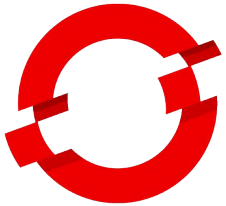
Monoliths to microservices: App Transformation

Hands-on Technical Workshop

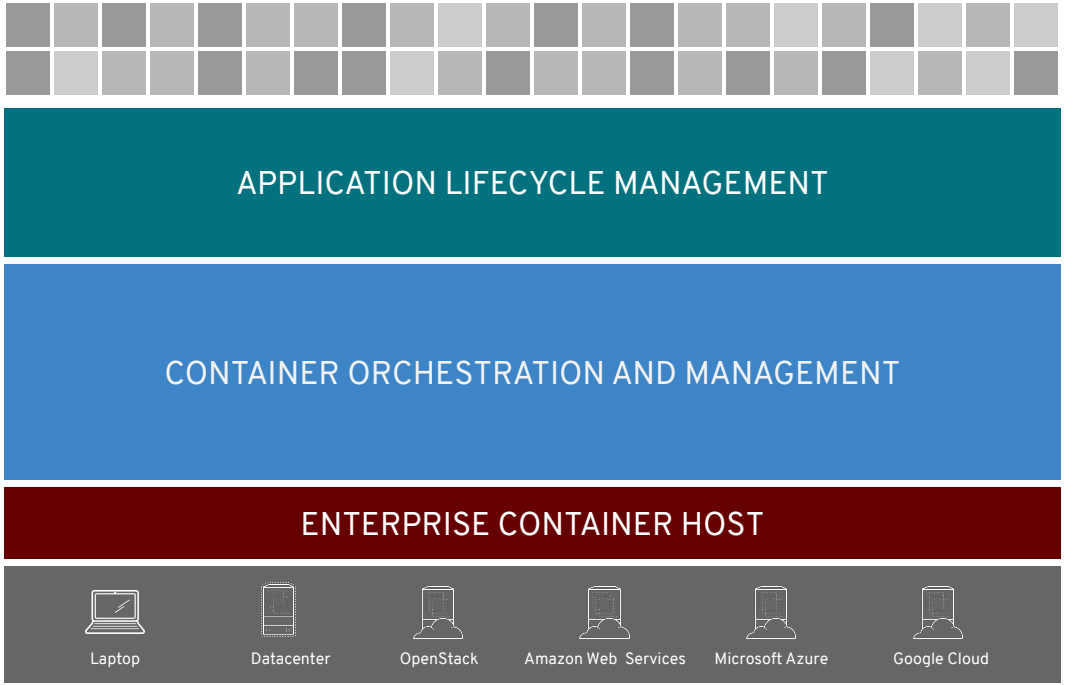
A developer introduction to OpenShift



Red Hat OpenShift

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

Cloud-native capabilities with Red Hat OpenShift

