



MONOLITHS TO MICROSERVICES: APP TRANSFORMATION

Hands-on Technical Workshop

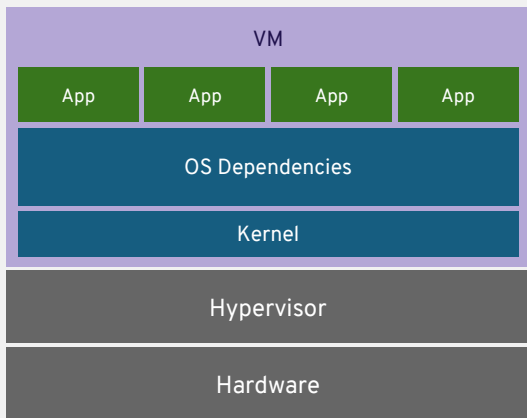
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Red Hat Australia and New Zealand

A DEVELOPER INTRODUCTION TO OPENSHIFT

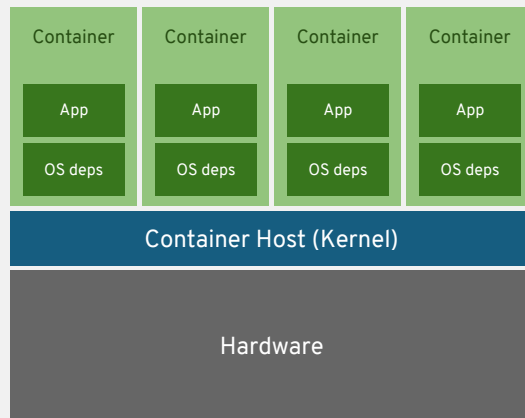
CONTAINERS

VIRTUAL MACHINES



virtual machines are isolated
apps are not

CONTAINERS

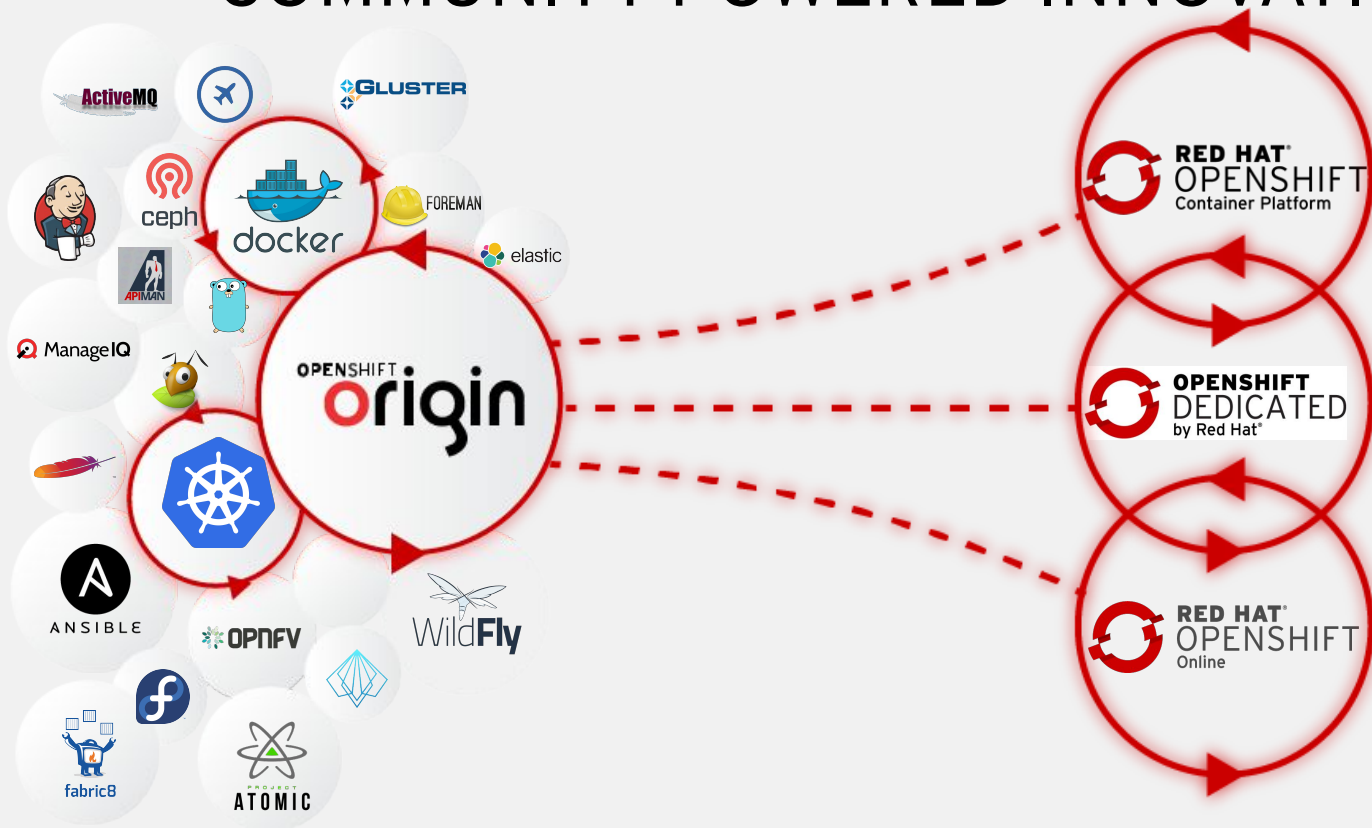


containers are isolated
so are the apps



