

# PROGRESSIVE DELIVERY MADE EASY WITH ARGO ROLLOUTS



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# **PROGRESSIVE DELIVERY**



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# Progressive Delivery, a History.... Condensed

By Adam Zimman - August 6, 2018

👁 4326



the developer-focused industry analyst firm

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JAMES GOVERNOR'S MONKCHIPS

# Towards Progressive Delivery

By [James Governor](#) | [@monkchips](#) | August 6, 2018

*Progressive Delivery* is a term that includes deployment strategies that try to avoid the pitfalls of all-or-nothing deployment strategies

*New versions being deployed do not replace existing versions but run in parallel for an amount of time receiving live production traffic, and are evaluated in terms of correctness and performance before the rollout is considered successful.*



From 2h ago

08.47 CEST

## CrowdStrike identifies issue behind worldwide outage



Josh Taylor

Cybersecurity software firm CrowdStrike has posted in its support updates that it has identified the issue behind today's massive, global Windows outage.

It is an issue with “content deployment” that has since had those changes reverted and has advised a workaround for affected users.

We are still waiting for confirmation or a statement from CrowdStrike's media team. It's almost midnight in the US, so it's not clear when we might get more detail.

+ Show more



## 6. Template Instances should have staged deployment

**Findings:** Each Template Instance should be deployed in a staged rollout.

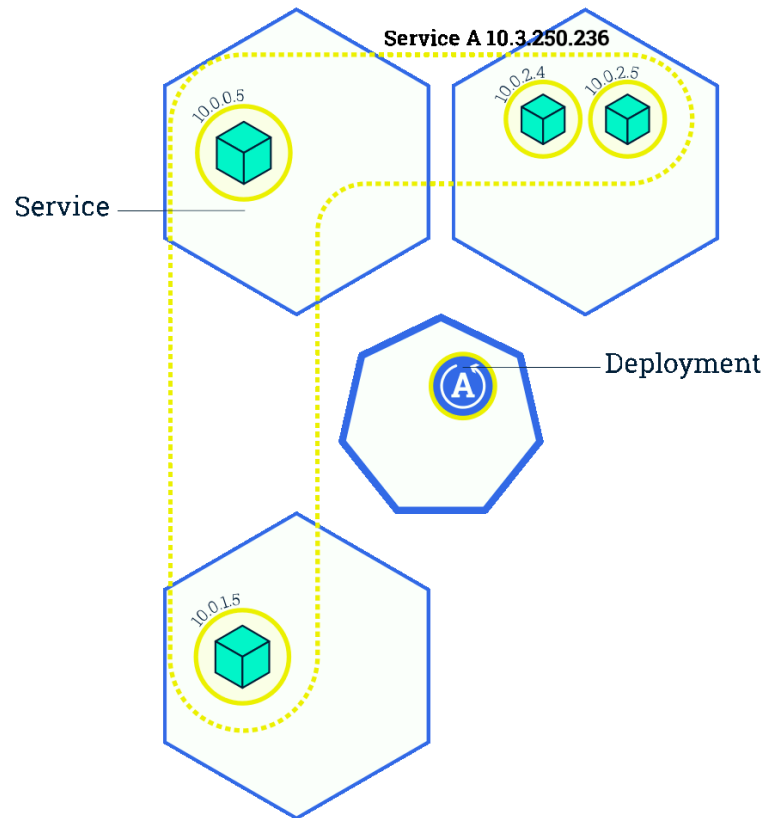
**Mitigation:** The Content Configuration System has been updated with additional deployment layers and acceptance checks

Staged deployment mitigates impact if a new Template Instance causes failures such as system crashes, false-positive detection volume spikes or performance issues. New Template Instances that have passed canary testing are to be successively promoted to wider deployment rings or rolled back if problems are detected. Each ring is designed to identify and mitigate potential issues before wider deployment. Promoting a Template Instance to the next successive ring is followed by additional bake-in time, where telemetry is gathered to determine the overall impact of the Template Instance on the endpoint.

