

Course : GitLab CI/CD, mastering the management of your software development lifecycle

from continuous integration to continuous deployment

Practical course - 3d - 21h00 - Ref. GLN

Price : 2360 CHF E.T.



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BEST

GitLab is not just a release manager, it's also a competitive solution for DevOps engineering. This hands-on course will teach you how to use this tool to improve project collaboration and automate a complete development cycle (builds, tests, deployments...).



Teaching objectives

At the end of the training, the participant will be able to:

- ✓ Learn more about GitLab
- ✓ Practice versioning with Git and collaborate with GitLab
- ✓ Implement continuous integration (CI) and continuous deployment (CD) with GitLab
- ✓ Understand the building blocks of a DevOps software factory

Intended audience

Developers, project managers, system administrators, architects.

Prerequisites

Basic knowledge of Linux commands. Basic knowledge of version management with Git.

Practical details

Hands-on work

Theoretical presentations alternate with practical applications.

Course schedule

PARTICIPANTS

Developers, project managers,
system administrators, architects.

PREREQUISITES

Basic knowledge of Linux commands.
Basic knowledge of version
management with Git.

TRAINER QUALIFICATIONS

The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

ASSESSMENT TERMS

The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more. Participants also complete a placement test before and after the course to measure the skills they've developed.

1 The GitLab offer

- GitLab CE (Community edition). GitLab EE (Enterprise edition).
- The different types of GitLab use: gitlab.com, on premise, on cloud (AWS, GCP).
- Registration procedure on gitlab.com.

Hands-on work

Create a GitLab account on gitlab.com. Navigate the interface.

2 Git and its use with GitLab

- Git concepts: blob, tree, commit, revision, branch, tag...
- Local file management. View and modify work history.
- Branch management. Branch mergers and conflict management.

Hands-on work

Setting up a remote repository and simulating collaborative work.

3 Repository management with GitLab

- Managing project collaborators and their rights.
- The exit system and the link with commits.
- Introducing the wiki and snippets.

Hands-on work

Setting rights and creating merge requests.

4 GitLab CI/CD

- Introducing GitLab CI/CD and GitLab runners.
- Introducing Docker.
- The gitlab-ci.yml manifest file, an introduction to the YAML language.
- Essential tags for describing steps, jobs and processes (courses, images, scripts, etc.).
- Pipeline execution monitoring. Automatic, manual and scheduled jobs.
- Artifacts and performance improvement with cache.
- The official documentation on manifest file syntax.
- Environment management.

Hands-on work

Simple examples of job creation and chaining.

5 Going further with GitLab

- Runner types (shared runner, specific runner and group runner).
- Shared runners available on gitlab.com managed by the GitLab team.
- Scalability of runners with Docker Machine.
- The Docker executor and available images: MySQL, PostgreSQL, Redis, MongoDB, Ruby...
- Integration tests, functional tests, scalability tests.
- Deployment in the cloud.
- The Kubernetes executor and job distribution in a Kubernetes cluster.
- Integration of the Prometheus monitoring tool.

Hands-on work

Set up a specific runner. Execute job sequences on different runners.

TEACHING AIDS AND TECHNICAL RESOURCES

- The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
- At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
- A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training.

ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at psh-accueil@orsys.fr to review your request and its feasibility.

6 Additional GitLab features

- Shared runners for Windows.
- Infrastructure as code with Terraform.
- Auto DevOps.
- Dynamic safety tests (DAST).

Dates and locations

REMOTE CLASS

2026 : 4 May, 1 June, 29 June, 3 Aug., 7 Sep.,
5 Oct., 18 Nov., 16 Dec.