A secure and enterprise-grade container application platform based on Kubernetes for traditional and cloud-native applications

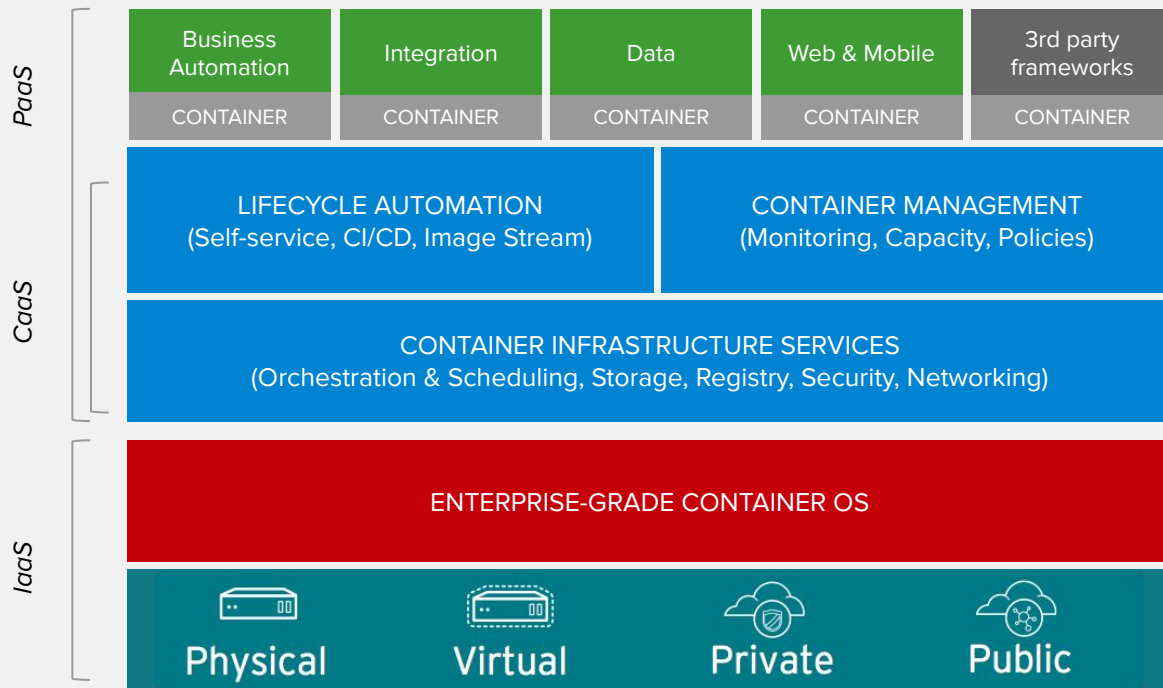
COMMUNITY POWERED INNOVATION



OPENSIFT OVERVIEW

Red Hat OpenShift
Container Platform

Red Hat Enterprise Linux
& Atomic Host



SUPPORTED IMAGES

LANGUAGES

Java

NodeJS

Python

PHP

Perl

Ruby

.NET
Core

Third-party
Language
Runtimes

DATABASES

MySQL

Postgre
SQL

MongoDB

Redis

...and virtually
any docker
image
out there!

