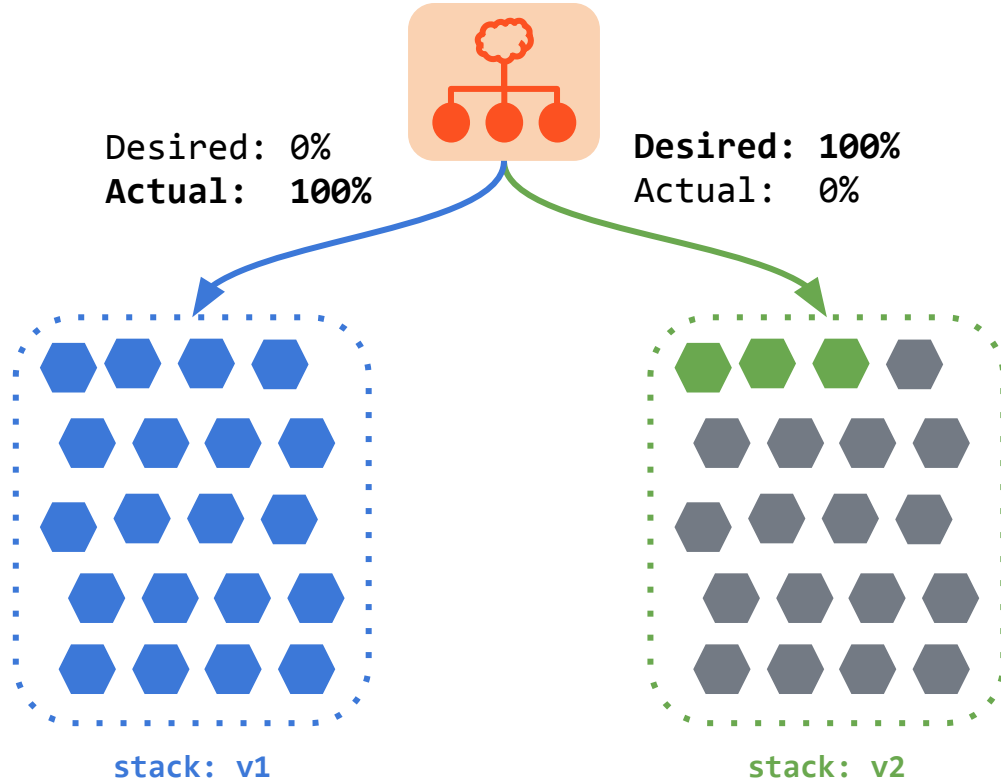
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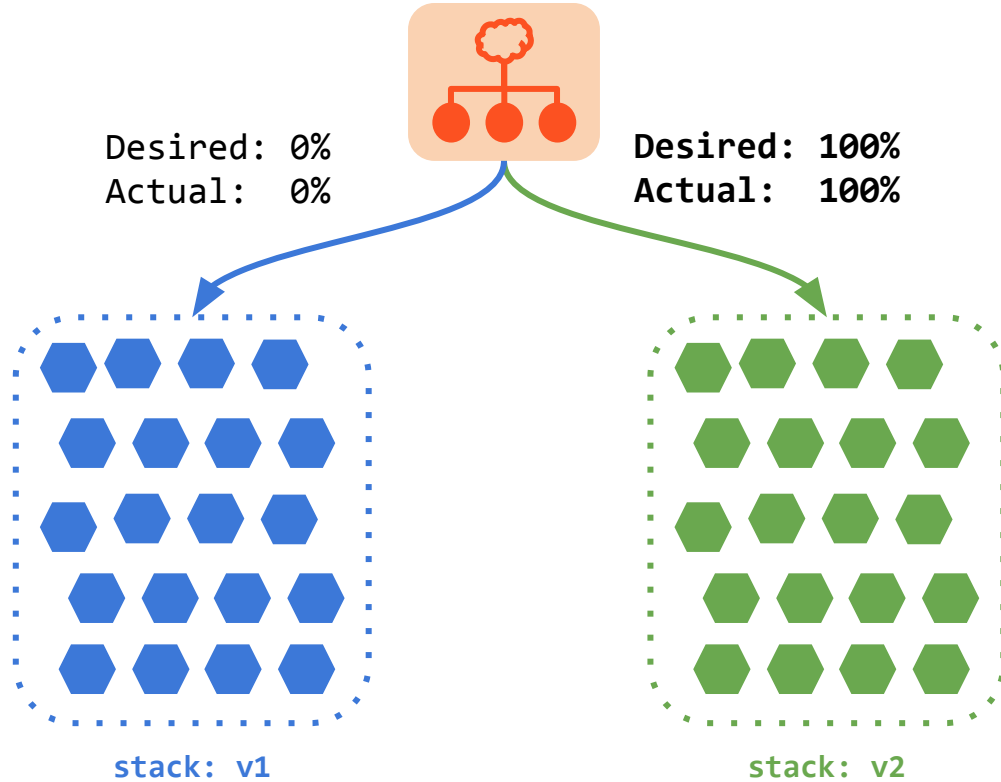