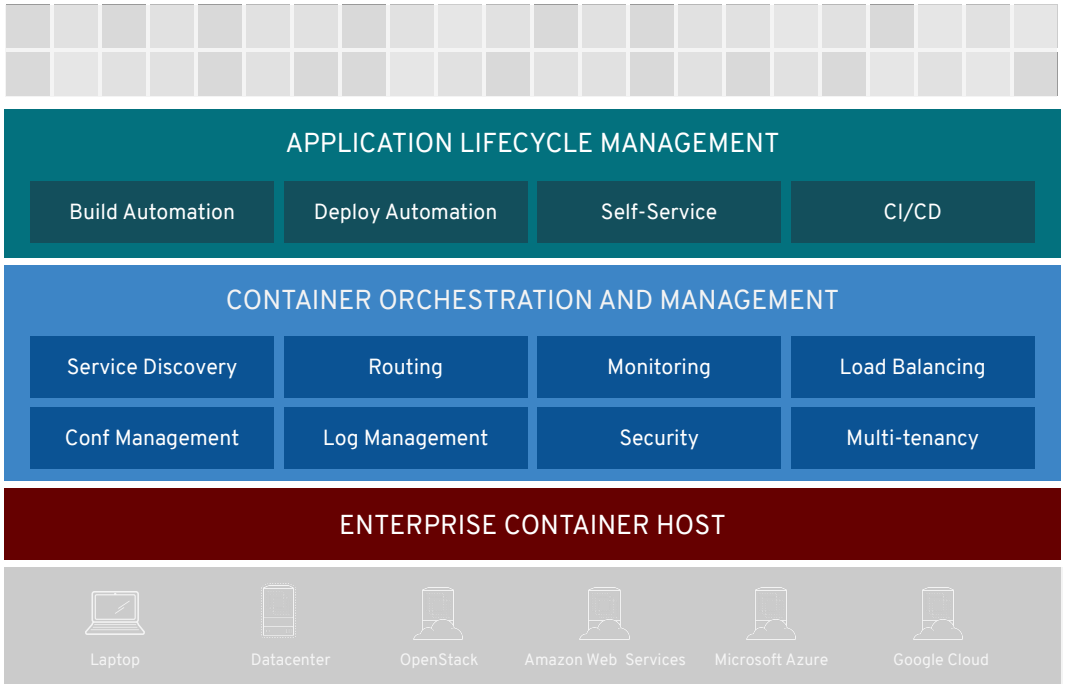


ANY
CONTAINER

Red Hat
OpenShift

ANY
INFRASTRUCTURE

Cloud-native capabilities with Red Hat OpenShift



ANY CONTAINER

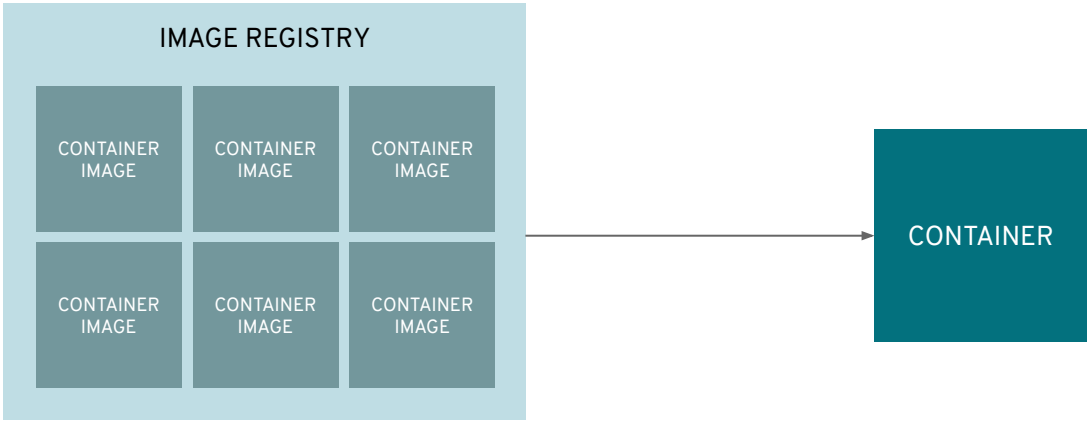
Red Hat OpenShift

ANY INFRASTRUCTURE

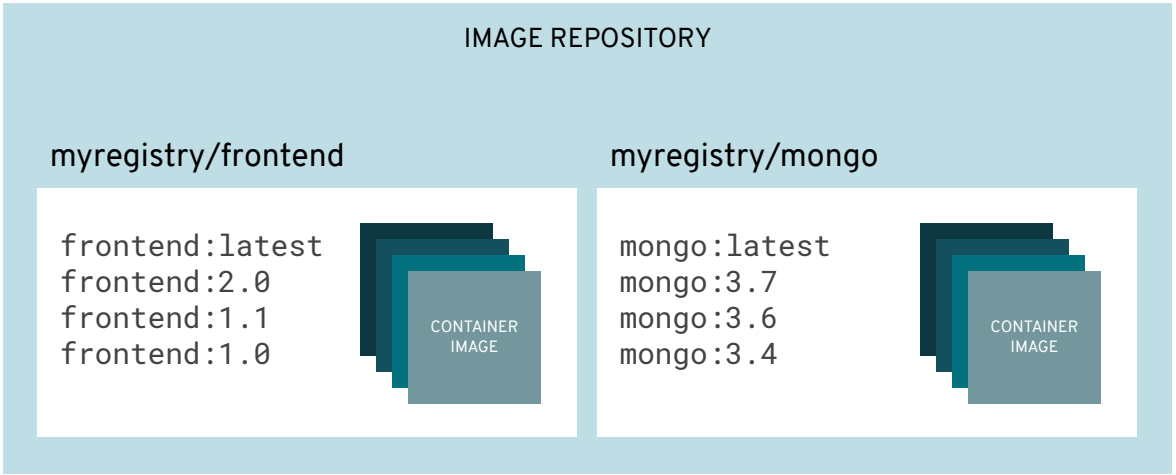
A container is the smallest compute unit

