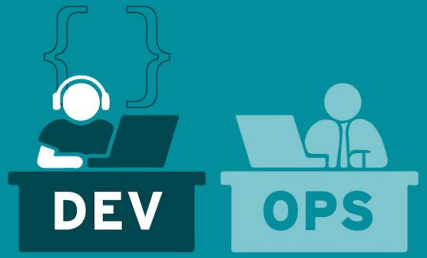
DEVCONF.IN



Improving the developer experience on OpenShift

Jorge Morales
OpenShift Developer Advocate
DevConf India 2018
August 4th - 10:30 - Room 2

redhat.

Me (aka Jorge Morales)

DEVCONF.IN

- Spanish by nature and by language
- Work at Red Hat
- OpenShift Developer Advocate
- Mostly Java developer
- Obsessed with improving the developer experience

http://jorgemoral.es

@jorgemoralespou

github.com/jorgemoralespou


This talk will consist of 3 acts

Improving the developer experience on OpenShift

Act 1:

What's all this OpenShift and Kubernetes thing?

Jessie Frazelle's Blog

Hard Multi-Tenancy in Kubernetes

Kubernetes is the new kernel

Friday, May 18, 2018

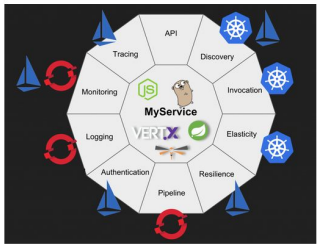
Kubernetes is the new kernel. We can refer to it as a "cluster kernel" versus the typical operating system kernel. This means a lot of great things for users trying to deploy applications. It also leads to a lot of the same challenges we have already faced with operating system kernels. One of which being privilege isolation. In Kubernetes, we refer to this as multi-tenancy, or the dream of being able to isolate tenants of a cluster.

https://blog.jessfraz.com/post/hard-multi-tenancy-in-kubernetes/

Why Kubernetes is The New Application Server

Kubernetes is the new Application Server

By Rafael Benevides June 28, 2018 +10 rating,16 votes



Have you ever wondered why you are deploying your multi-platform applications using containers? Is it just a matter of "following the hype"? In this article, I'm going to ask some provocative questions to make my case for *Why Kubernetes is the new application server.*

https://developers.redhat.com/blog/2018/06/28/why-kubernetes-is-the-new-application-server/

