DO180
Red Hat OpenShift Administration I:
Operating a Production Cluster

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Course Introduction: Red Hat OpenShift Administration I: Operating a Production Cluster

This course prepares OpenShift Cluster Administrators to perform day-to-day management of Kubernetes workloads and collaborate with Developers, DevOps Engineers, System Administrators, and SREs to ensure the availability of application workloads. DO180 focuses on managing typical end-user applications. These applications are accessible from a web or mobile UI and represent the majority of cloud native and containerized workloads. Management of applications also include deployment of their dependencies such as databases, messaging, and authentication systems. This course is based on Red Hat® OpenShift® Container Platform 4.12.

Course Objectives

- Managing OpenShift clusters from the command-line interface and from the web console.
- Deploying applications on OpenShift from container images, templates, and Kubernetes manifests.
- Troubleshooting network connectivity between applications inside and outside an OpenShift cluster.
- Connecting Kubernetes workloads to storage for application data.
- Configuring Kubernetes workloads for high availability and reliability.
- Managing updates to container images, settings, and Kubernetes manifests of an application.

Audience

- System Administrators
- Site Reliability Engineers
- System and Software Architects

Prerequisites

Containers, Kubernetes and Red Hat OpenShift Technical Overview (DO080)
It is also recommended, though not required, that students achieve the Red Hat Certified System Administrator certification

Hello! Instructor Introduction

Instructor: **Jason Trainocate (M)**

Red Hat Certified Instructor

RHCA & RHCE

Microsoft Certified Trainer

Cisco Certified System Instructor

NetApp Certified Trainer

Google Cloud Authorized Instructor
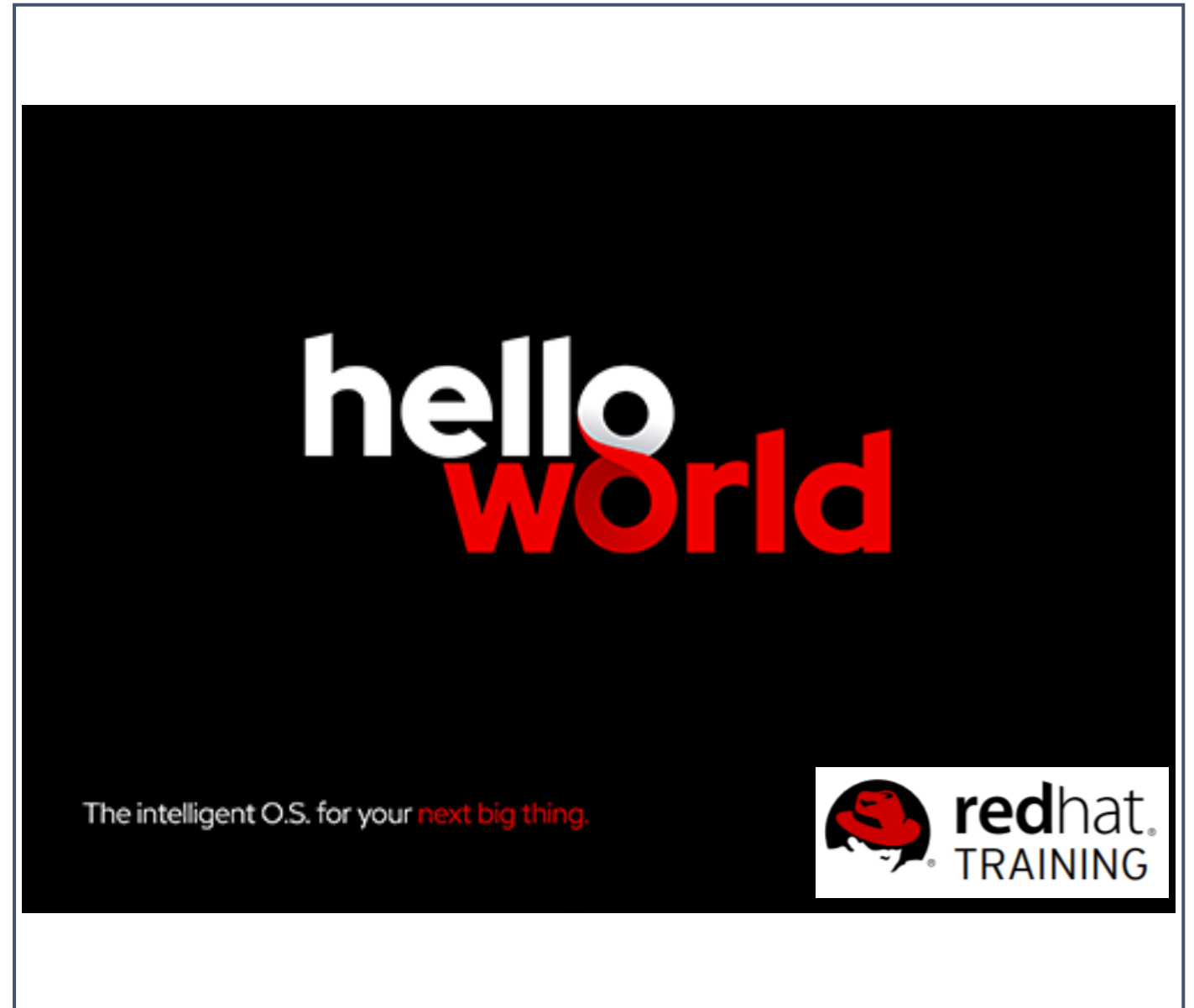
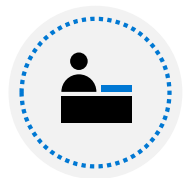# Hello! Student Introductions

