

Red Hat DevOps Pipelines and Processes: CI/CD with Jenkins, Git, and Test Driven Development (TDD) (DO400)

ID DO400 **Price** 3,740.— €excl. tax **Duration** 4 days

Course 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. 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.

Following course completion, you will receive a 45-day extended access to hands-on labs for any course that includes a virtual environment.

Who should attend

This course is designed for application developers.

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 our free assessment to gauge whether this offering is the best fit for your skills.

Course Objectives

Impact on the organization

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.

Impact on the individual

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.

Course Content

- Version control with Git
- Build and execute Jenkins pipelines
- Release strategies
- Build applications with Test Driven Development
- Security scanning and code analysis of applications
- Monitor applications and pipelines
- Consume and troubleshoot pipelines

Detailed Course Outline

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.

About Fast Lane



Fast Lane is a global, award-winning specialist in technology and business training as well as consulting services for digital transformation. As the only global partner of the three cloud hyperscalers- Microsoft, AWS and Google- and partner of 30 other leading IT vendors, Fast Lane offers qualification solutions and professional services that can be scaled as needed. More than 4,000 experienced Fast Lane professionals train and advise customers in organizations of all sizes in 90 countries worldwide in the areas of cloud, artificial intelligence, cyber security, software development, wireless and mobility, modern workplace, as well as management and leadership skills, IT and project management.

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Germany

**Fast Lane Institute for Knowledge
Transfer GmbH**
Tel. +49 40 25334610
info@flane.de / www.flane.de

Austria

ITLS GmbH
(Partner of Fast Lane)
Tel. +43 1 6000 8800
info@itls.at / www.itls.at

Switzerland

**Fast Lane Institute for Knowledge
Transfer (Switzerland) AG**
Tel. +41 44 8325080
info@flane.ch / www.flane.ch