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kubernetes

Documentation Blog Partners Community Case Studies English v1.11

Production-Grade Container Orchestration

Automated container deployment, scaling, and management

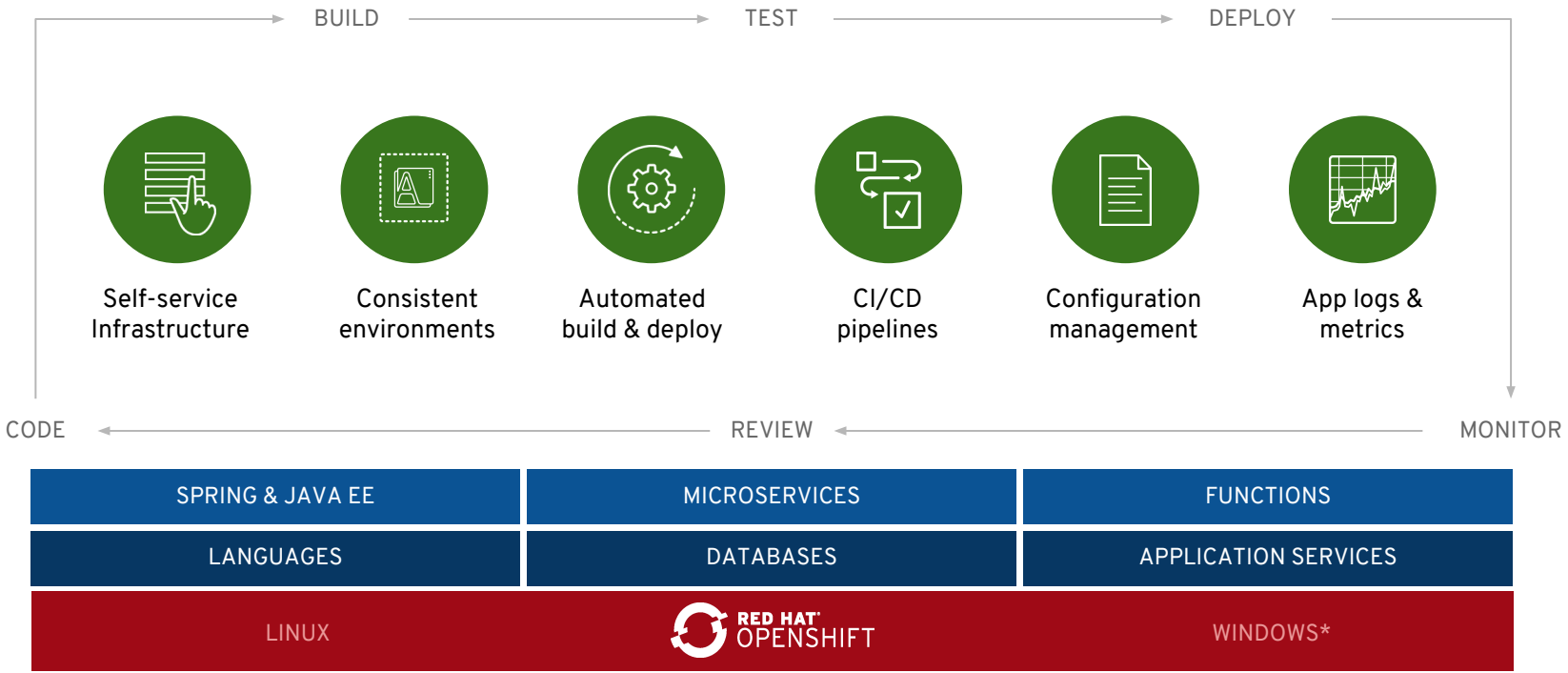
Kubernetes is an open-source system for automating deployment, scaling, and management of containerized applications.

It groups containers that make up an application into logical units for easy management and discovery. Kubernetes builds upon 15 years of experience of running production workloads at Google, combined with best-of-breed ideas and practices from the community.

OpenShift extends Kubernetes to make **developer lives easier**

The Kubernetes platform for developers

HOW OPENSHIFT ENABLES
DEVELOPER PRODUCTIVITY



Improving the developer experience on OpenShift

Act 2:

What's all this Developer Experience thing?

Developer Experience (**DX**) is the equivalent to **User Experience** (**UX**) when **the user** of the software or system **is a developer**.

“It just needs to work! Not look good!”

VS

User Experience (UX)

Developer Experience (DX)

Developers want to have choice

- Choice of architectures
- Choice of programming languages
- Choice of databases
- Choice of application services
- Choice of development tools
- Choice of build and deploy workflows

They don’t want to have to worry about the infrastructure.

Developers want tools to be productive

- Every function they need at hand
- Stable
- Easy to use
- Performant
- No disruptive
- Intuitive

They don’t want to change the way they work.

WHY IT MATTERS

DX | Developer Experience

Users of your technology are happier, promote it more, and stay longer when the product has good DX

“If you are using a product that combines enterprise-grade functionality with an unusable experience, then your life will be filled with frustration and pain”

Developers Are People Too!

@jorgemoralespou

Improving the developer experience on OpenShift

Act 3:

How can we improve?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VMs? Containers?
All I want to do is program!
Jeesh.