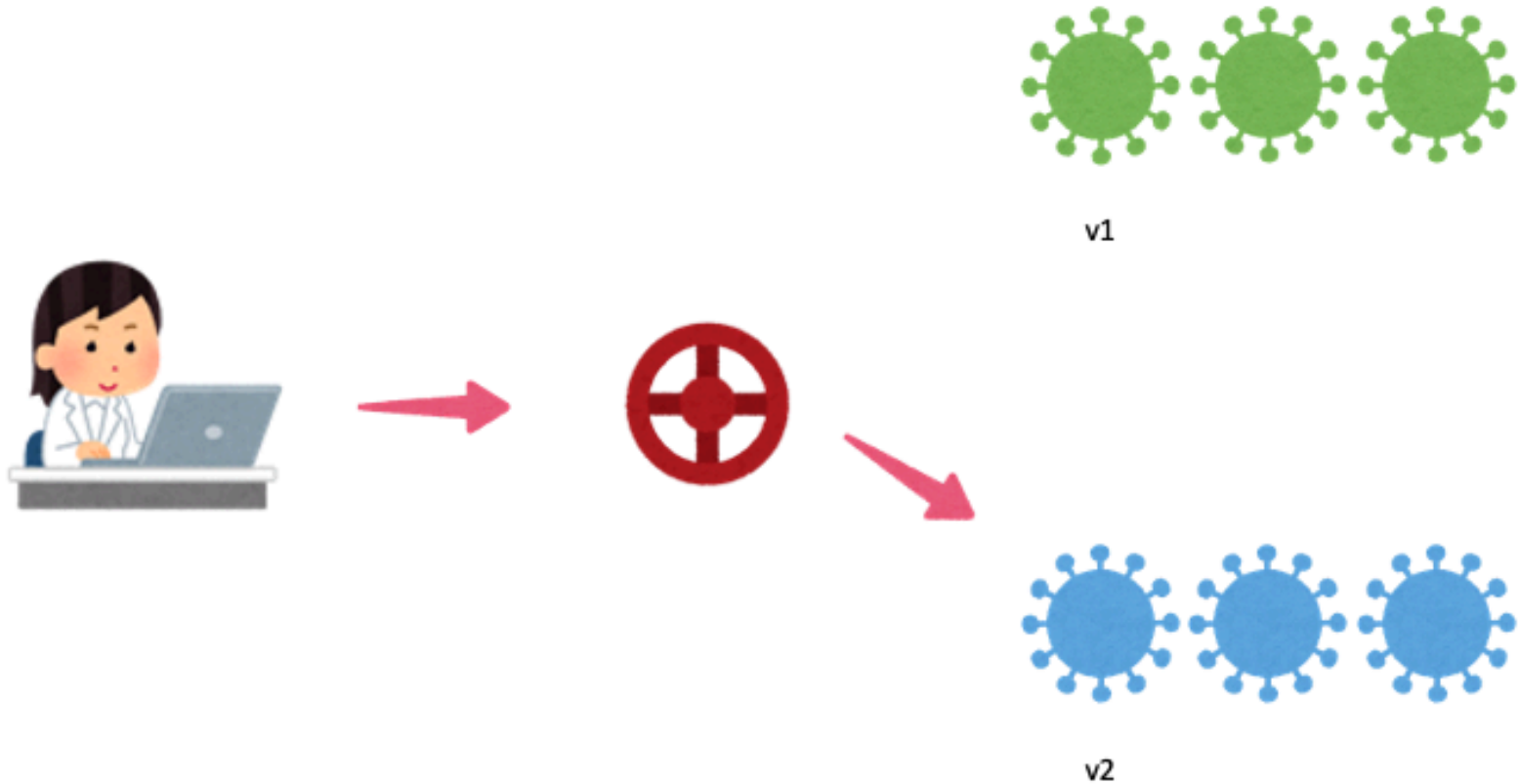
- Avoiding downtime
- Limit the blast radius
- Shorter time from idea to production

