

AGENDA

Introduction

Common problems

Troubleshooting OpenShift

Tools

WorkShop explanation

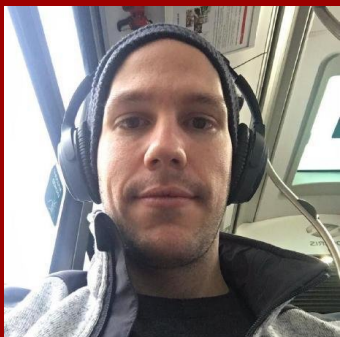
Demo



THE PRESENTERS

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Senior Software Engineer, Red Hat



OPENSIFT ADVANTAGES

OPENSIFT CONTAINER PLATFORM

Application Services

Middleware, Service Mesh, Functions, ISV

Cluster Services

Metrics, Chargeback, Registry, Logging

Developer Services

Dev Tools, Automated Builds, CI/CD, IDE

Automated Operations*

Kubernetes

Red Hat Enterprise Linux or Red Hat CoreOS

Best IT Ops Experience

CaaS



PaaS

Best Developer Experience

*coming soon



COMMON PROBLEMS



COMMON PROBLEMS

- Configuration



COMMON PROBLEMS

- Configuration
- Resources

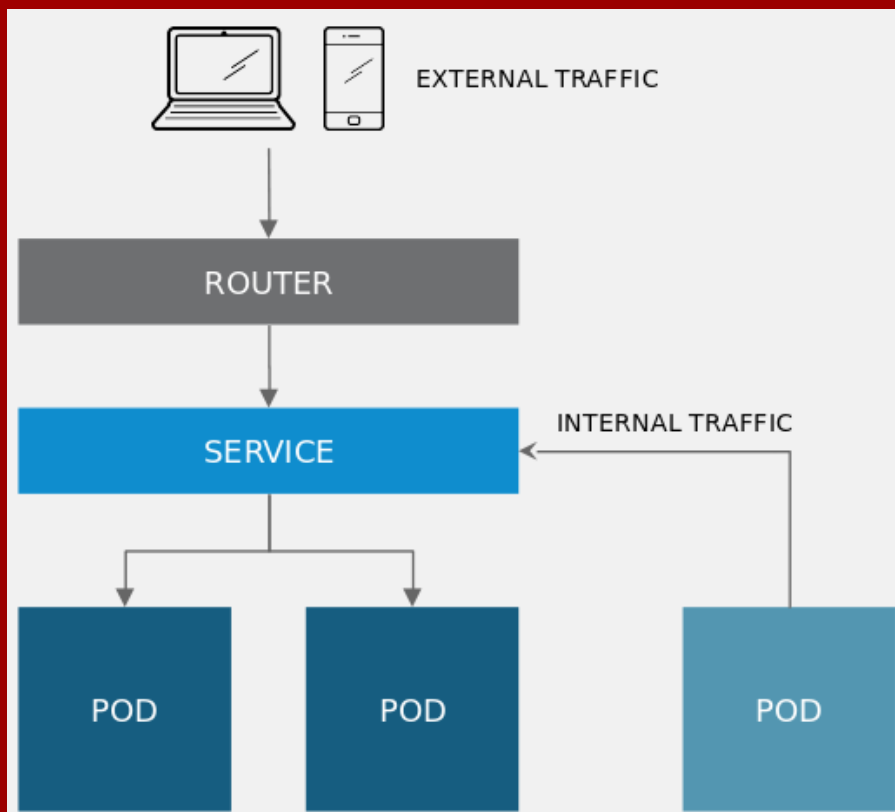


COMMON PROBLEMS

- Configuration
- Resources
- Networking
- Storage
- Black magic
- Magnets
- etc.