Focus on what's **important!!!**


Focus on code
@jorgemoralespou

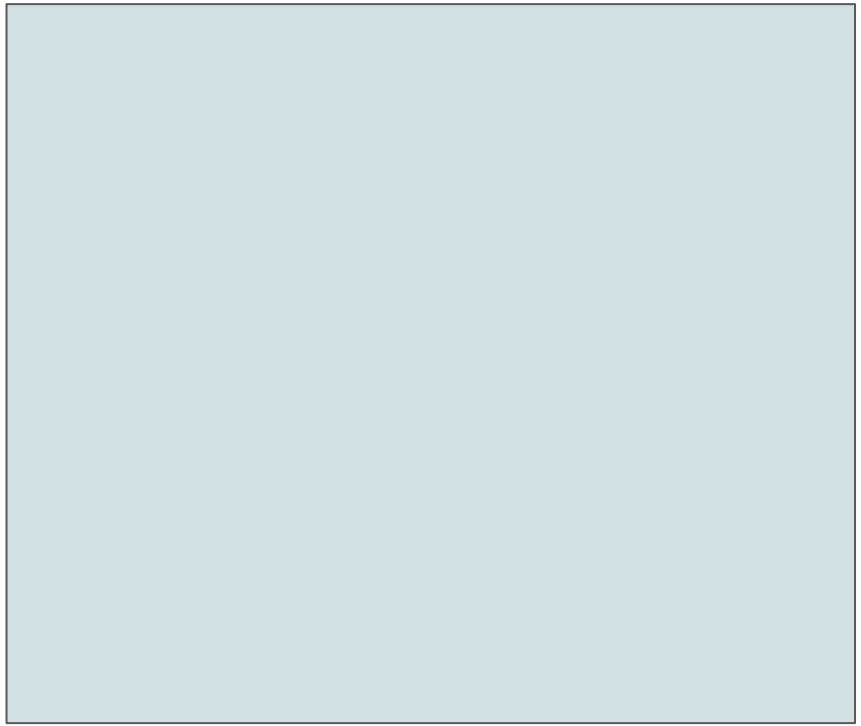
INTRODUCING: OpenShift-Do (aka. odo)

A developer friendly command line tool

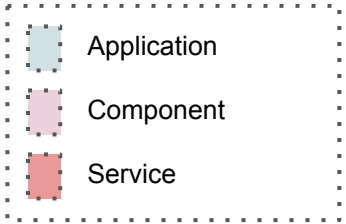
odo is a **CLI** tool that provides developers with:

- **Simple** language to understand
- **Fast** and automated source code deployments
- **In-context** work
- Easy **iterative development** cycle

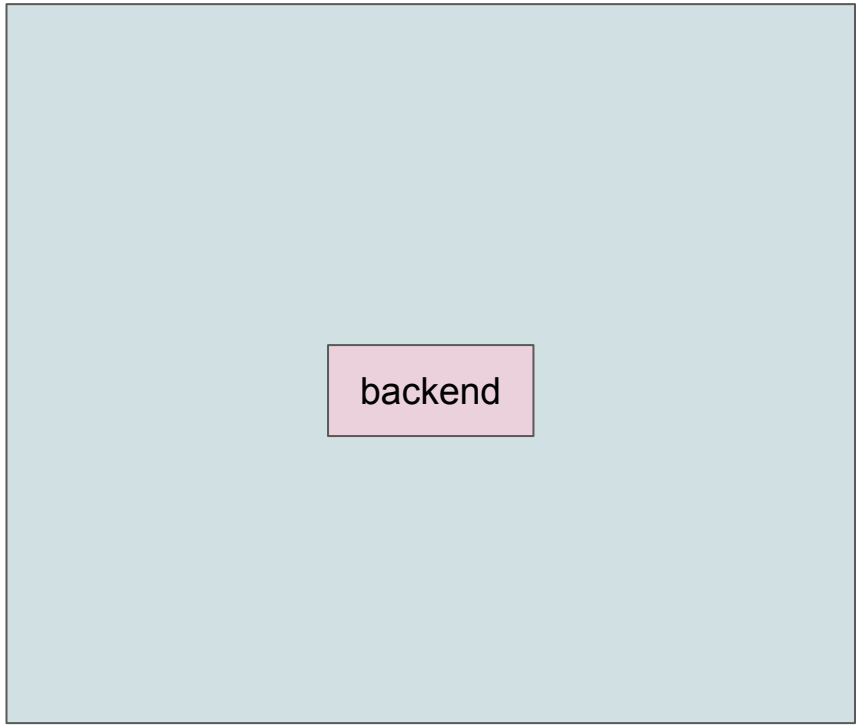
In odo, applications are the basics



```
$ odo application create odo-demo
```