# **PROGRESSIVE DELIVERY TECHNIQUES**

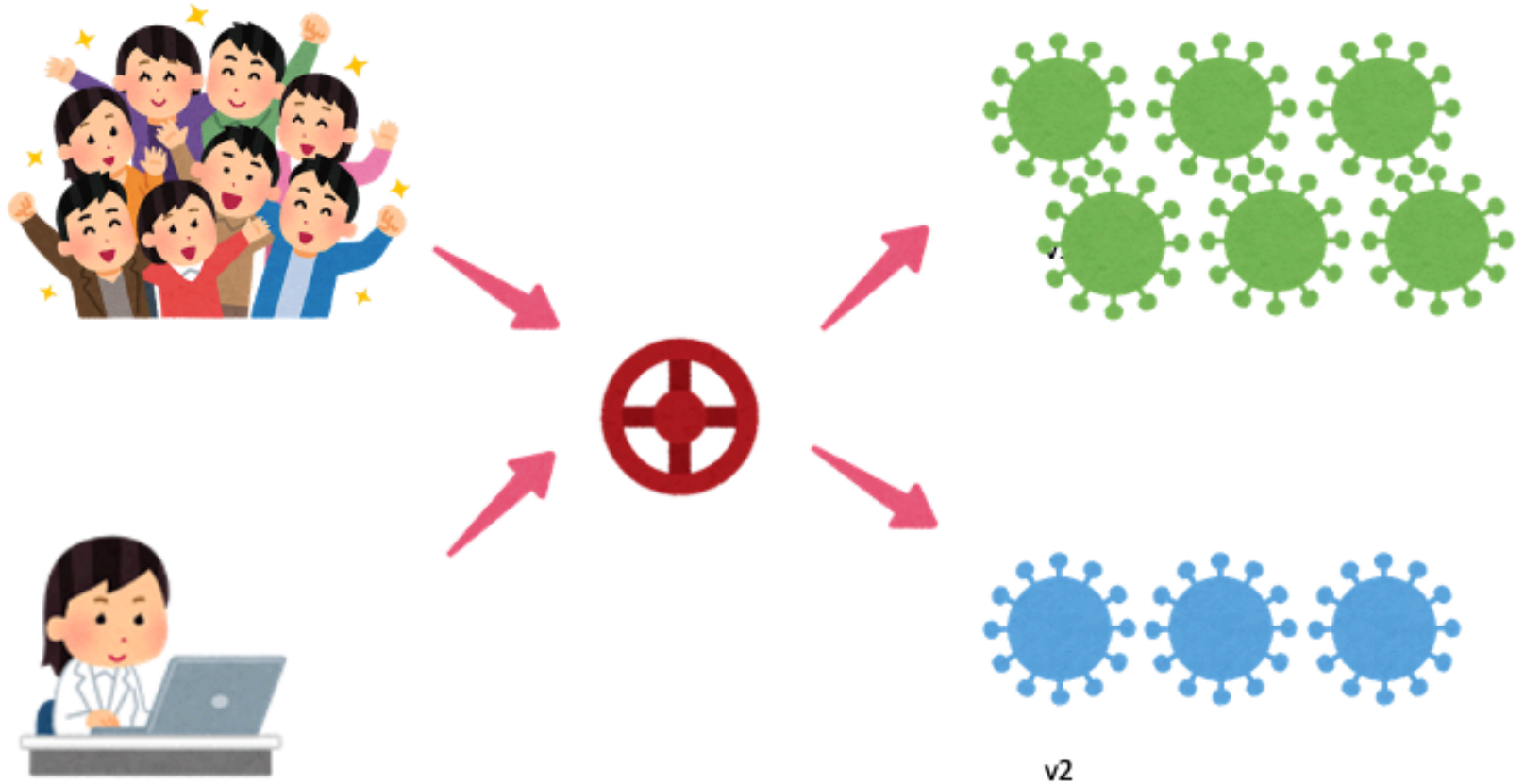
# ROLLING UPDATES



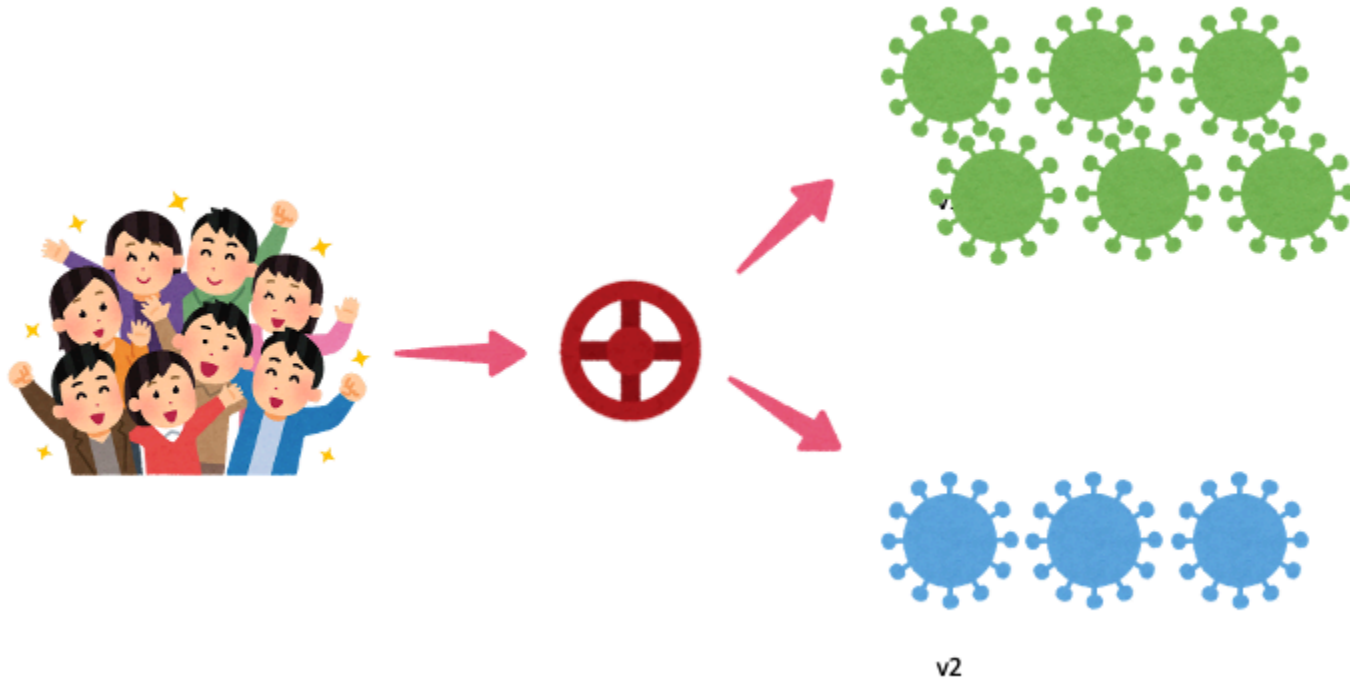
# BLUE-GREEN DEPLOYMENT



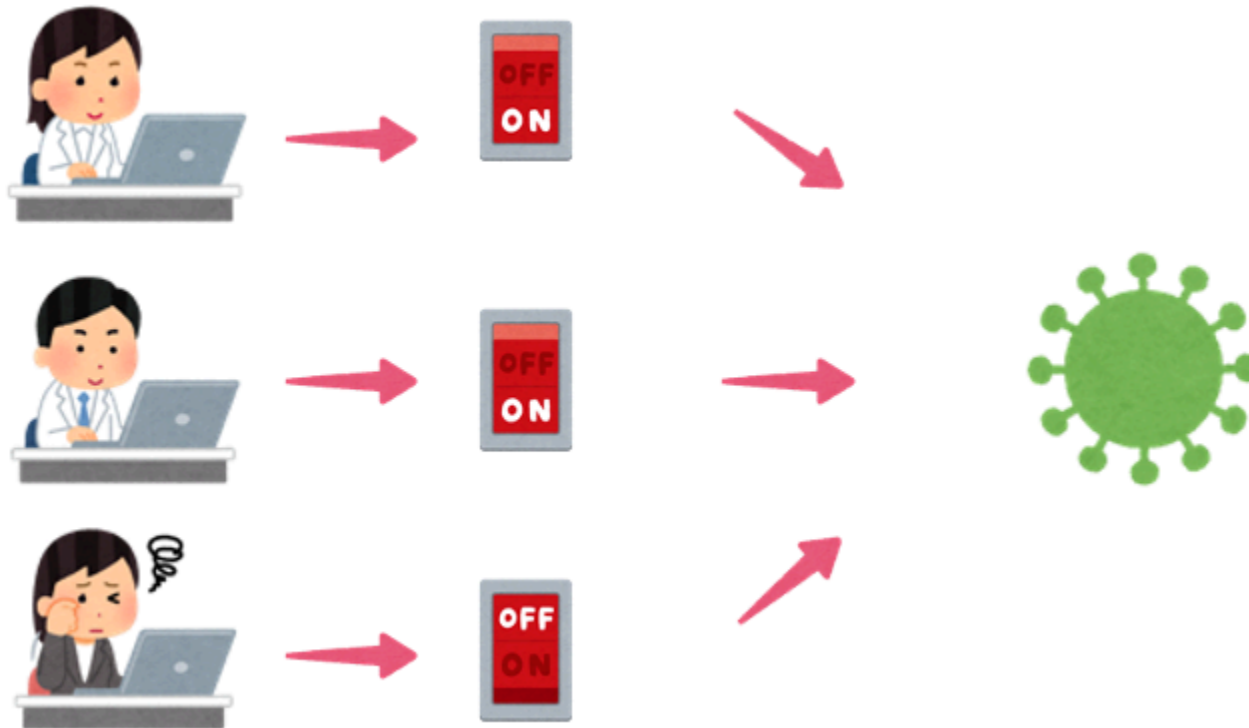