Your name

Company affiliation

Title/function
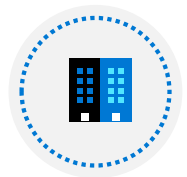
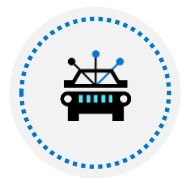Container & Red Hat OpenShift experience

Your expectations for the course

Facilities
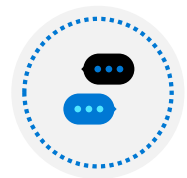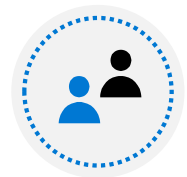
Class hours		Messages	
Building hours		Smoking	
Parking		Internet access	
Restrooms		Recycling	
Meals		Emergency procedures	
Phones			
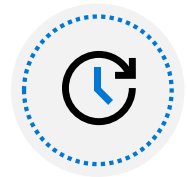
Lab and Material Access
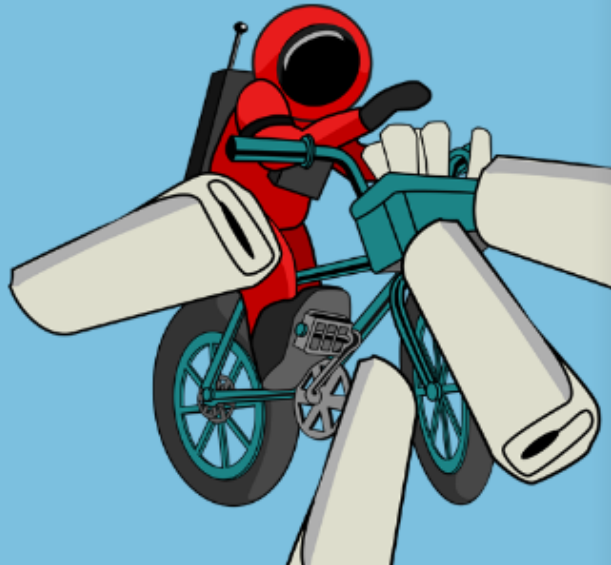
Orientation to the Classroom Environment
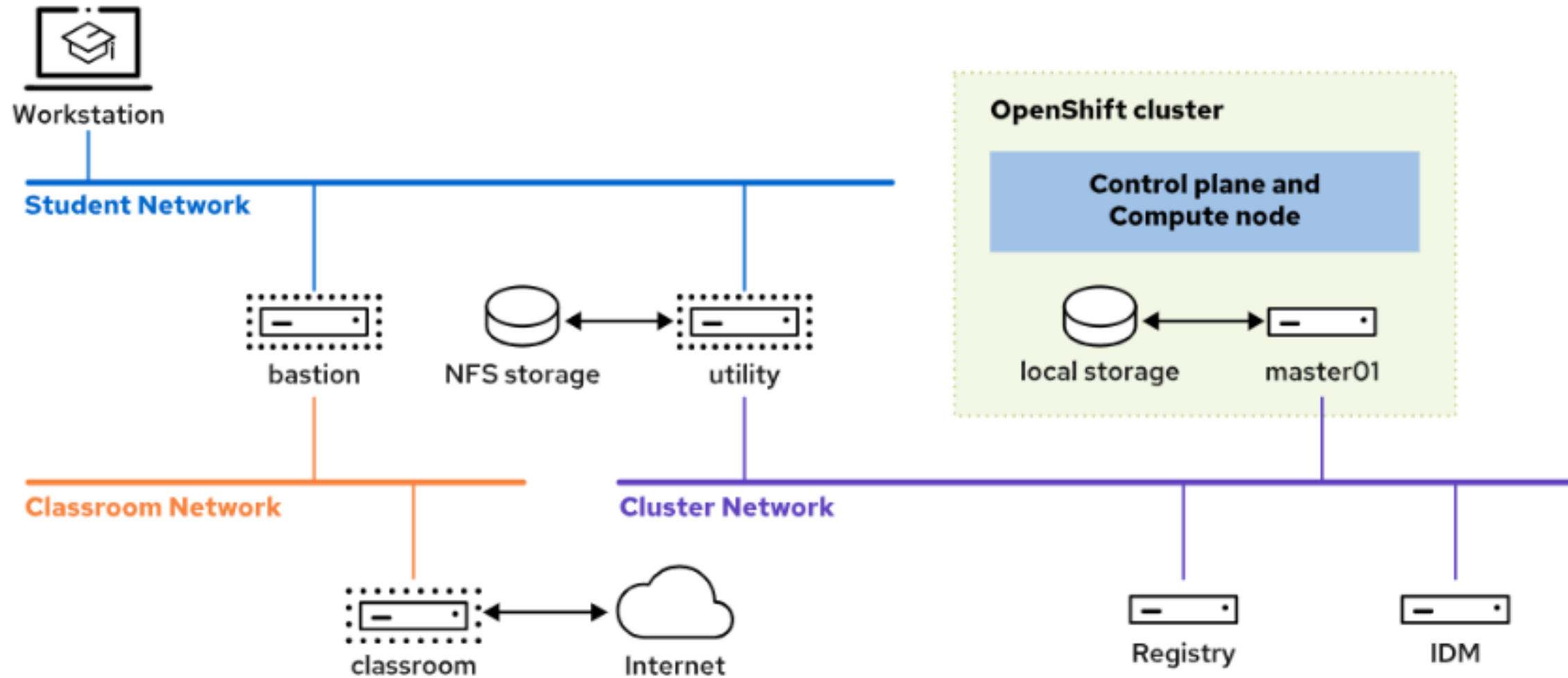
Orientation to the Classroom Environment