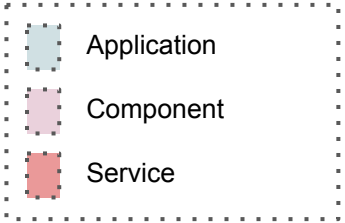


In odo, components are the centerpiece

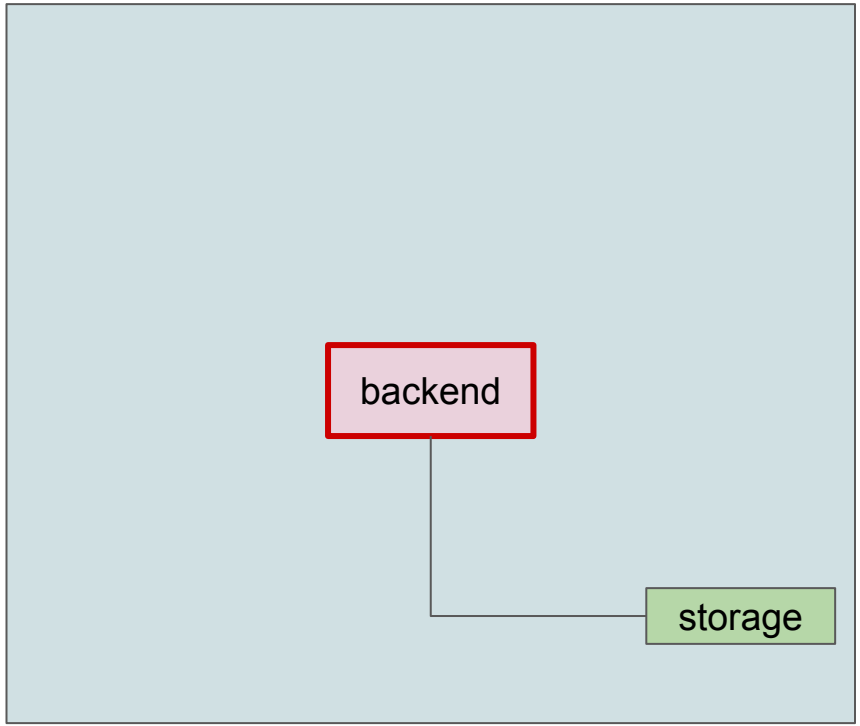



```
$ odo create wildfly
```

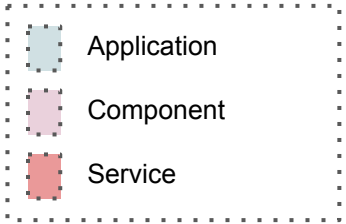
- From local (Iterative development)
- From binary (Iterative development)
- From git (cloud based development)



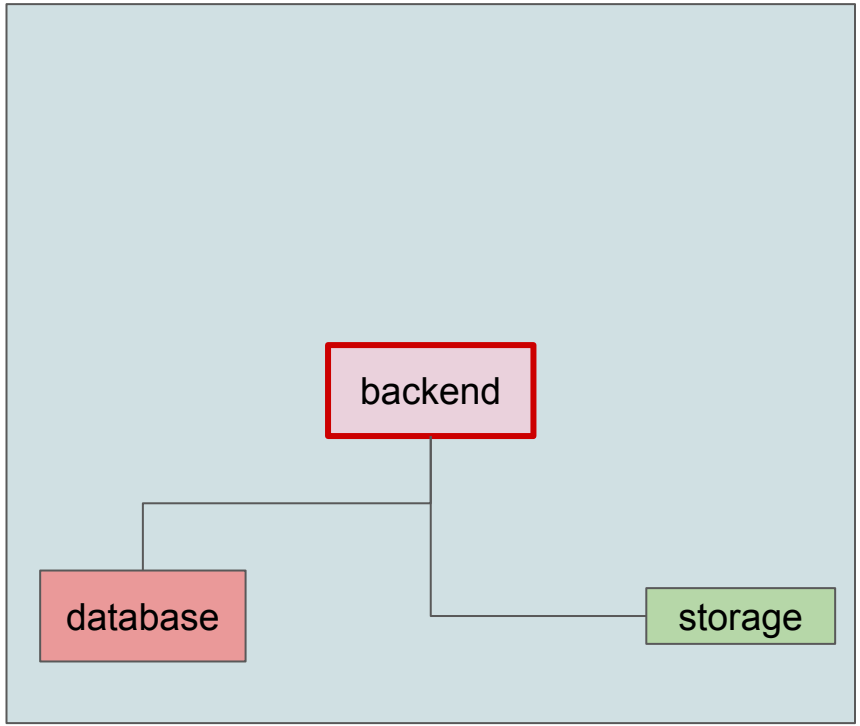
In odo, everything is in context



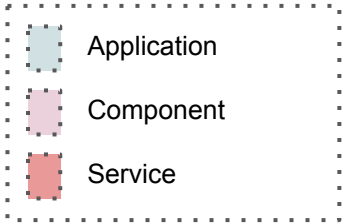

```
$ odo storage create
        --path=/opt/my-app/data
        --size=1Gi
```