# CANARY DEPLOYMENT



# DARK LAUNCHING



# FEATURE FLAGS





# MONITORING IS THE NEW TESTING

Know when users are experiencing issues in  
**production**

React to the issues **automatically**



**@DEVOPS\_BORAT**

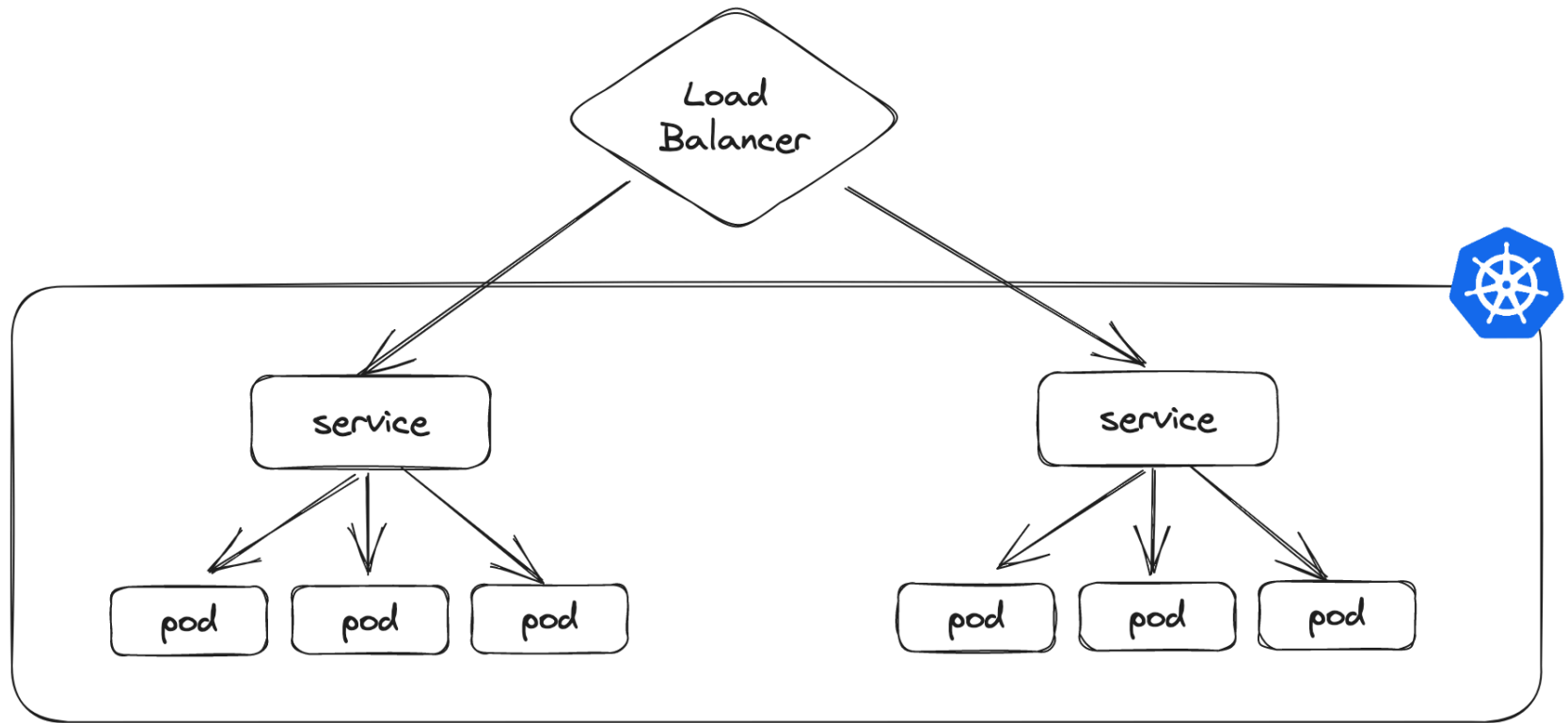
DevOps Borat

To make error is human. To propagate error to all server in automatic way is **#devops**.