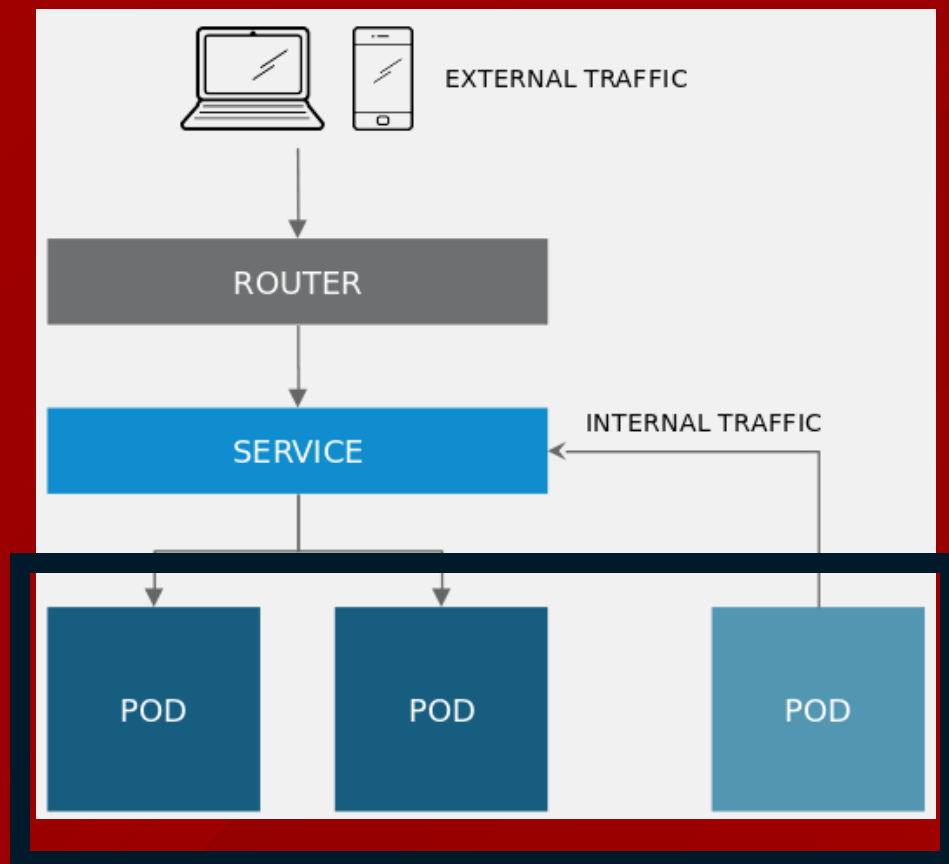
TROUBLESHOOTING BASICS

INSIDE OUT STRATEGY



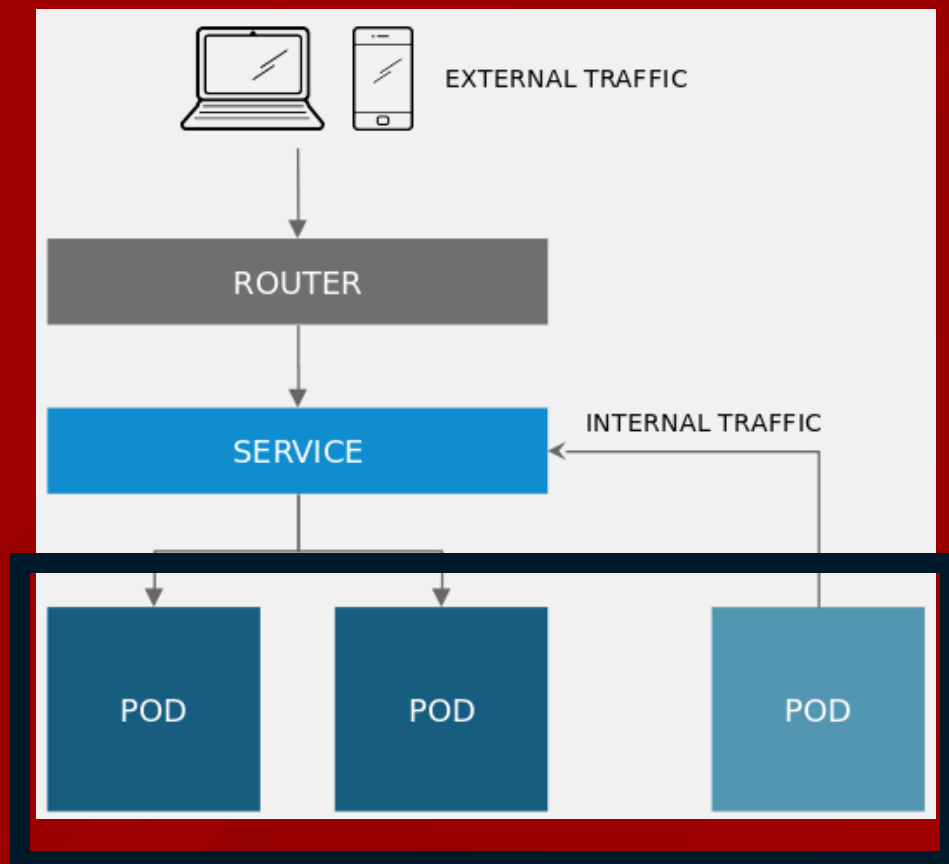
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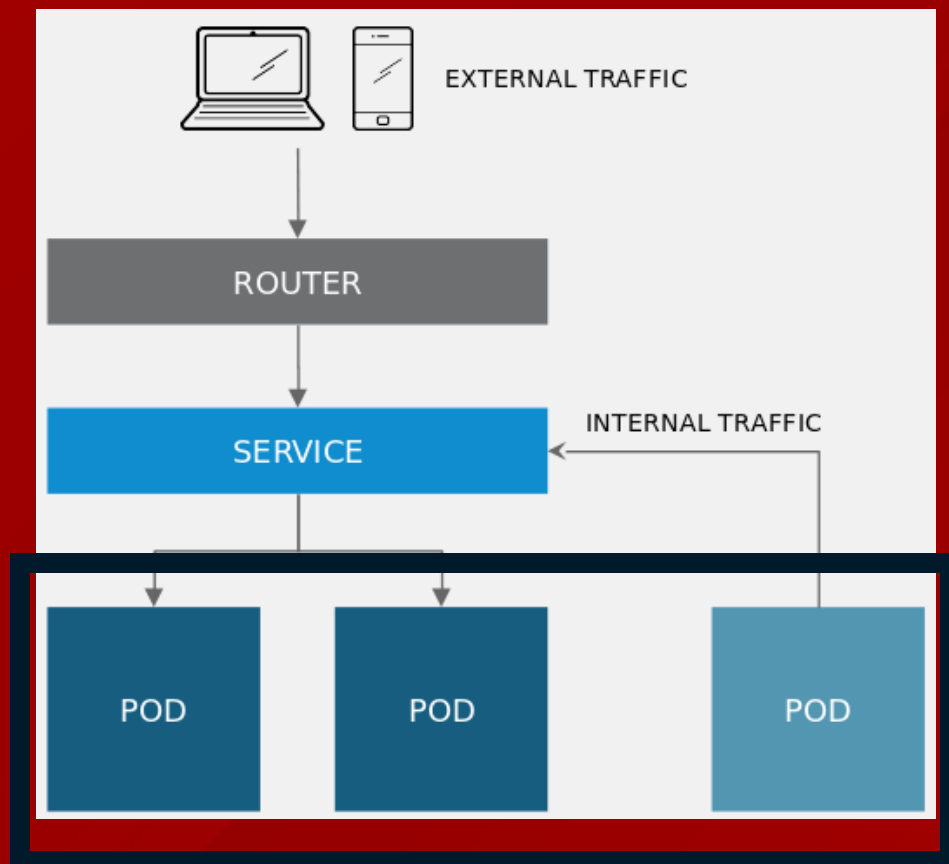