Third-party
Databases

CrunchyData

GitLab

Iron.io

Couchbase

Sonatype

EnterpriseDB

NuoDB

Fujitsu

and many more

WEB SERVERS

Apache
HTTP
Server

nginx

Varnish

Phusion
Passenger

Tomcat

Third-party
App
Runtimes

MIDDLEWARE

Spring
Boot

Wildfly
Swarm

Vert.x

JBoss
Web
Server

JBoss
EAP

JBoss
A-MQ

JBoss
Fuse

Third-party
Middleware

3SCALE
API
mgmt

JBoss
BRMS

JBoss
BPMS

JBoss
Data Virt

JBoss
Data Grid

RH
Mobile

RH SSO

Third-party
Middleware

ENTERPRISE JAVA

RED HAT® JBOSS®
ENTERPRISE
APPLICATION PLATFORM

JAVA MICROSERVICES



REACTIVE SYSTEMS



SERVLET APPS



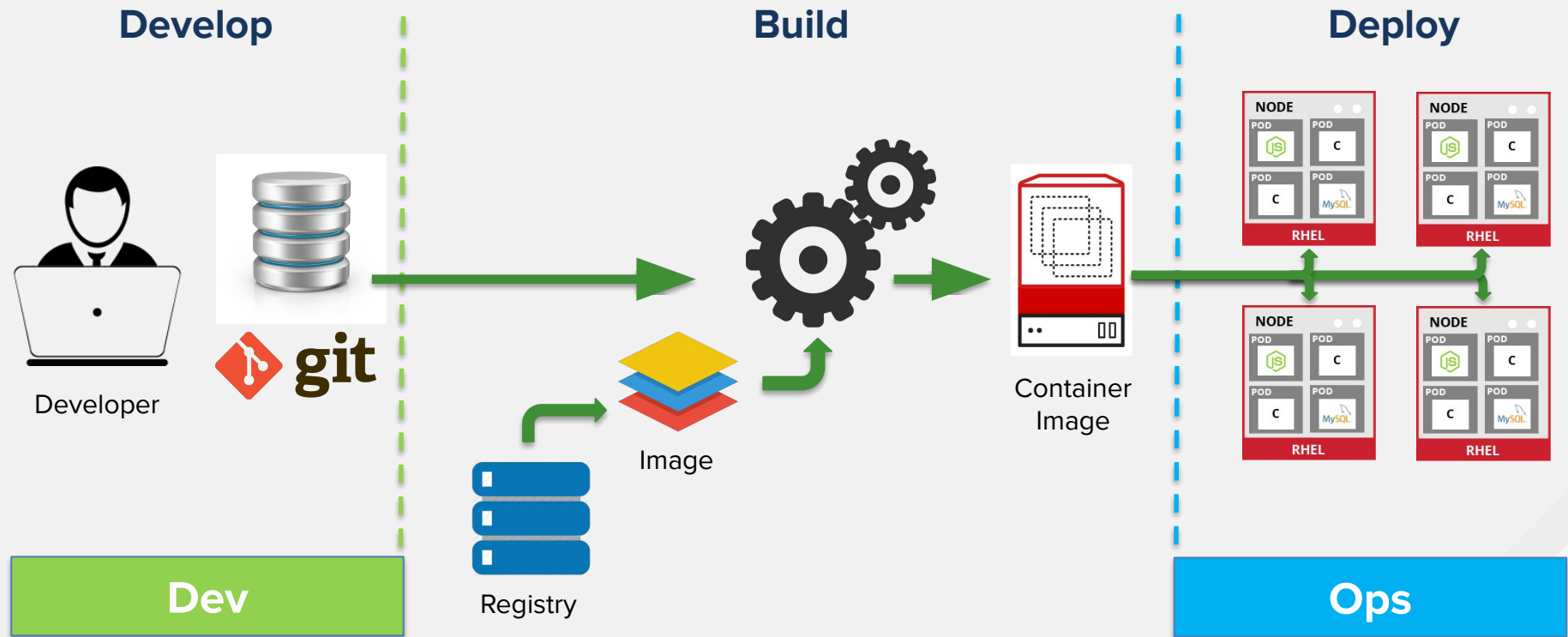
JAVASCRIPT FLEXIBILITY



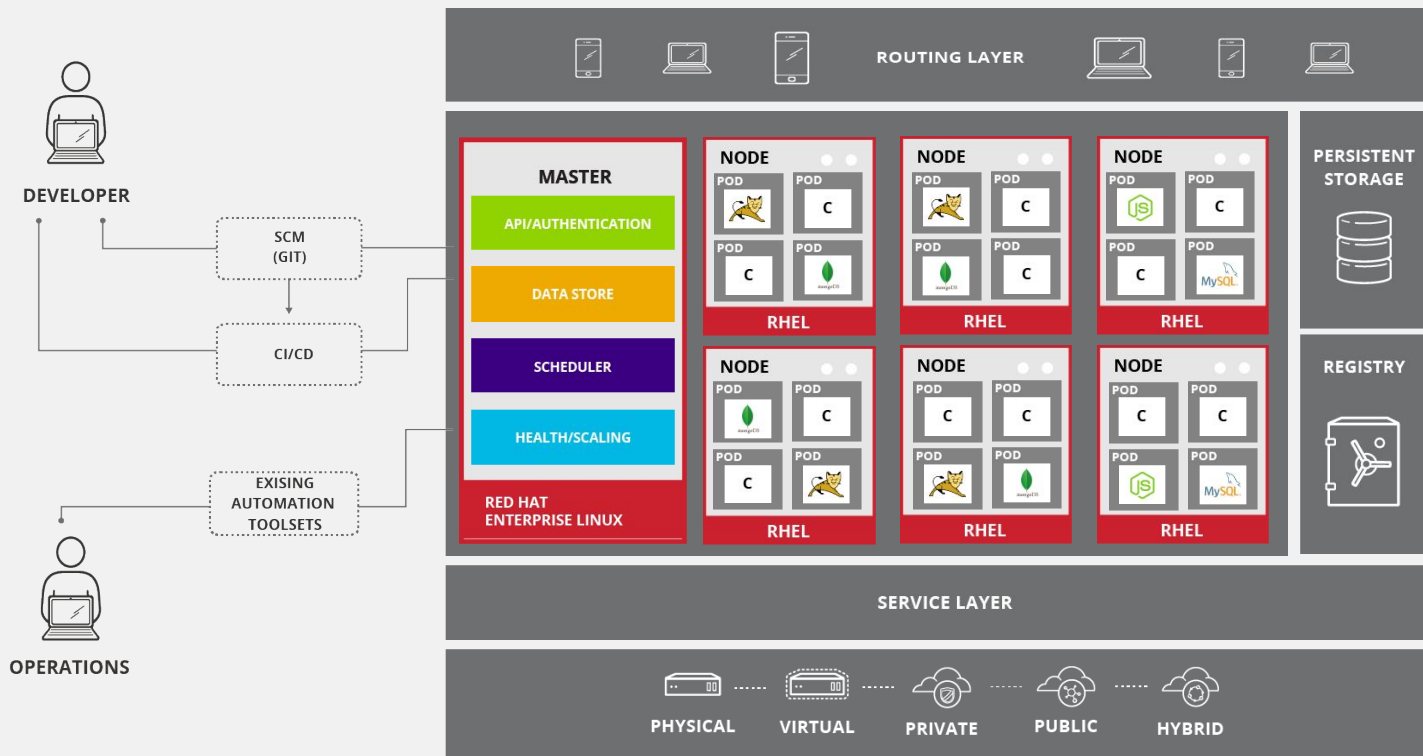
TOMCAT SIMPLICITY

RED HAT® JBOSS®
WEB SERVER

SOURCE TO IMAGE



OPENSSHIFT ARCHITECTURE



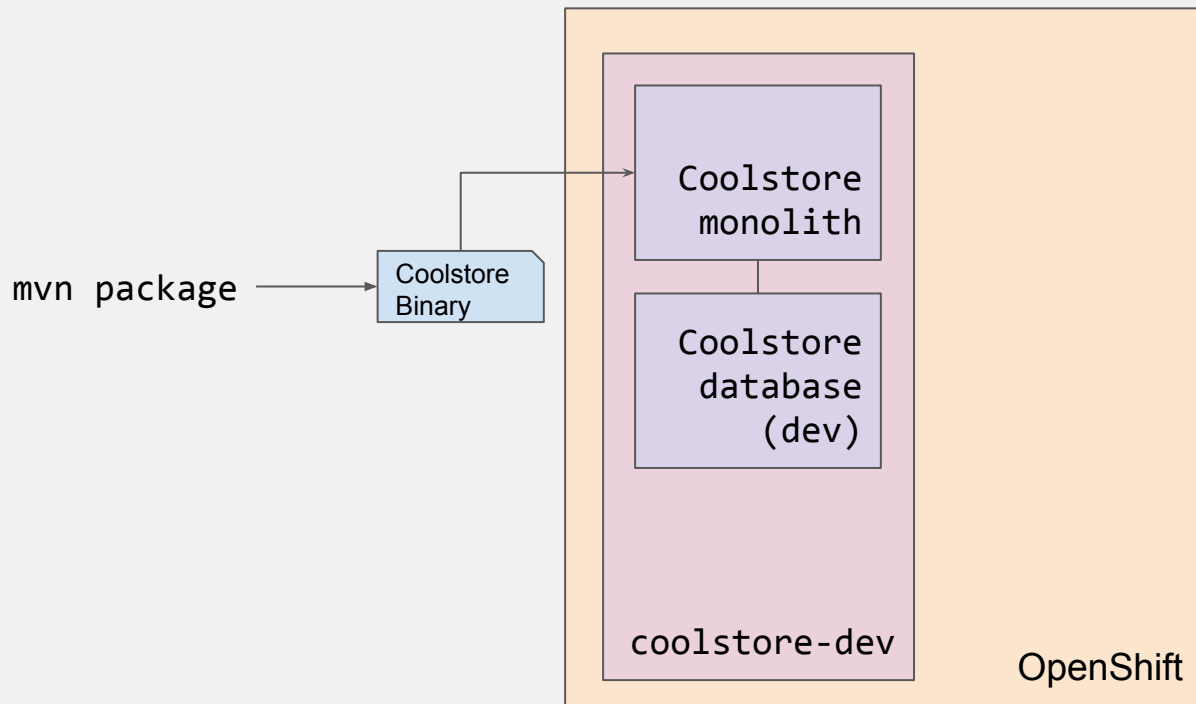
LAB: DEVELOPER INTRODUCTION TO OPENSHIFT

