



# MFE-IT

Reference: 2B/EN/GL2C

## GitLab CI/CD Training Course

Master the Automation of Testing, Builds and Deployments for  
Your Projects

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*Duration: 2 Days | Hours: 14 h*

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*Remote · Sessions guaranteed from 1 registrant · 60% hands-on practice*

## DESCRIPTION

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GitLab CI/CD is much more than a continuous integration tool: it is a comprehensive automation platform that allows you to test, deliver and deploy your code at every stage of the DevOps cycle.

This training guides you through the implementation of efficient, understandable and maintainable pipelines, suitable for all types of projects (monoliths, microservices, front-end, APIs). You will learn how to structure your `.gitlab-ci.yml`, manage runners, environments and secrets, and automate your development processes end to end.

## LEARNING OBJECTIVES

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By the end of this training course, participants will be able to:

- Understand how GitLab CI/CD works and its components
- Write simple and then advanced `.gitlab-ci.yml` pipelines
- Define build, test, lint, package and deployment steps
- Manage environment variables, runners and target environments
- Deploy automatically to servers (Docker, SSH, Kubernetes)
- Monitor pipelines and diagnose failures effectively

## PREREQUISITES

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- Proficiency in Git and collaborative versioning
- Basic knowledge of development (back-end or front-end)
- Comfortable with the terminal and configuration files (YAML)

*Because each participant is unique, a personalised interview is systematically organised in advance with our expert to design a training programme perfectly aligned with their objectives, level and professional challenges.*

## TARGET AUDIENCE

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Developers, tech leads, DevOps engineers and architects with prior experience using Git in a collaborative environment.

## DETAILED PROGRAMME

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The training alternates between theoretical input and hands-on practice (approximately 60% of the time). Modules are built around practical exercises based on real-world business use cases.

### Module 1 – Introduction to GitLab CI/CD

- Introduction to GitLab, runners, jobs and stages
- DevOps cycles and YAML basics
- Architecture of a typical pipeline

### Module 2 – Creating your first pipeline

- .gitlab-ci.yml structure and simple jobs
- Test steps and basic syntax
- Manual versus automatic execution

### Module 3 – Variables, contexts and secrets

- Environment variables and dotenv
- Secrets management and credentials security
- Dynamic .gitlab-ci patterns

### Module 4 – Automated builds and tests

- Running unit tests, linting, compiling and packaging
- Caching strategies and artefacts
- Parallelisation and matrix jobs

### Module 5 – Automatic deployment

- Staging and production environments
- Deployment via Docker, SSH/SCP or Kubernetes
- Strategies: automatic, manual or with validation

### Module 6 – Advanced and conditional pipelines

- Includes, templates and parent-child pipelines
- Multi-project pipelines and triggers
- Schedules and rules

## Module 7 – CI/CD in the production chain

- Integration with Jira and Slack alerts
- Quality tracking and delivery monitoring
- Log auditing and incident response

## TEACHING METHODS

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### Format and Delivery

The training is delivered remotely via an interactive virtual classroom. It can also be delivered on-site, with content customised to match the needs of your professional project. The theory/practice split is approximately 40%/60%.

### MFE-IT Ultra-Personalised Format

Each session accommodates between 1 and 3 participants, ensuring highly individualised support. A preliminary interview allows us to tailor the content to each participant's profile. Inter-company sessions are guaranteed from just 1 registrant (except in cases of force majeure).

### Skills Assessment

Throughout the training, the trainer assesses participant progress through multiple-choice questions, role-playing exercises and hands-on work. At the end, a certificate of achievement is issued to each participant.

### Post-Training Support

For one month following the training, each participant can contact MFE-IT trainers with questions about implementing acquired knowledge. A response is provided by email or telephone within 48 working hours.

### Accessibility

MFE-IT is committed to welcoming people with disabilities. Contact: [contact@mfe-it.com](mailto:contact@mfe-it.com).

## PRACTICAL INFORMATION

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### Trainer Resources

- Structured demonstrations aligned with the detailed programme
- Exercise briefs and solutions throughout the training
- A ready-to-use technical environment for practical workshops
- Trainer validation of acquired knowledge at the end of each workshop
- Digital reference documents

## **Certification and Validation**

At the end of the training, a certificate is sent by email specifying the objectives, nature, duration and assessment results. A completion certificate can also be provided on request.

## **Benefits for Participants**

- Train from your workplace or home, with no travel required
- Benefit from an expert trainer-consultant on the subject
- Enjoy an ultra-personalised format (1 to 3 participants)
- Continue training even in the event of unforeseen circumstances

## **Benefits for the Organisation**

- Optimise the training budget by reducing travel and accommodation costs
- Offer quality training to all employees, regardless of location
- Reduce absence time linked to travel
- Support team upskilling in all contexts