Pod Statuses

Pending

TROUBLESHOOTING BASICS

INSIDE OUT STRATEGY



Pod Statuses

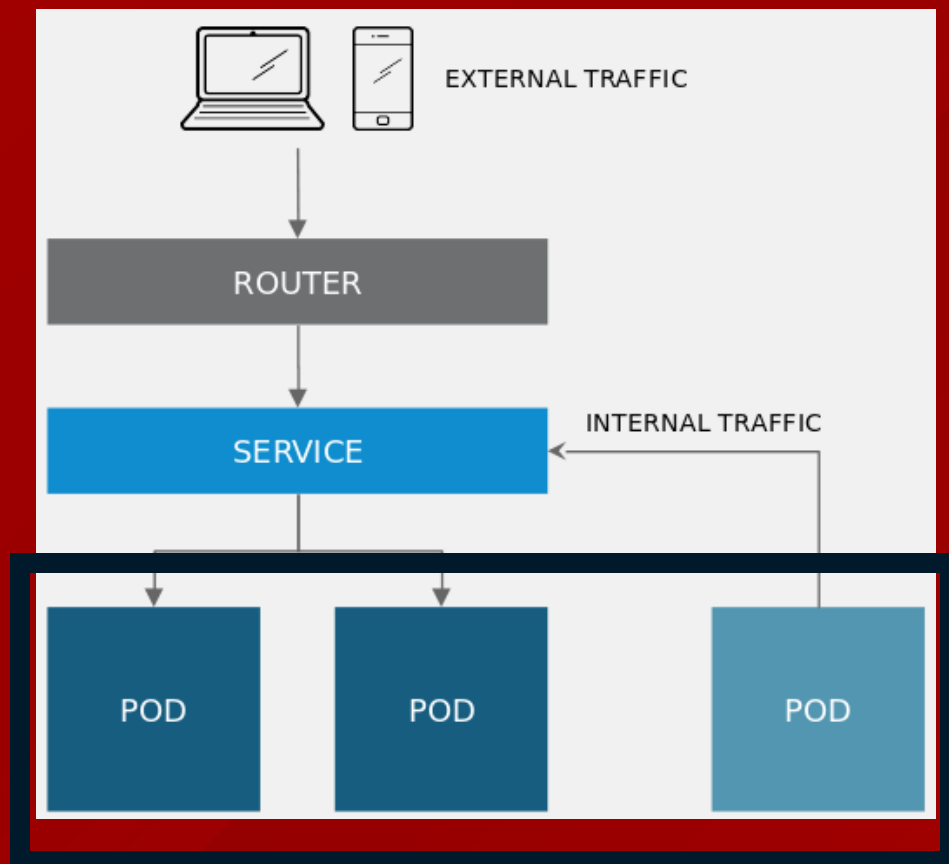
Pending



Scheduled

TROUBLESHOOTING BASICS

INSIDE OUT STRATEGY



Pod Statuses

Pending



