



DEVOPS-104

# Continuous Integration Basics

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## OVERVIEW

<b>Skill Level</b>	:	Beginner
<b>Suitable for</b>	:	Developers who want to set up their projects for Continuous Integration using Maven and GitLab
<b>Duration</b>	:	1 Day

Continuous Integration (CI) is a DevOps practice which allows developers to merge code changes coming from several sources. It means building, testing, and delivering improvements to software code using automation tools that focus on the code's correctness before integration.

Maven is a highly popular build tool for Java projects and is effective when setting up your project for Continuous Integration. This course will help the trainee learn how to set up a basic Maven project, what different types of tests are needed, and how to check which parts of their code still need testing.

In this course, the trainee will also learn how to use GitLab in building, integrating, and verifying their code through hands-on exercises. Lastly, the trainee will learn some of the best practices and conventions in Continuous Integration coming from our consultants' many years of experience in implementing CI.

## COURSE OUTLINE

### What is Continuous Integration?

- Concept
- Benefits
- Overall Process

## Build Tools

- Maven/Gradle/npm
- Automated Tests (Unit/Acceptance/Integration/UI)
- Code Coverage

## CI Tools and Git Practices

- CI Tools (GitLab, Jenkins, AWS CodePipeline, CircleCI, Bamboo)
- Intro to GitLab
- Trunk-based development
- Pull Requests/Merge Requests
- Code Reviews
- Code Freeze

## Best Practices and Conventions

- Integrate early and often
- Keep the build green at all times
- Write tests as part of your stories
- Write tests when fixing bugs
- Collective code ownership



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### Enquiries



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