containers are created from container images during a build

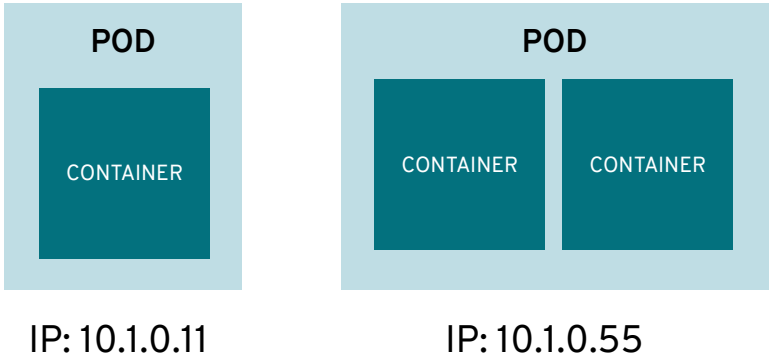
container images are stored in an image registry



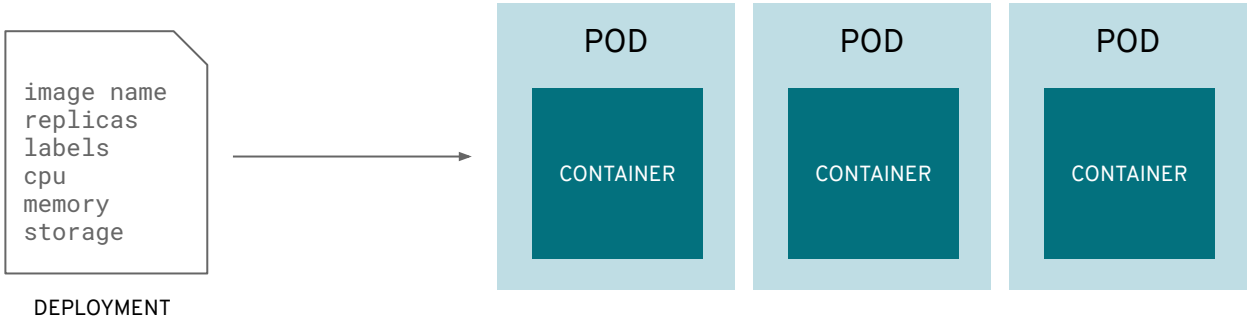
an image repository contains all versions of an image in the image registry



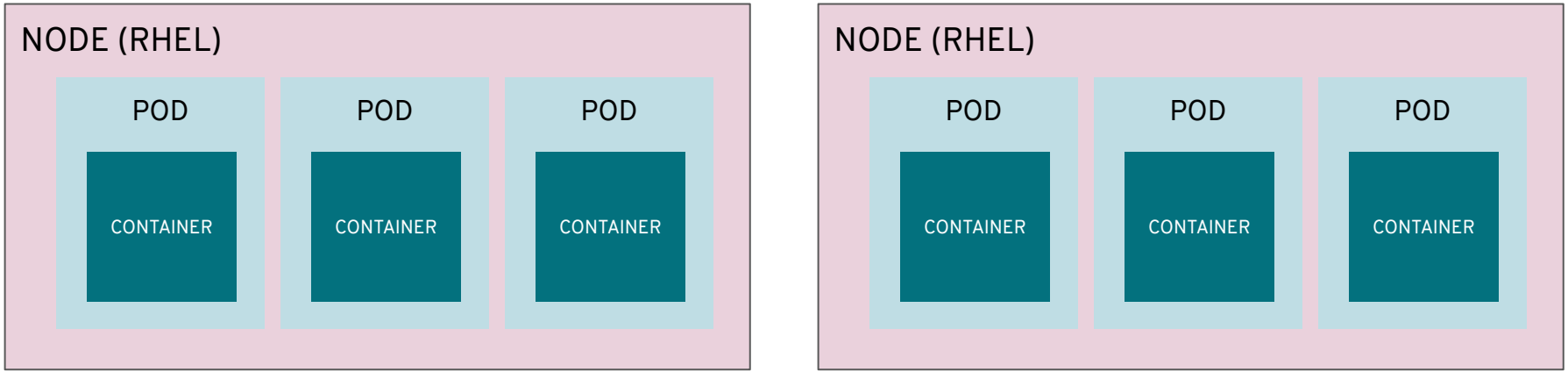
containers are wrapped in pods which are units of deployment and management, and share a common network address