GOAL FOR LAB

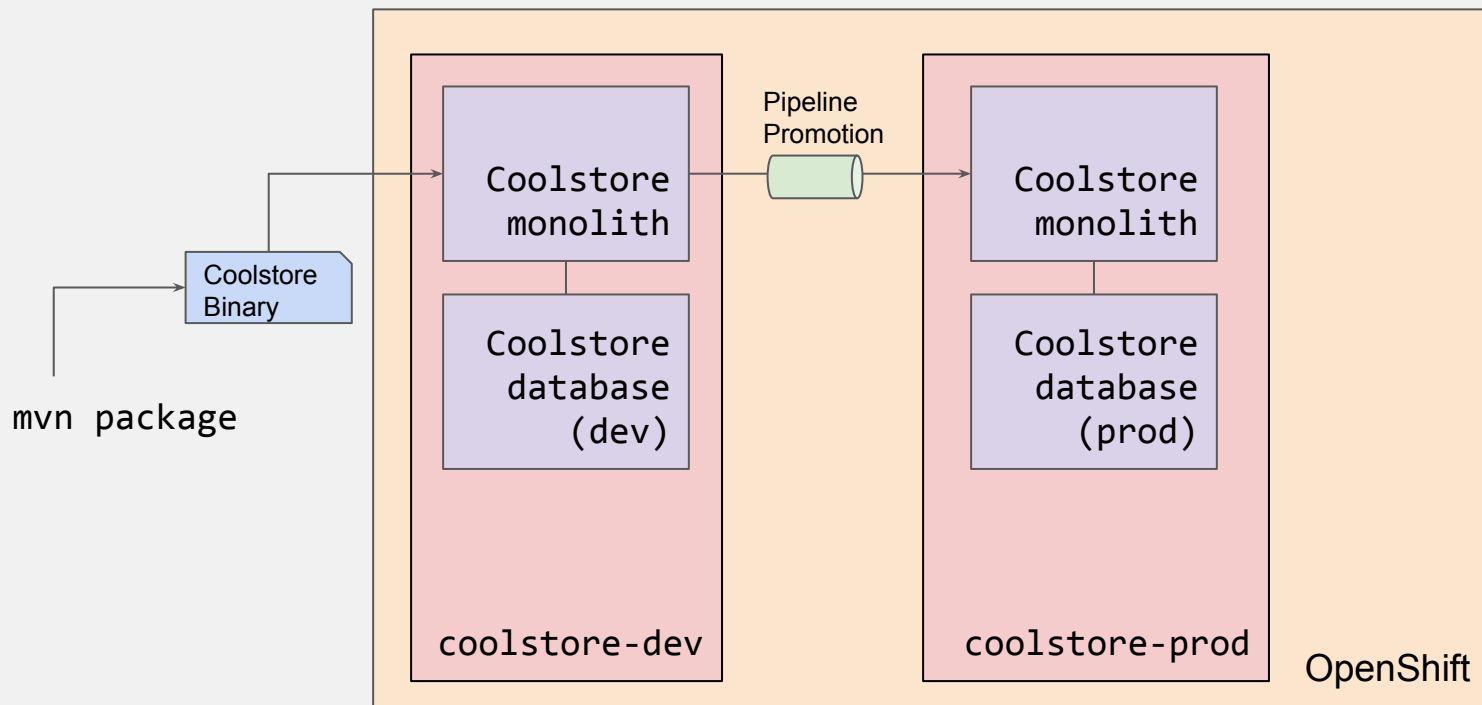
In this lab you will learn:

- Important OpenShift concepts for developers
- How OpenShift makes developers and architects happier
- How to do efficient round-trip development:
 - Separate **dev** from **prod** environments
 - Quick deployments using **rsync** / port-forwarding
 - Promoting apps using **CI/CD Pipelines**

CURRENT STATE



DESIRED RESULT OF SCENARIO 3



LAB: DEVELOPER INTRO TO OPENSIFT

A man with white hair, wearing a light-colored lab coat and green safety goggles, is focused on a task. He is holding a pair of pliers in his right hand and a wire in his left hand. He is wearing a silver watch on his left wrist. The background is a workshop or laboratory setting with various tools and equipment visible.

WEB: openshift-modernize-apps.katacoda.com
SLIDES (PDF): bit.ly/m2m-slides

SCENARIO 3

A DEVELOPER INTRODUCTION TO OPENSIFT

WRAP-UP AND DISCUSSION

RESULT OF LAB

In this lab you learned how to:

- Do quick deployments with `oc rsync`
- Create a production environment separate from dev
- Promote tested/verified builds between environments using OpenShift pipeline builds

You should now have two projects (dev and prod) running the same CoolStore app! In the next lab we will begin the process of breaking the monolith up into microservices.

LEARN MORE: learn.openshift.com



Interactive Learning Portal

Our Interactive Learning Scenarios provide you with a pre-configured OpenShift instance, accessible from your browser without any downloads or configuration. Use it to experiment, learn OpenShift and see how we can help solve real-world problems.

Getting Started
with OpenShift for
Developers

START SCENARIO

Logging in to an
OpenShift Cluster

START SCENARIO

Deploying
Applications From
Images

START SCENARIO

Deploying
Applications From
Source

START SCENARIO

Using the CLI to
Manage Resource
Objects

START SCENARIO

Connecting to a
Database Using
Port Forwarding

START SCENARIO

Transferring Files
in and out of
Containers

START SCENARIO



THANK YOU



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