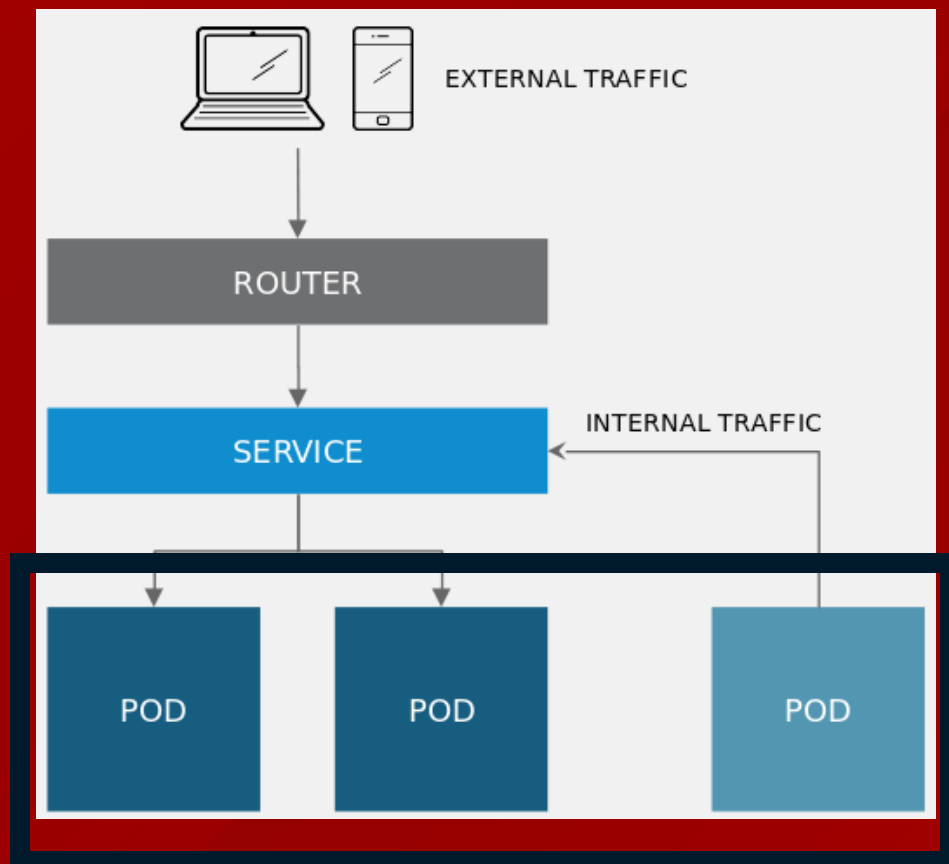
Scheduled



ContainerCreating

TROUBLESHOOTING BASICS

INSIDE OUT STRATEGY



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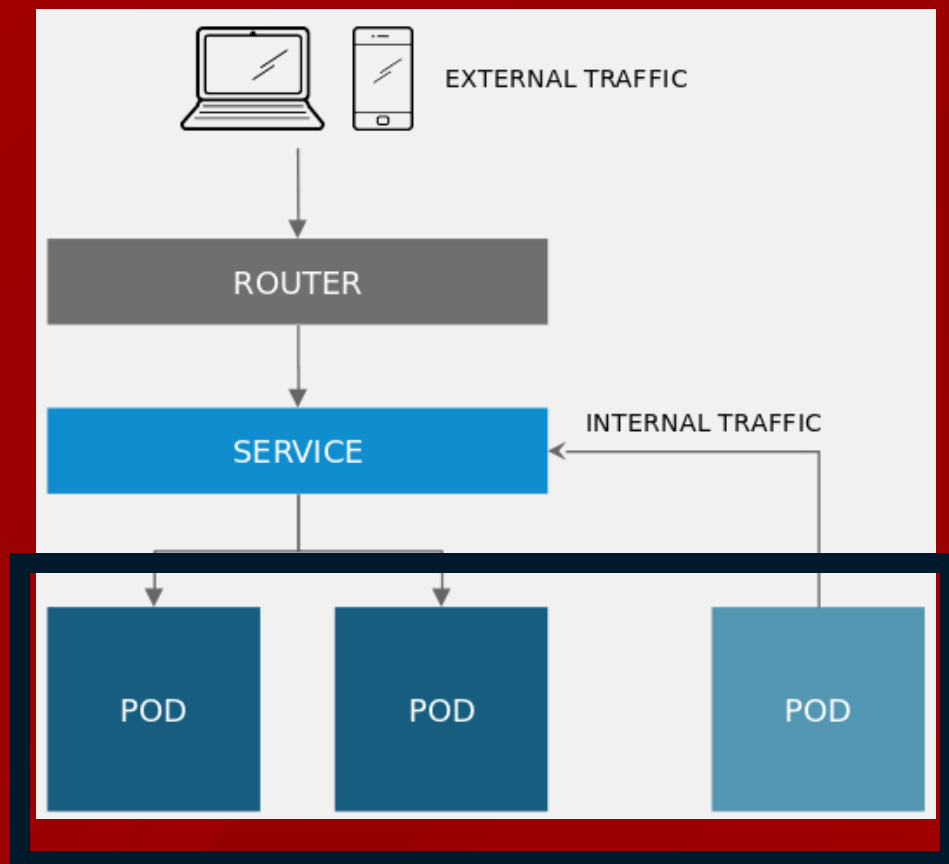
ContainerCreating



