Module Title   :   DO500: Red Hat Training: DevOps Culture and Practice Enablement

Duration   :   5 days

Overview

Red Hat Training: DevOps Culture and Practice Enablement (DO500) is a 5-day, immersive master class that offers you the opportunity to experience and implement the cultural shift that a successful DevOps adoption journey demands.

How is this course different from any other agile training?

Most agile training offerings focus on a particular framework or are directed at just delivery or just technology, but this course combines the best tools from many leading frameworks. The curriculum blends continuous discovery and continuous delivery together with cultural and technical practices into a unique, highly engaging experience, packed with real-world applications.

Technology considerations

- This class will require internet access to certain sites (AWS, youtube, google drive, online chat tools)
- This course is a "bring your own device" (BYOD) training so you will be expected to bring your own device.
  - Chrome browser suggested

Audience

This course is designed for application developers.

Prerequisite

- Knowledge of agile practices is helpful
- Experience using agile practices and methodologies such as scrum is beneficial

Outline

What is DevOps?

Brainstorm and explore what principles, practices, and cultural elements make up a DevOps model for software design and development.

Pairing and mobbing

Discuss and experience two foundational practices: pair programming and mob programming.

Retrospectives, information radiators, and team sentiment

Examine the value of conducting retrospectives, visualizing work, and assessing team sentiment.

Impact mapping

Discuss the impact mapping discovery practice.

Agile practices

Cover agile practices, including sprint planning, daily standup, showcase, retrospective, and backlog refinement.

Value stream and process mapping

Delve into the practices of value stream mapping and metric-based process mapping.

Continuous integration, deployment, and delivery

Explore the foundational practices of continuous integration, continuous deployment, and continuous delivery.

Event storming

Learn how to use the event storming discovery practice.

User story mapping and value slicing

Examine the user story mapping, value slicing, and empathy mapping practices.

Automated testing, part 1

Develop an understanding of the test-driven development and business-driven development foundational practices, often referred to as automated testing.

Automated testing, part 2

Complete the automated testing lab begun in part 1.

Pipelines as code

Explore continuous integration/continuous delivery pipelines using Jenkins.

Non-functional testing

Discover the merits of non-functional testing.

Build monitoring

Understand how to monitor builds and graphically represent their status as an information radiator.

Demo day

Experiment with the optimal methods of producing a showcase and bring the class to a close.

Note: This course is based on Red Hat OpenShift Container Platform, Red Hat® Ansible Engine, and Red Hat® Enterprise Linux®. Course outline is subject to change with technology advances and as the nature of the underlying job evolves.

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Course Outline :: DO500::

Outcomes

Course outcomes and next steps

What are the learning outcomes you can expect?

To help you make the shift to DevOps, this course takes you through a five-day, immersive simulation. You will gain and apply experience with more than 30 practices, including:

- **Cultural tools** such as social contracts, real-time retrospectives, and team sentiments to align teams.
- **Powerful planning practices** such as impact mapping, event storming, and metrics-based process mapping.
- **Iterative and incremental delivery practices,** including scrum and kanban.
- **Technical programming practices**, including continuous integration, continuous delivery, infrastructure as code, test automation, and test-driven development.

You will be exposed to these and other open practices that are used in Open Innovation Labs and can be found in the Open Practice Library.

You will also participate in hands-on labs that demonstrate how we use Red Hat OpenShift Container Platform and Red Hat Ansible in conjunction with Jenkins to automate the build and deployment of a sample to-do list application and its required infrastructure.

How will my organization and team be impacted?

Many companies are finding that their current organizational structure and software development practices are not ready to deliver the outcomes of digital transformation: shorter time to market, quick feedback loops, and user-driven products. These companies need to adopt and practice DevOps culture and methods to be successful in their digital transformation.

This course introduces you to real-world DevOps culture principles and modern software development practices. You will develop a modern software application using Red Hat OpenShift Cluster Platform, Red Hat Ansible Automation, and other industry-standard DevOps software, tools, and techniques. You'll be prepared to use DevOps principles and open source solutions to start and lead the digital transformation journey at your organization.

Red Hat has created this course in a way intended to benefit our customers, but each company and infrastructure is unique, and actual results or benefits may vary.

How will I be impacted?

As a result of attending this course, you will have experienced DevOps culture, been exposed to numerous DevOps practices, and implemented a small application using what you've learned. You should be able to demonstrate these skills:

- Understand and implement multiple open practices
- Deploy a small multi-tiered application to an OpenShift cluster
- Work as an effective member of an agile team
- Discover, prioritize, and document desired software features and functionality
- Develop software using pair and mob programming styles

Recommended Next Exam or Course

- Container Adoption Journey Bootcamp (DO700)
- OpenShift Development Skills Path
- OpenShift Administration Skills Path
- Open Innovation Labs residency