## PRESCALE STACKS

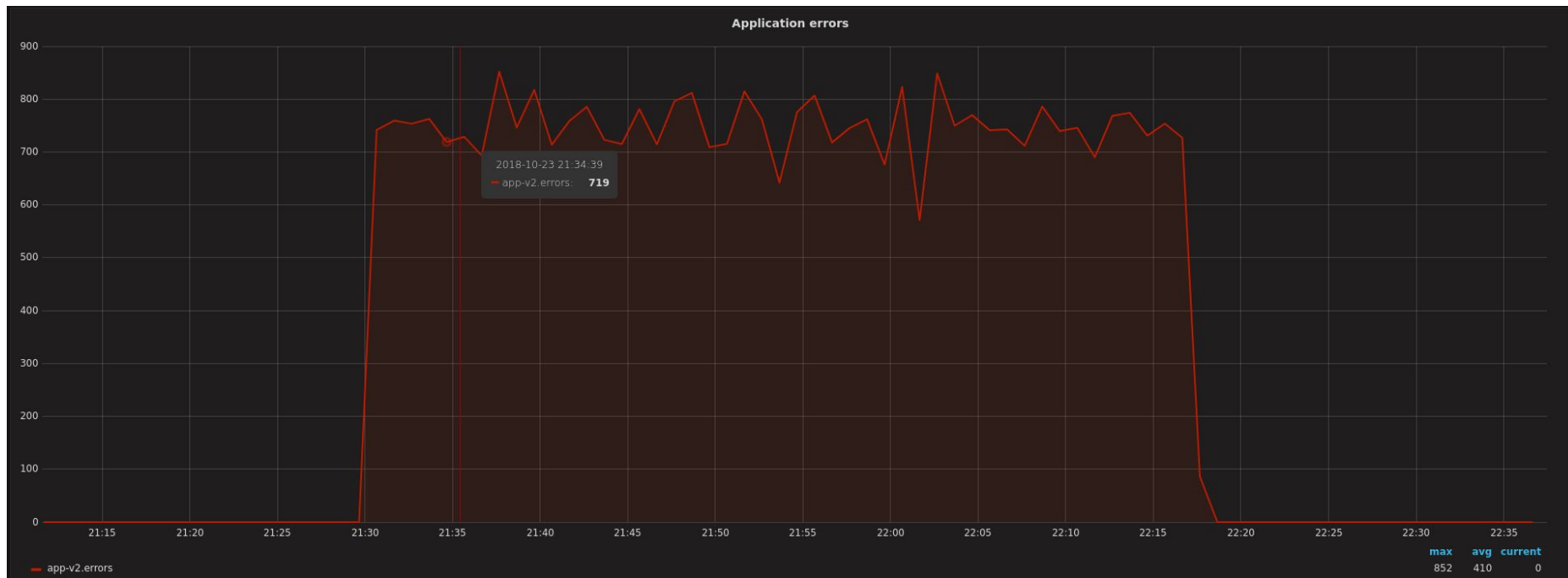
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minReplicas: 3  
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## PRESCALE STACKS



## INTEGRATE WITH APPLICATION METRICS





# OPEN SOURCE

## StackSet Controller

[github.com/zalando-incubator/stackset-controller](https://github.com/zalando-incubator/stackset-controller)

## AWS ALB Ingress controller

[github.com/zalando-incubator/kube-ingress-aws-controller](https://github.com/zalando-incubator/kube-ingress-aws-controller)

## Skipper HTTP Router & Ingress controller

[github.com/zalando/skipper](https://github.com/zalando/skipper)

## External DNS

[github.com/kubernetes-incubator/external-dns](https://github.com/kubernetes-incubator/external-dns)





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Illustrations by [@01k](#), [@kcgreenn](#), [@ntakayama](#)



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