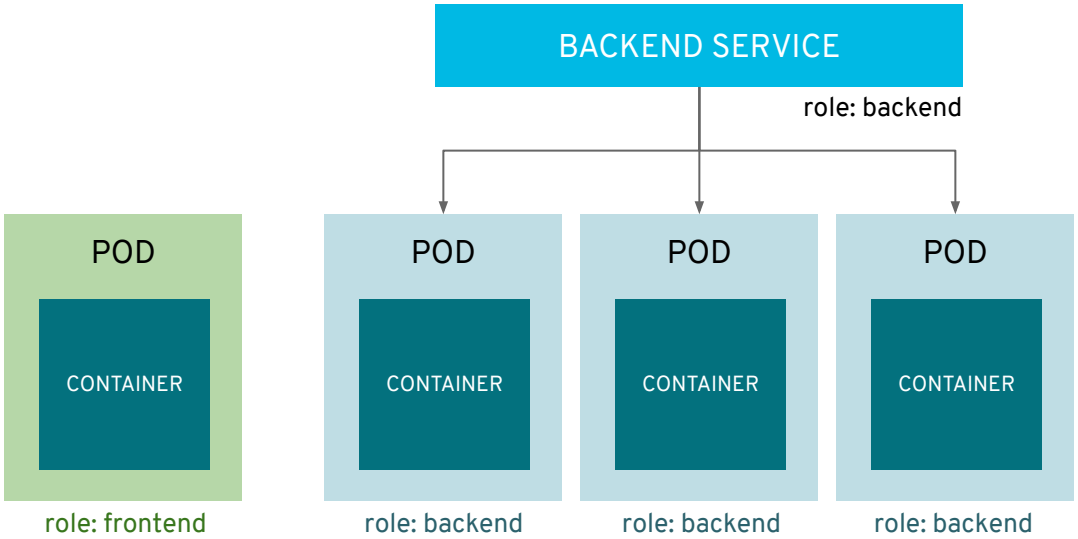
pods configuration is defined in a **deployment**