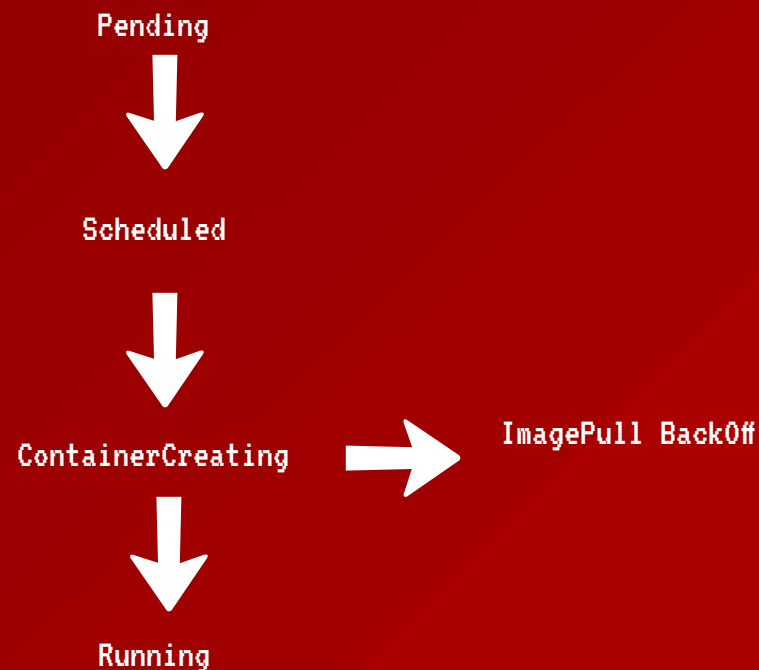
ImagePull BackOff

TROUBLESHOOTING BASICS

INSIDE OUT STRATEGY

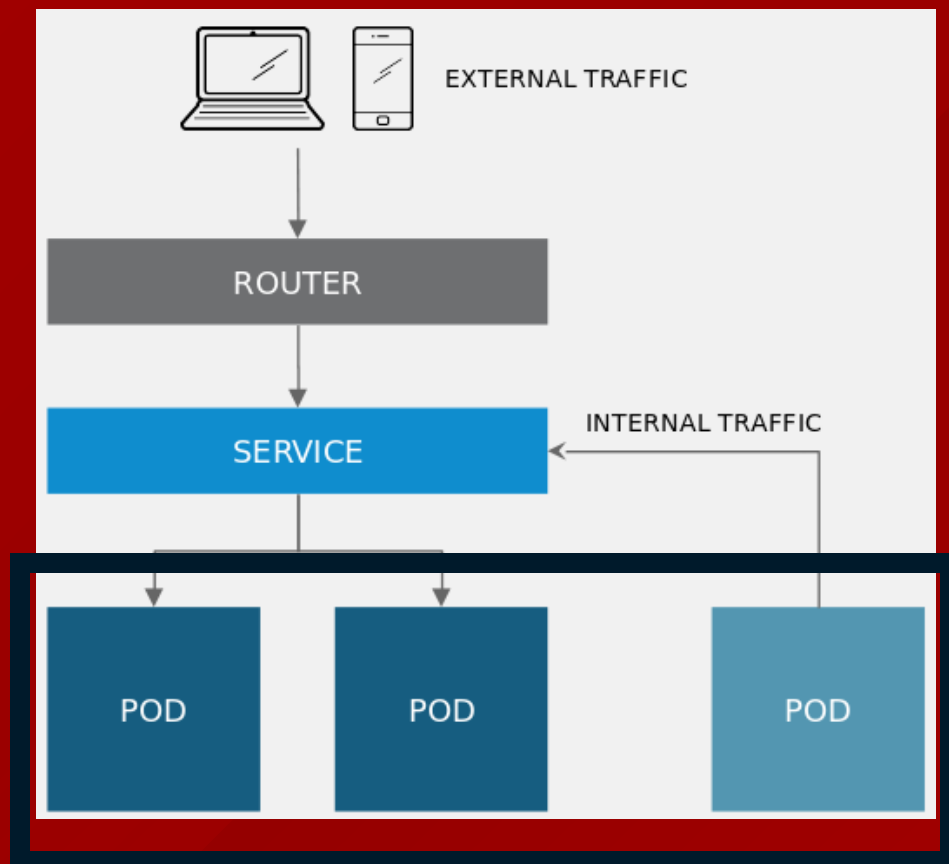


Pod Statuses

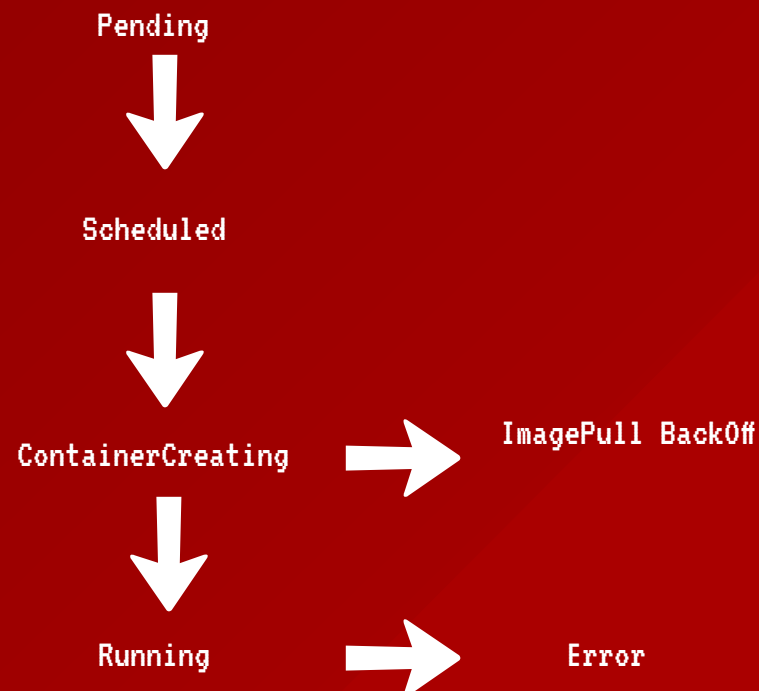


TROUBLESHOOTING BASICS

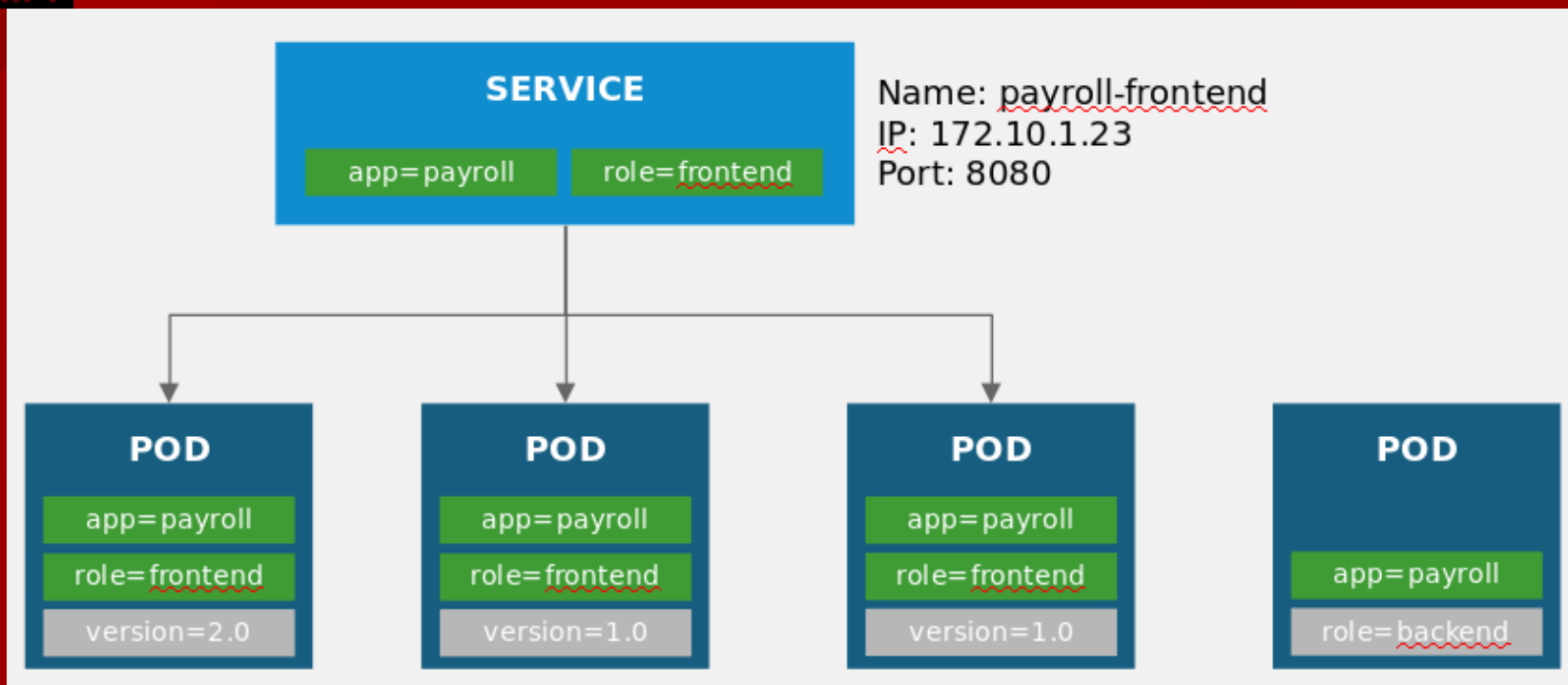
INSIDE OUT STRATEGY



Pod Statuses

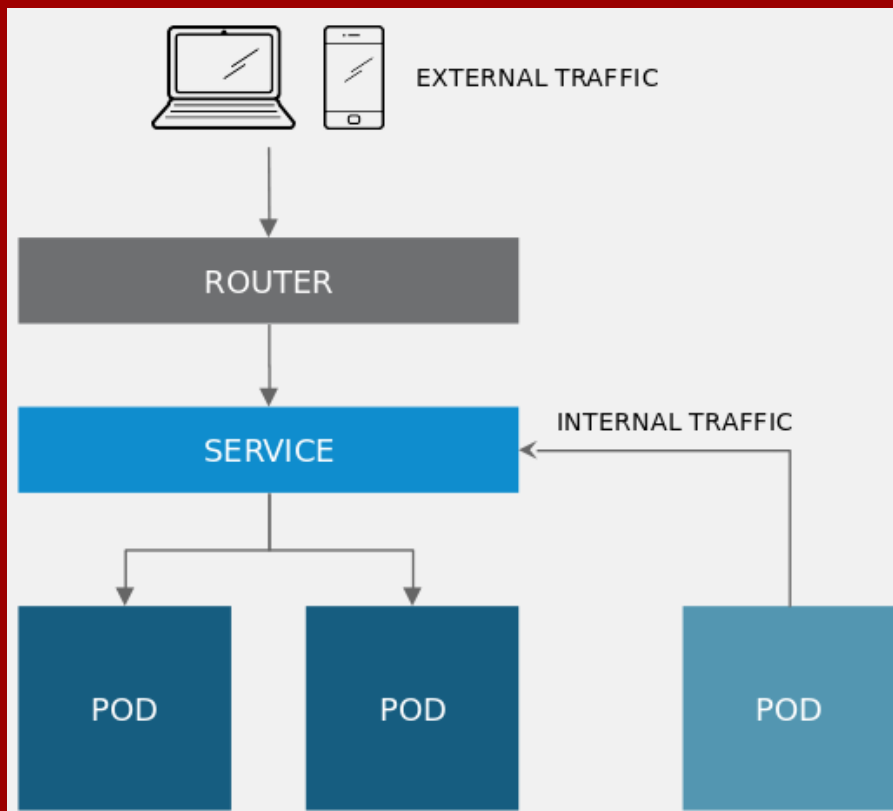


SERVICES

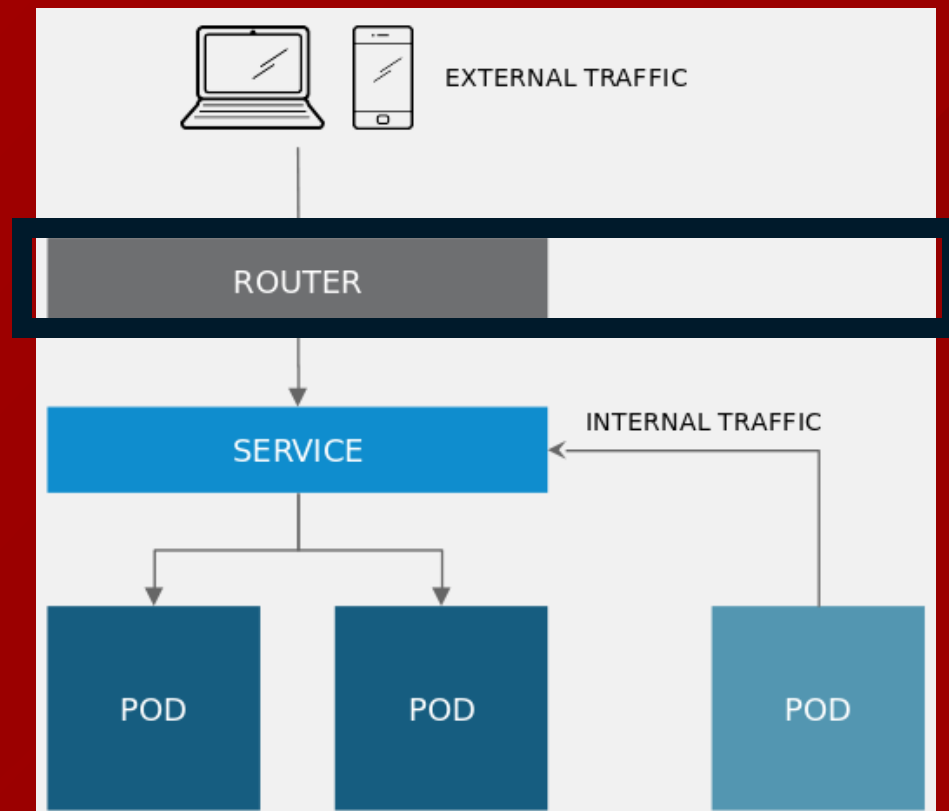


- INTERNAL LOAD BALANCER
- USE SELECTORS TO IDENTIFY SET OF REPLICATED PODS
- PODS CAN BE ADDED OR REMOVED
- SERVICE REMAINS CONSISTENTLY AVAILABLE

ROUTES EXPOSES SERVICES EXTERNALLY



ROUTES EXPOSES SERVICES EXTERNALLY



A route consists of:

- Name
- Service selector
- Optional security configuration.



TROUBLESHOOTING BASICS

TOOLS