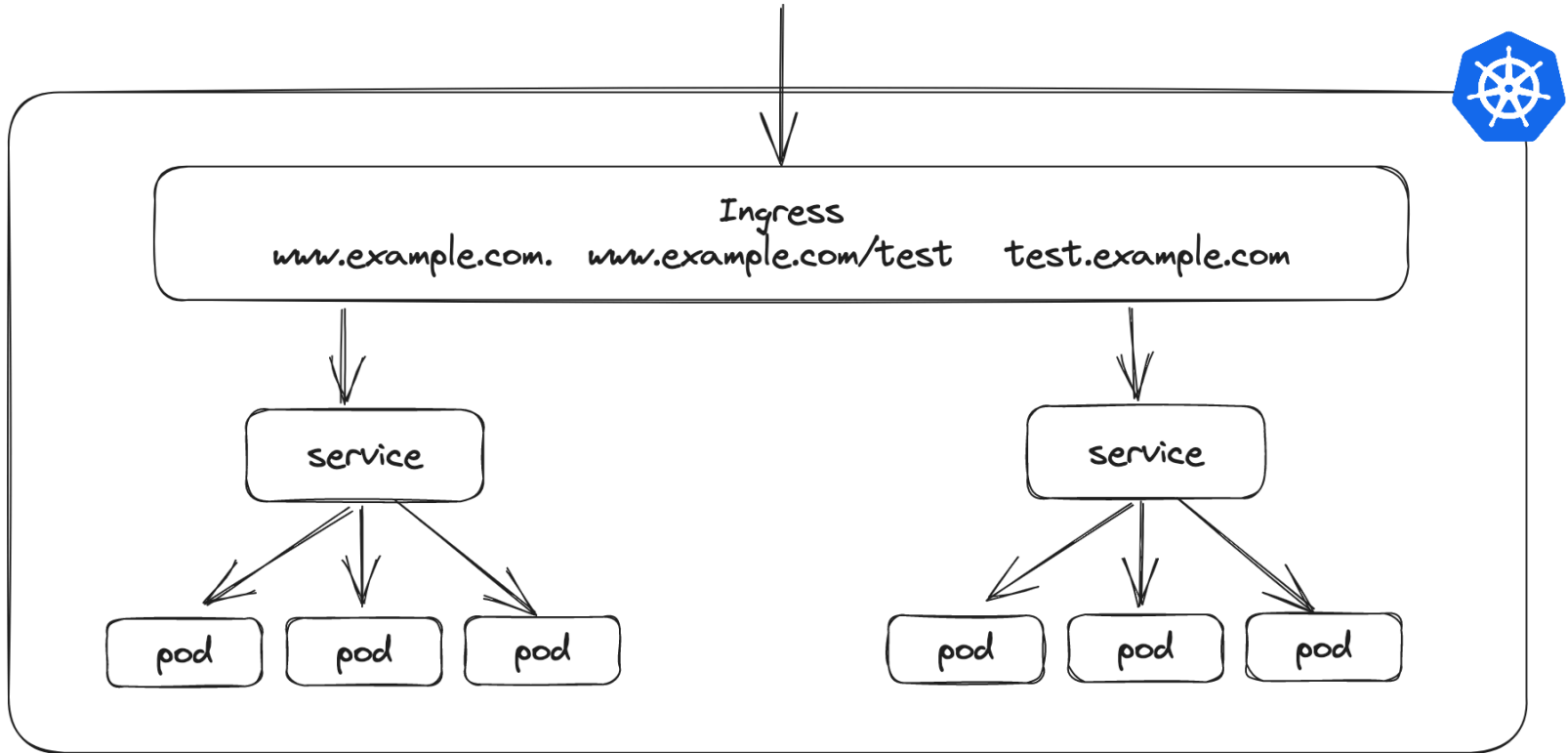
*If you haven't automatically destroyed  
something by mistake, you are not  
automating enough*

# **PROGRESSIVE DELIVERY IN KUBERNETES**

# KUBERNETES SERVICE ARCHITECTURE



# KUBERNETES INGRESS ARCHITECTURE



# KUBERNETES INGRESS

Ingress controllers:

- AWS
- GCE
- nginx
- Ambassador
- Istio Ingress
- Traefik
- HAProxy
- ...