pods are deployed to and run on nodes



services provide internal load-balancing and service discovery across pods



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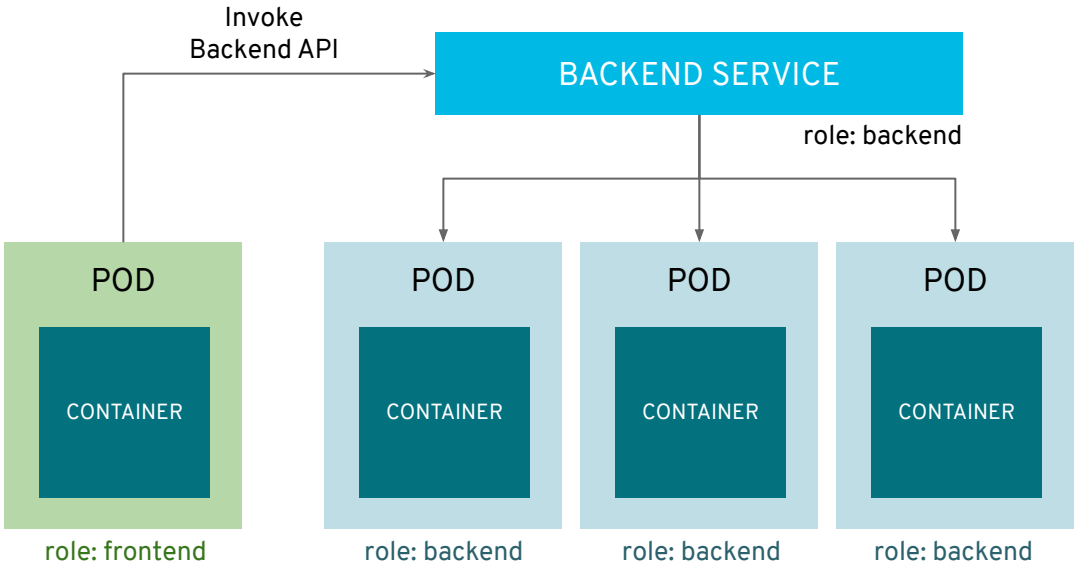
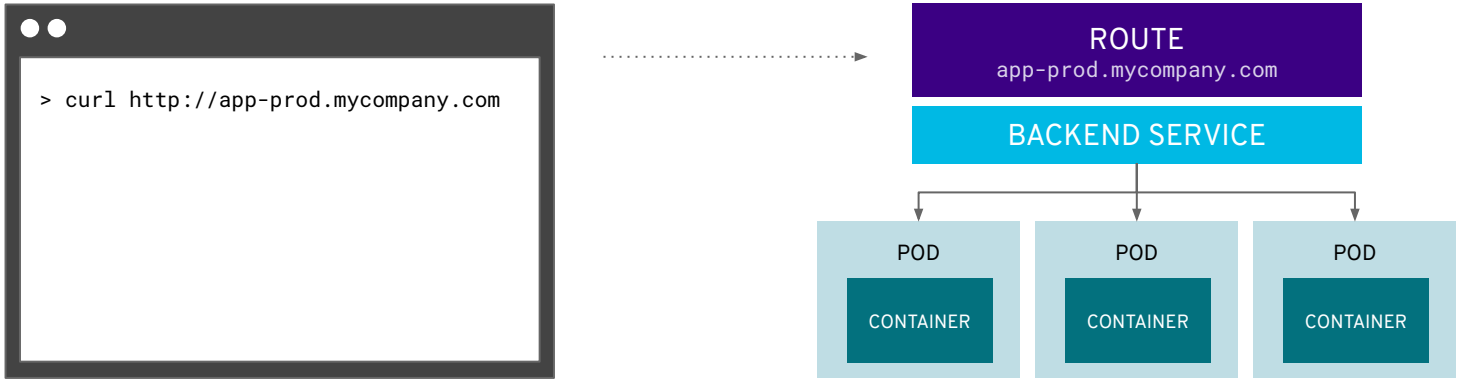
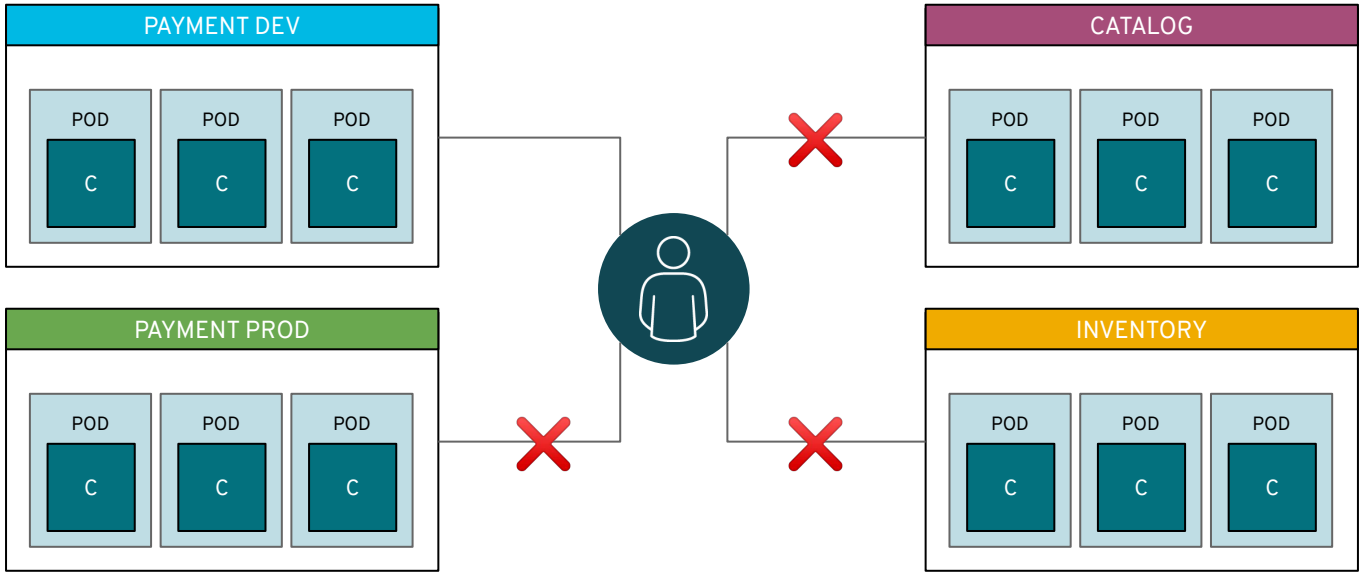
apps can talk to each other via services