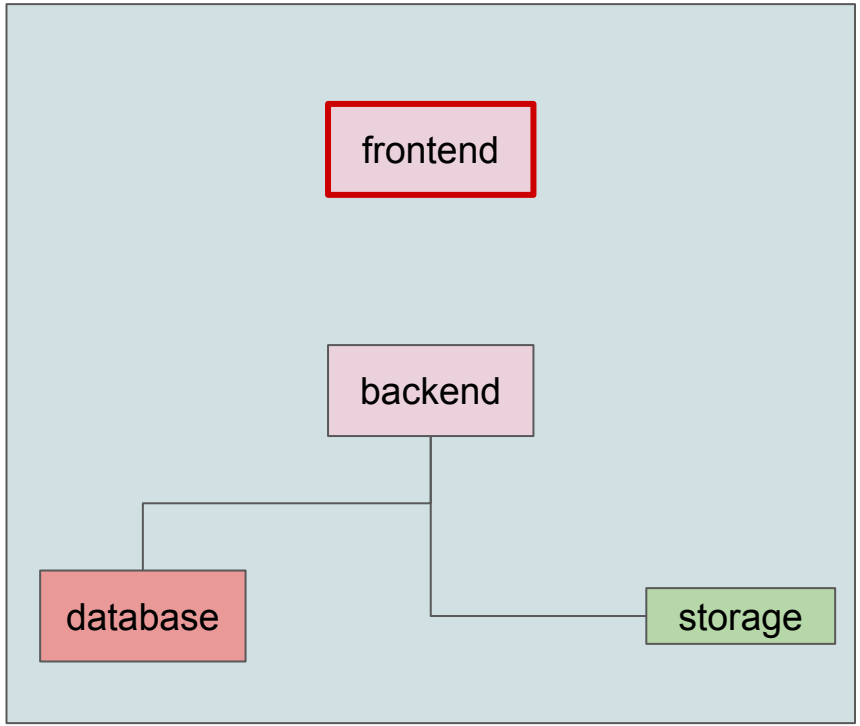
In odo, everything is in context



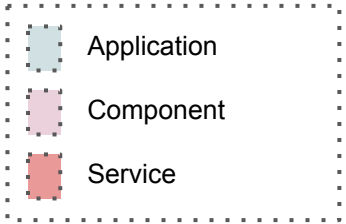

```
$ odo catalog list
$ odo service create database
```