# ARGO ROLLOUTS

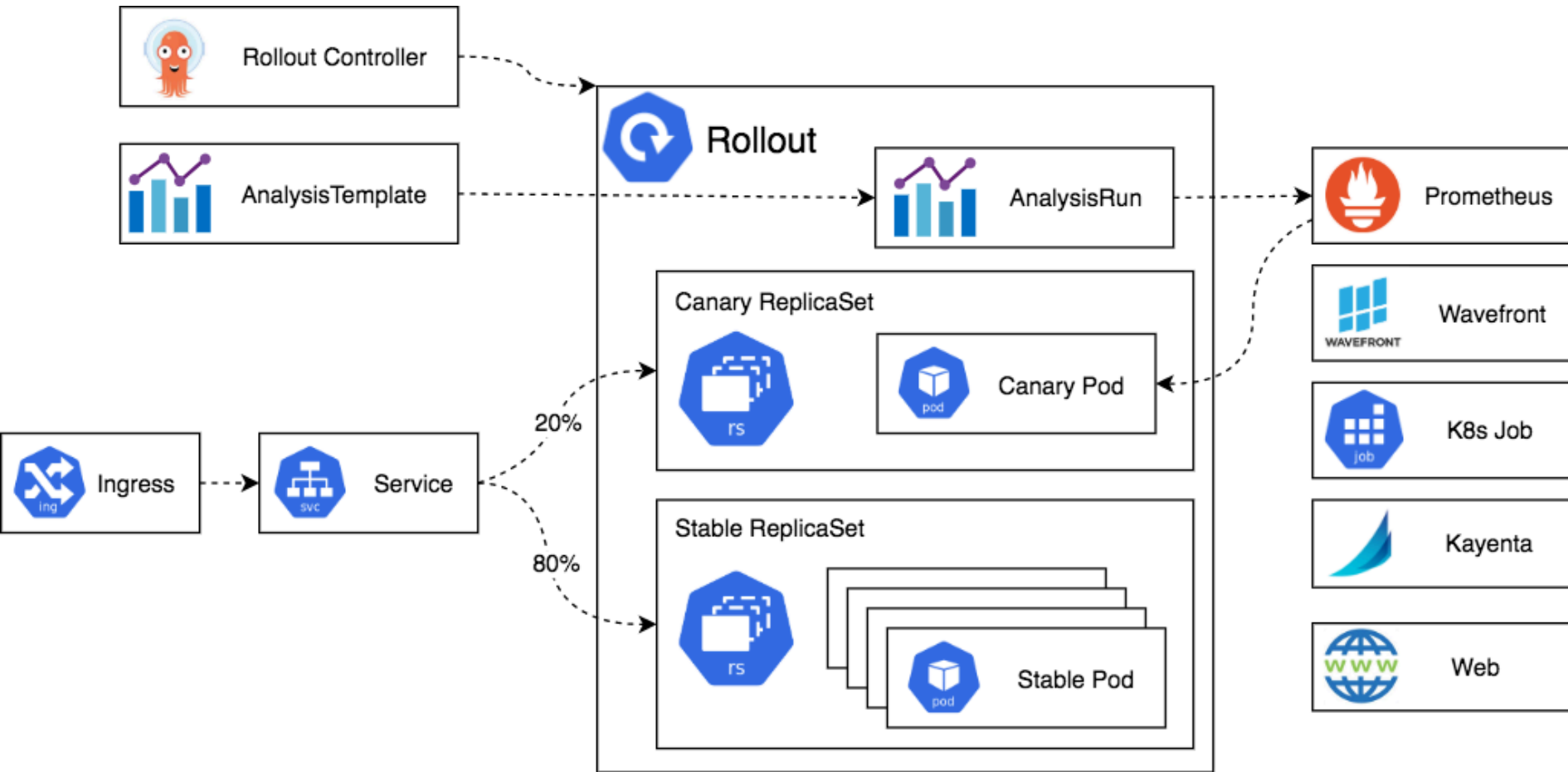


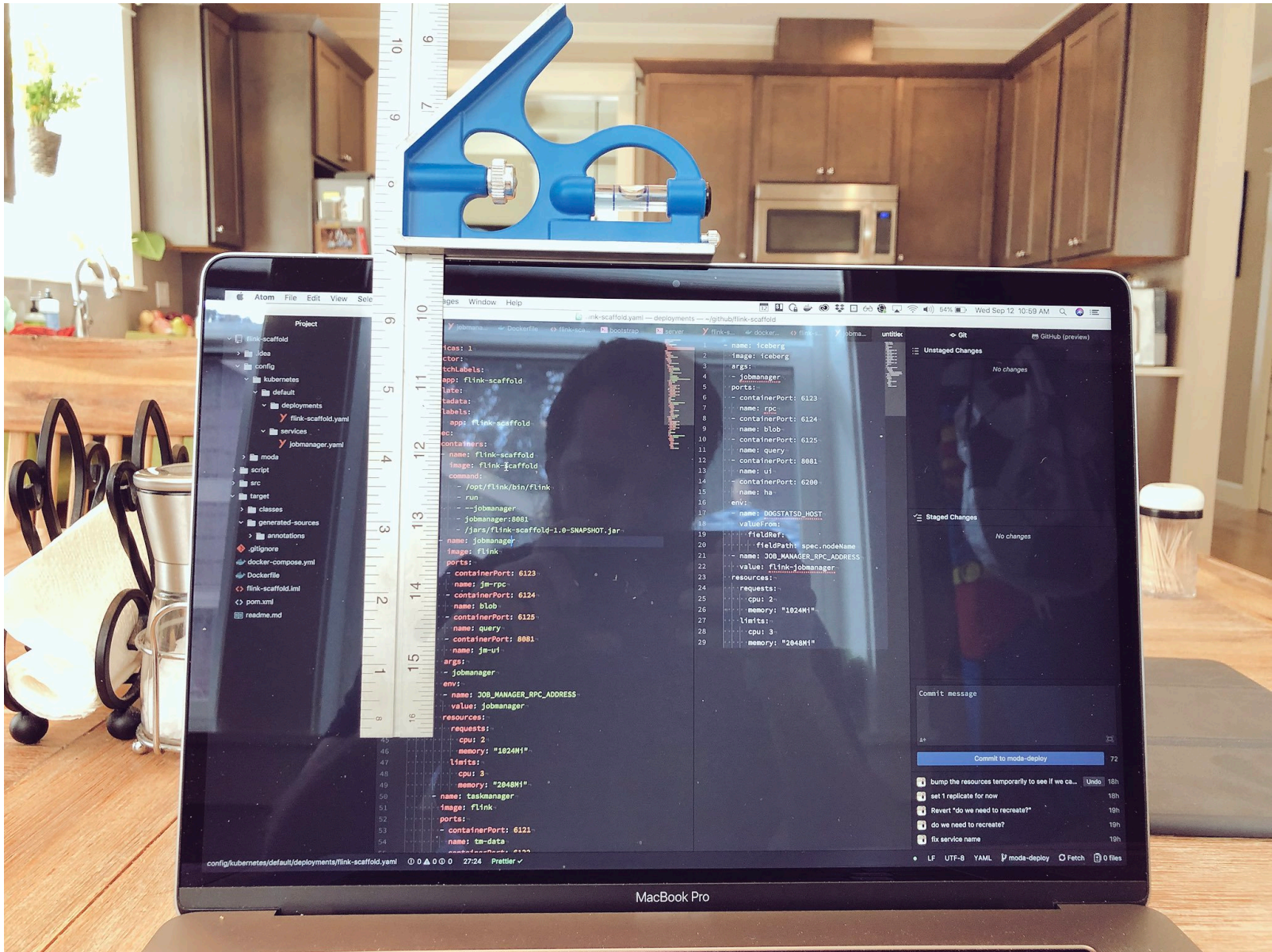


# ARGO ROLLOUTS

*provides advanced deployment capabilities such as blue-green, canary, canary analysis, experimentation, and progressive delivery features to Kubernetes.*

# ARGO ROLLOUTS

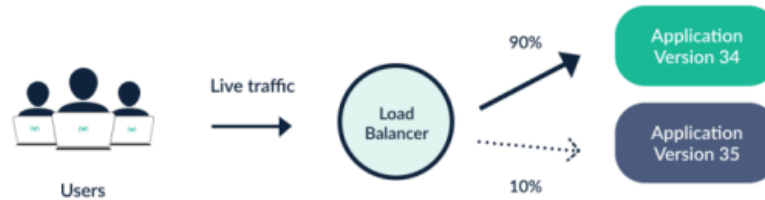




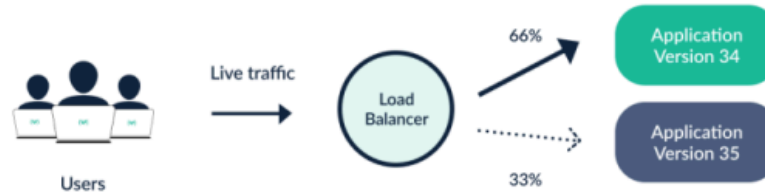
# 1 INITIAL VERSION



# 2 NEW VERSION USED BY 10% OF USERS



# 3 NEW VERSION USED BY 33% OF USERS



# 4 NEW VERSION USED BY ALL USERS





canary-demo

RESTART

RETRY

ABORT

PROMOTE-FULL

### Summary

Strategy

Canary

Step

1/8

Set Weight

20

Actual Weight

20

### Containers



canary-demo

argoproj/rollouts-demo:green

Add more containers to fill this space!

### Revisions

Revision 9



argoproj/rollouts-demo:green

canary

canary-demo-68f96454b6



Revision 8

ROLLBACK



argoproj/rollouts-demo:yellow

### Steps

Set Weight: 20%

Pause

Set Weight: 40%

Pause: 10s

Set Weight: 60%

Pause: 10s

csanchez.org



# Adobe