routes add services to the external load-balancer and provide readable urls for the app



projects isolate apps across environments, teams, groups and departments



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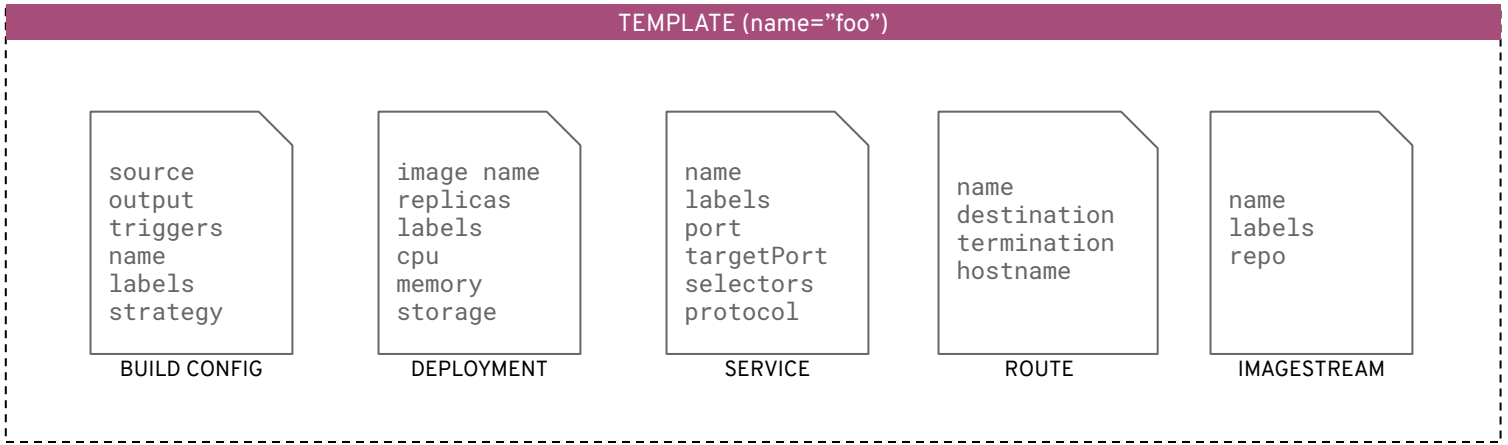
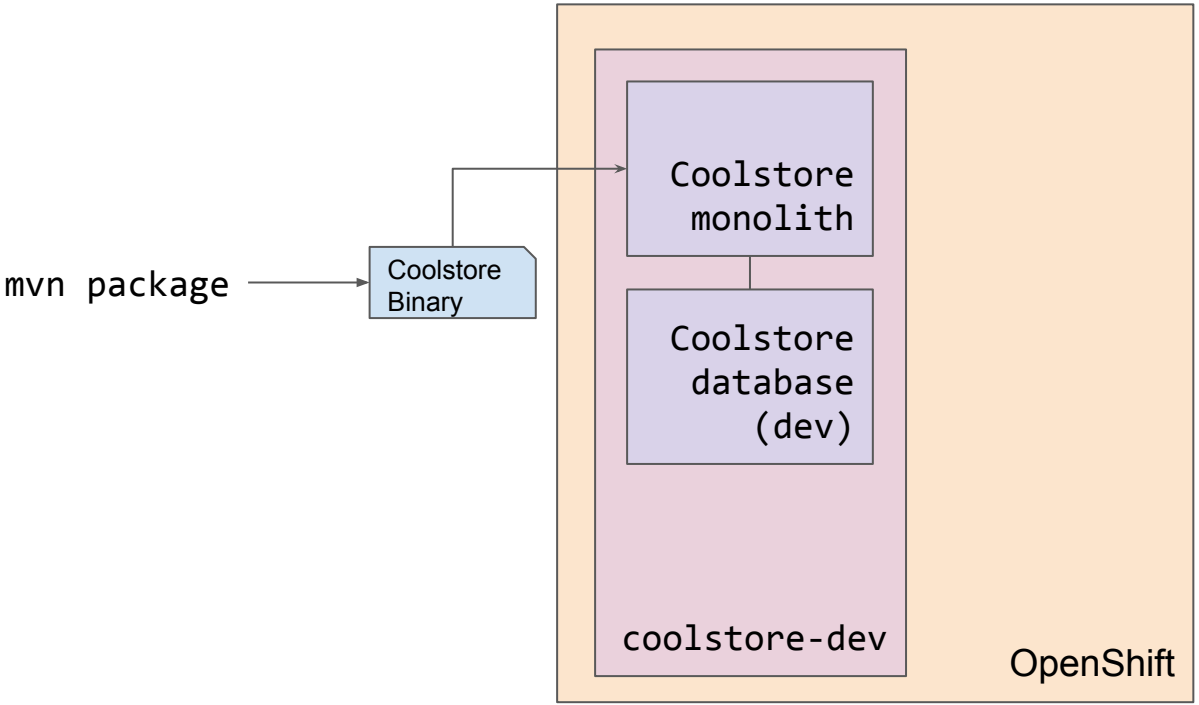
templates define a blueprint for an application that can be instantiated within a project




```
$ oc new-app foo
```