t3chfest
bit.ly/bf-t3chfest



TROUBLESHOOTING BASICS

TOOLS

- Logs (system, console)



TROUBLESHOOTING BASICS

TOOLS

- Logs (system, console)
- Events



TROUBLESHOOTING BASICS

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- Objects status and definition

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- Debug or rsh pods



TROUBLESHOOTING BASICS

TOOLS

- Logs (system, console)
- Events
- Objects status and definition
- Debug or rsh pods
- Prayers, sacrifices



THE WORKSHOP

- Manager app
- demo app
- tty app
- SCOREBOARD
- Access the manager-app web
- 6 Levels + Bonus Level
- 10 minutes per level - one point per unused second
- Give up and reset options

<https://github.com/ruromero/break-fix>

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Master Password: Bernard

<https://github.com/ruromero/break-fix>

THE DEMO APPLICATION

Source 2 Image Walk Through

Code



DEV

Build



Container Image



Registry

Deploy



ENVEL

ENVEL

ENVEL

OPS



- Code:

- GitHub URL
- Branch
- Relative Path (contextDir)

- Source image:

- centos/nodejs-6-centos7:latest

- Produces image:

- demoapp/demoapp:latest



THE DEMO APPLICATION

- Built from s2i image: centos/nodejs-6-centos7:latest
- <https://github.com/ruromero/break-fix>
- Replicas: 1
- Triggers: Config, Image(demoapp@latest, auto=true)
- Strategy: Recreate
- Labels: app=demoapp
- Health checks: GET http://:8080/
- Service Port 8080
- No resources limit/requests
- Displays Hello Break & Fix!