Machine name	IP addresses	Role
bastion.lab.example.com	172.25.250.254	Router that links VMs to central servers
classroom.lab.example.com	172.25.252.254	Server that hosts the required classroom materials
idm.ocp4.example.com	192.168.50.40	Identity management server for cluster authentication and authorization support
master01.ocp4.example.com	192.168.50.10	An RHOCP single-node (SNO) cluster
registry.ocp4.example.com	192.168.50.50	Registry server to provide a private registry and GitLab services to the cluster
utility.lab.example.com	192.168.50.254	Server that provides supporting services that the RHOCP cluster requires, including DHCP, NFS, and routing to the cluster network
workstation.lab.example.com	172.25.250.9	Graphical workstation that students use

Day 1 - Chapters	Content: minutes
1　Introduction to Kubernetes and OpenShift	• Lecture: 90 • Quiz: 30 • Guided Exercise: 60
2　Kubernetes and OpenShift Command-line Interfaces and APIs	• Lecture: 75 • Quiz: 10 • Guided Exercise: 60 • Review Lab: 20

Day 2 - Chapters		Content: minutes
3	Run Applications as Containers and Pods	• Lecture: 90 • Quiz: 5 • Guided Exercise: 45 • Review Lab: 30
4	Deploy Managed and Networked Applications on Kubernetes	• Lecture: 90 • Guided Exercise: 55 • Review Lab: 30

Day 3 - Chapters	Content: minutes
5 Manage Storage for Application Configuration and Data	• Lecture: 90 • Guided Exercise: 80 • Review Lab: 30
6 Configure Applications for Reliability	• Lecture: 75 • Quiz: 10 • Guided Exercise: 80 • Review Lab: 30

Day 4 - Chapters	Content: minutes
7 Manage Application Updates	• Lecture: 90 • Guided Exercise: 80 • Review Lab: 30
8 Comprehensive Review	• Review Lab: 4 hours