Lab: Developer introduction to OpenShift

Current state



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**

LAB: DEVELOPER INTRO TO OPENSHIFT

WEB: bit.ly/RH-MS-ARO-lab-guides
SLIDES (PDF): bit.ly/RH-MS-ARO-lab-slides

SCENARIO 3 A DEVELOPER INTRODUCTION TO OPENSHIFT

Wrap-up and discussion

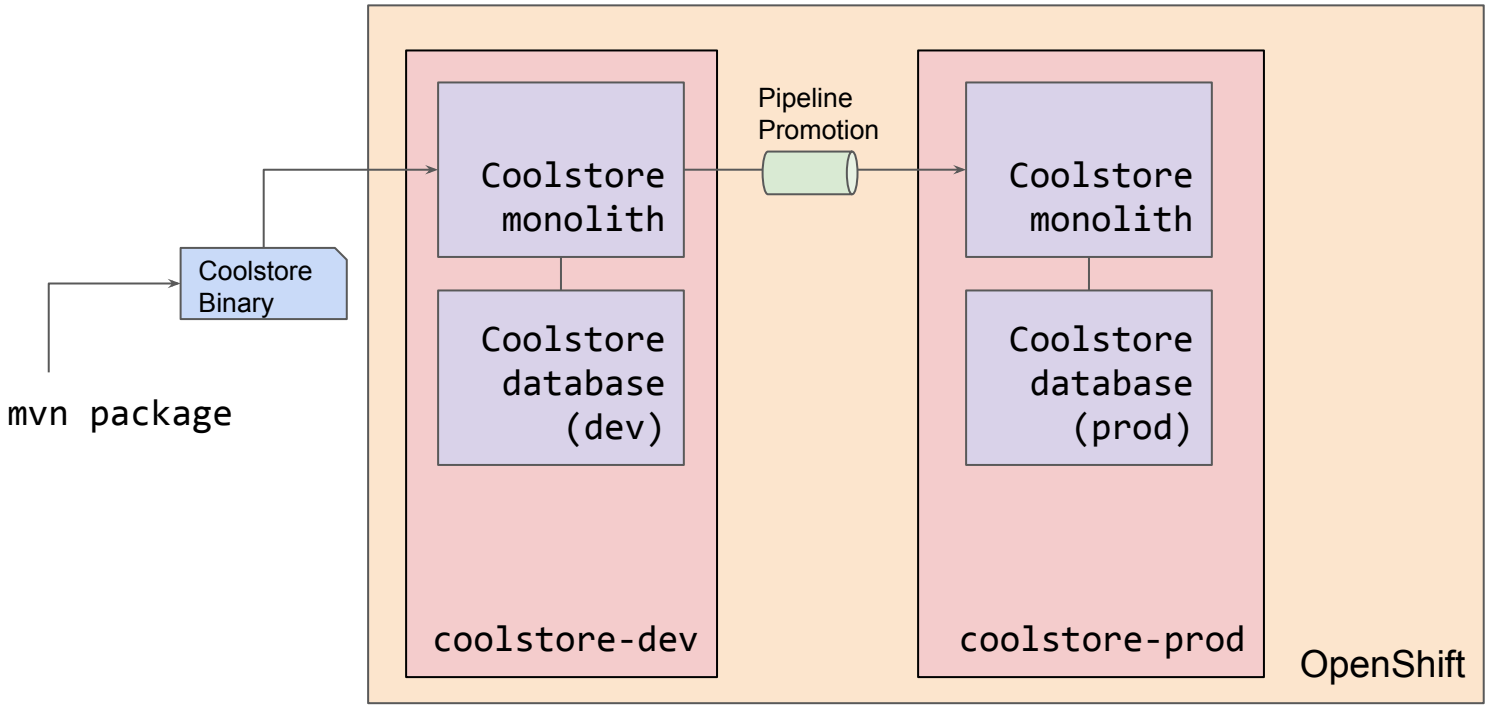
Result of lab

In this lab you learned how to:

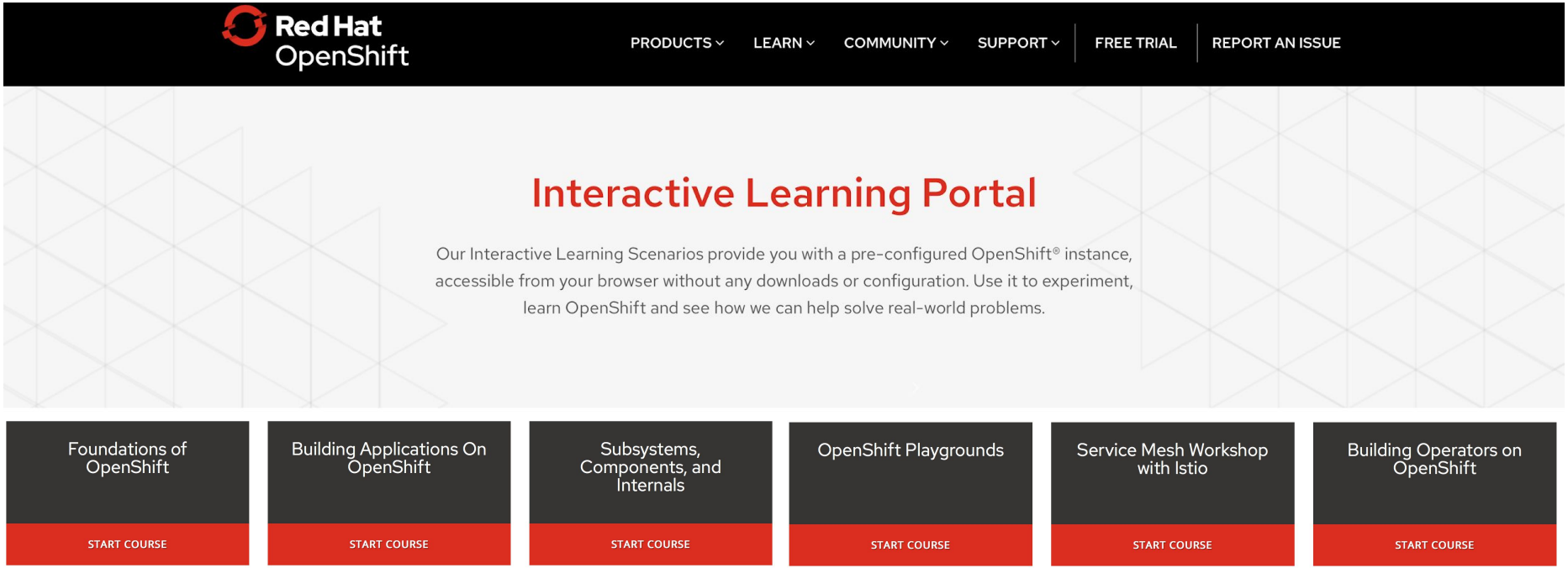
- Do quick deployments with **`oc rsync`**
- Create a production environment separate from dev
- Promote tested/verified builds between environments using OpenShift pipeline builds

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.

Desired result of scenario 3



Learn more: learn.openshift.com



Thank you

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