



State of the Operators

Framework, SDKs, and beyond

Sebastien Pahl
Director of Engineering at OpenShift
KubeCon '18

What is an Operator?

What is an Operator?

Containers brought simplicity to the development world

```
$ docker pull postgres  
$ docker pull redis
```

```
$ docker run --name some-postgres -e POSTGRES_PASSWORD=foo -d postgres  
$ docker run --name some-redis -d redis
```

What is an Operator?

- An operator is a kubernetes native application
 - Leverages the kubernetes API (usable with kubectl)
 - Runs on kubernetes as containers
- Purposely built for an application
 - Operational knowledge baked in and automated
 - handling upgrades from one version to another
 - handling complex failure recovery scenarios
 - scaling a stateful application up and down
 - Best suited for complex and stateful applications (but not only!)
 - Example: a prometheus operator specifically designed for it

OPERATORS ACROSS THE INDUSTRY



...and many more

<https://github.com/operator-framework/awesome-operators>



**OPERATOR
FRAMEWORK**



- **Operator SDK** - Allows developers to build, package and test an Operator based on your expertise without requiring all the knowledge of Kubernetes API complexities
- **Operator Lifecycle Manager** - Helps you to install, and update, and generally manage the lifecycle of all of the Operators (and their associated services) running across your clusters
- **Operator Metering** - Enable usage reporting for Operators and resources within Kubernetes

Demo

Where to get started?

- <https://github.com/operator-framework>
- <https://github.com/operator-framework/getting-started>
- <https://commons.openshift.org/sig/operators.html>
- [#kubernetes-operators](#) on the kubernetes slack
- <https://groups.google.com/forum/#!forum/operator-framework>

Kubecon sessions about operators

Tuesday, December 11 • 4:30pm - 5:05pm

[Intro: Operator Framework BoF - Diane Mueller & Sebastien Pahl, Red Hat](#)

Wednesday, December 12 • 1:45pm - 2:20pm

[Deep Dive: Operator Framework BoF - Diane Mueller & Sebastien Pahl, Red Hat](#)

Thursday, December 13 • 9:51am - 9:56am

[Keynote: Maturing Kubernetes Operators - Rob Szumski, Principal Product Manager for OpenShift, Red Hat](#)

Thursday, December 13 • 4:30pm - 5:05pm

[Collecting Operational Metrics for a Cluster with 5,000 Namespaces - Rob Szumski & Chance Zibolski, Red Hat](#)

Operator Workshop

Friday, December 14 • 9:00am - 1:00pm

[Kubernetes Operator Framework Workshop \(Additional registration required\)](#)

SOLD OUT

Thank you!