DEMO TIME



IS THAT IT?

- **Isolate** your problems
- Rely on the **platform**
- **Keep learning**, it is not always that easy



LEARNING RESOURCES

Hands on labs:

<http://learn.openshift.com>

Free eBooks:

OpenShift in Action - <https://www.manning.com/books/openshift-in-action>

Kubernetes - <https://www.openshift.com/promotions/kubernetes.html>

Micro-Services - <https://www.openshift.com/promotions/microservices.html>

Docker Security and OpenShift - <https://www.openshift.com/promotions/docker-security.html>

DevOps with OpenShift - <https://www.openshift.com/promotions/devops-with-openshift.html>

Introducing Istio Service Mesh for Microservices -

<https://developers.redhat.com/books/introducing-istio-service-mesh-microservices/>

Openshift Cookbook - <http://cookbook.openshift.org/>

Development environments on your laptop:

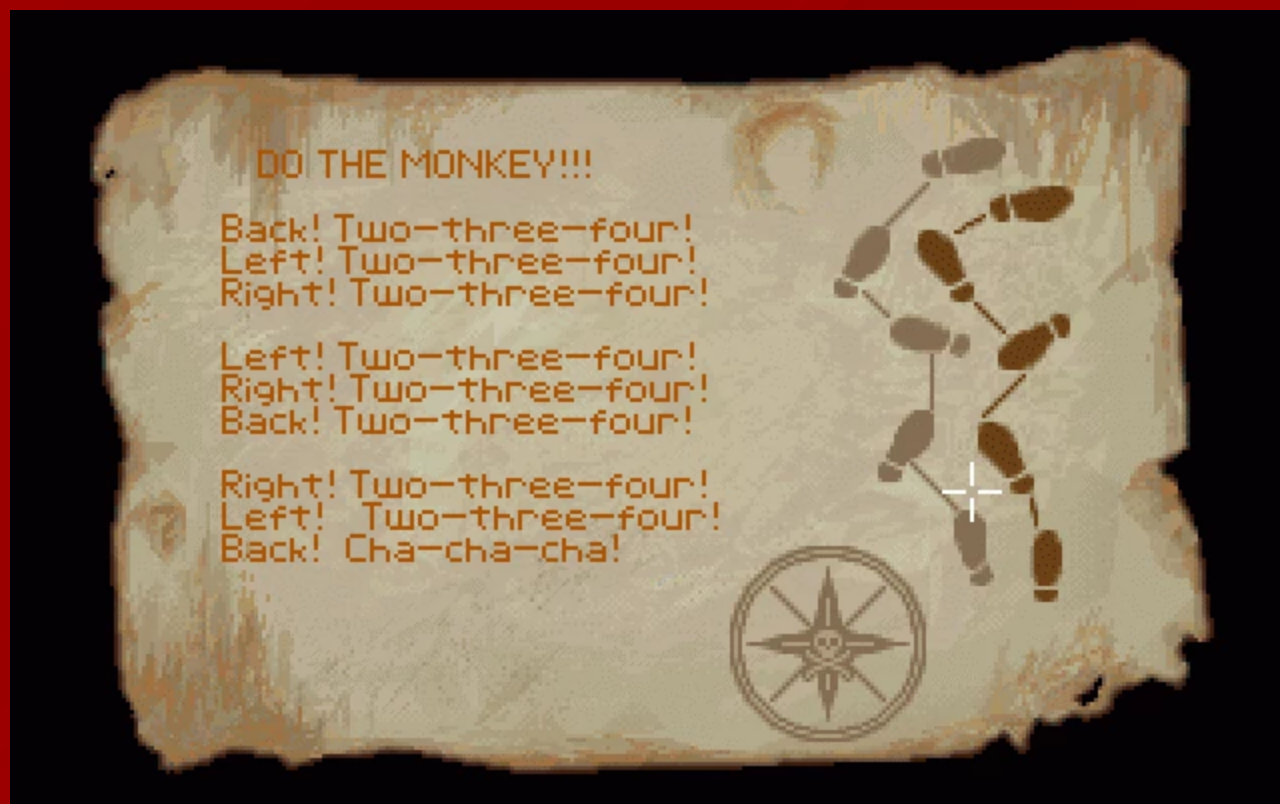
Minishift - <https://docs.openshift.org/latest/minishift/getting-started/installing.html>

oc cluster up - https://github.com/openshift/origin/blob/master/docs/cluster_up_down.md

Red Hat Container Developer Kit - <https://developers.redhat.com/products/cdk/overview/>

THANKS!
QUESTIONS?
FEEDBACK?

WE HAVE SWAG!



<http://bit.ly/bf-t3chfest>