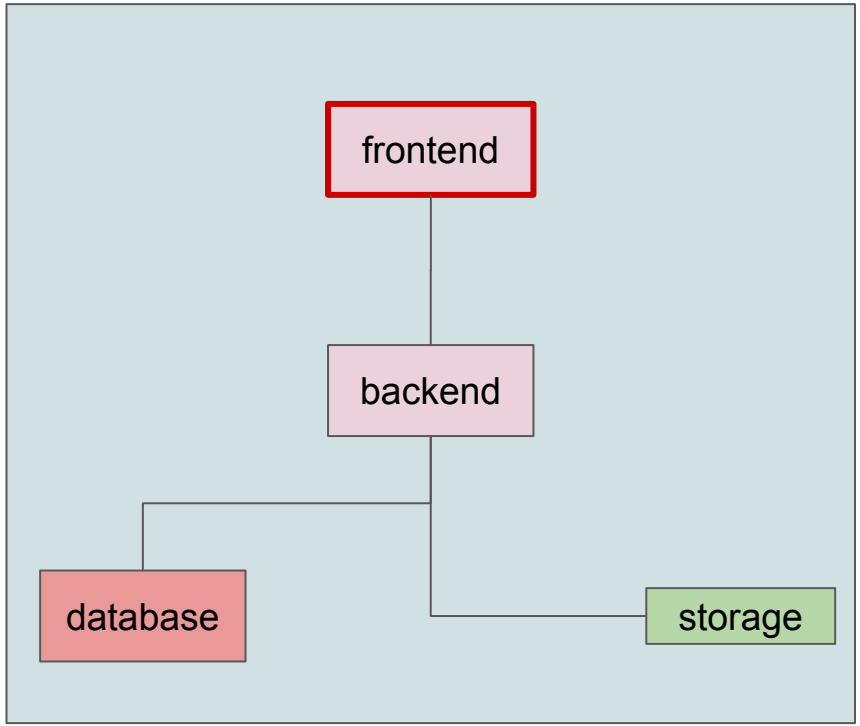
In odo, everything is in context



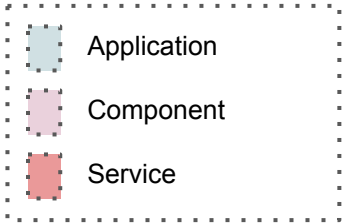

```
$ odo create httpd frontend
```



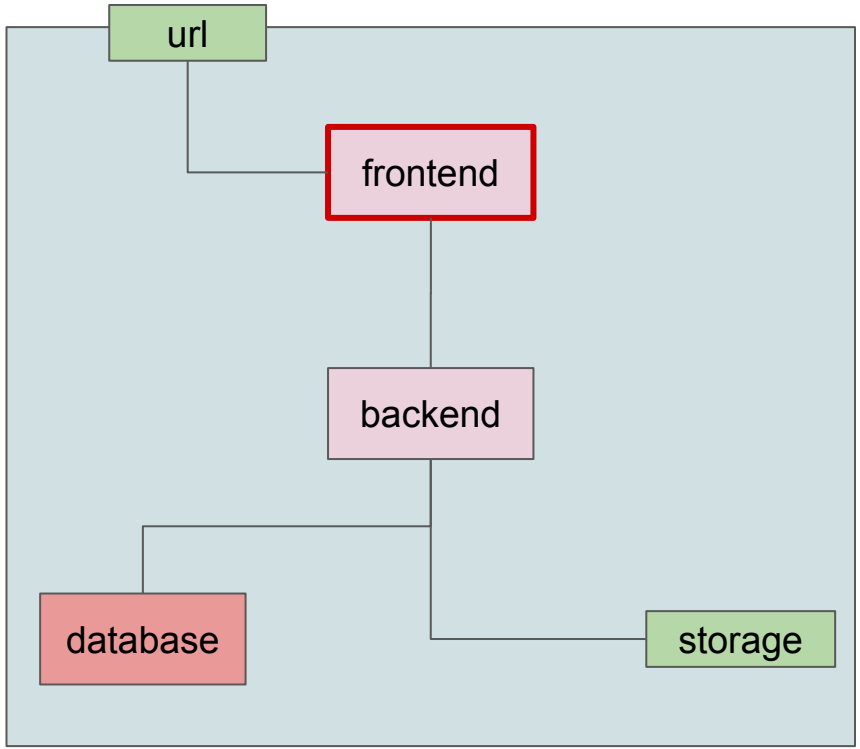
In odo, everything is in context



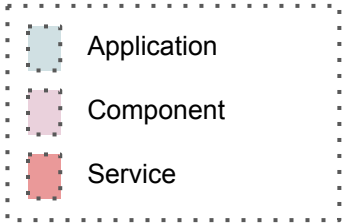

```
$ odo link backend
```



In odo, everything is in context




```
$ odo url create
```



Iterative development

- odo push
  - Push sources that will be built in the container
  - Push binary directly to the container

- odo watch
  - Watches for local changes (on sources or binary) and pushes automatically


LIVE DEMO

Where?

```
https://github.com/redhat-developer/odo
```

Designing a CLI is easy.

Effective CLI design is difficult

Contributions are welcome

LEARN.OPENSHIFT.COM

Foundations of OpenShift START COURSE	Building Applications On OpenShift START COURSE	Subsystems, Components, and Internals START COURSE
OpenShift Playgrounds START COURSE	Service Mesh workshop with Istio START COURSE	Serverless scenarios with OpenShift Cloud Functions START COURSE

Interactive Learning Scenarios provide you with a pre-configured OpenShift instance, accessible from your browser without any downloads or configuration.

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