Red Hat DevOps Pipelines and Processes: CI/CD with Jenkins, Git, and Test Driven Development

Duration: 4 Days **Course Code: DO400**

Overview:

Build essential skills to implement agile and DevOps development processes and workflows.
DevOps practices have enabled organizations to undergo a digital transformation, moving from a monolithic waterfall approach to a rapidly deploying cloud-based agile process. DevOps with Jenkins, Test-Driven Development, and Git version control, improves application time-to-market and code quality.
This approach makes applications more resilient and enables organizations to quickly implement new features and respond to a quickly changing market.
This transformation requires a team of developers trained to use tools that enable them to spend more time coding and testing and less time troubleshooting.
Red Hat DevOps Pipelines and Processes: CI/CD with Jenkins, Git, and Test-Driven Development (TDD) is a practical introduction to DevOps for developers that teaches students the necessary skills and technologies for automated building and deploying of cloud-native applications. You will be able to use the concepts in this course to simplify and more efficiently integrate your application code, build reliable code with TDD, and use automated pipelines to simplify testing. You will learn how to build pipelines, design applications with a “test first” approach, and integrate application code with Git. This course is intended to illustrate the benefits of DevOps and the tools that support its implementation.
Note: *Starting January 2026 this course only exists in CR (classroom) if scheduled or Closed course modalities. No RHLS-Course for this course.*
Customer can get access to the e-learning course content by purchasing a RedHat RHLS Standard subscription (access to the entire RedHat E-learning offering) - Contact us
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Target Audience:

This course is designed for application developers.

Objectives:

- After this course participants should be able to:
- Manage Version control with Git
- Build and execute Jenkins pipelines
- Release strategies
- Build applications with Test Driven Development
- Handle Security scanning and code analysis of applications
- Monitor applications and pipelines
- Consume and troubleshoot pipelines

Prerequisites:

- Experience with application development in Java, Node.js, Python, or others is required.
- Experience with application development or Red Hat Application Development I: Programming in Java EE (AD183) is recommended, but not required.
- Proficiency in using an IDE such as Red Hat® Developer Studio or VSCode
- Introduction to OpenShift Applications (DO101) is recommended, but not required.

Take Red Hat free assessment to gauge whether this offering is the best fit for your skills Red Hat Skills Assessment

- AD183 - Red Hat Application Development I: Programming in Java EE
- DO101 - Introduction to Red Hat OpenShift Applications

Testing and Certification

Follow-on-Courses:

- DevOps Culture and Practice Enablement (DO500)
- Introduction to Containers, Kubernetes, and Red Hat OpenShift (DO180)
- Red Hat OpenShift Development I: Containerizing Applications (DO288)
- DO500 - Red Hat Training: DevOps Culture and Practice Enablement
- DO180 - Red Hat OpenShift Administration I: Operating a Production Cluster
- DO288 - Red Hat OpenShift Developer II: Building and Deploying Cloud-native Applications

Content:

Introduction to continuous integration and continuous deployment (CI/CD)

Describe the principles of DevOps and the role of Jenkins.

Integrate source code with version control

Manage source code changes with Git version control.

Test applications

Describe the foundational principles behind comprehensive application testing and implement unit, integration, and functional testing.

Build applications with test-driven development

Implement and build application features with TDD.

Author pipelines

Create basic pipelines to run Jenkins jobs.

Deploy applications with pipelines

Safely and automatically deploy applications to Red Hat OpenShift Container Platform.

Implement pipeline security and monitoring

Manage the security and monitor the performance of pipelines.

Consume pipelines

Work with (or “Use”) and troubleshoot CI/CD pipelines for automated deployment and automated testing.

Additional Information:

Official course book provided to participants

Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

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