Git: Implementing Version Control

Hands-on course of 2 days - 14h
Ref.: GIT - Price 2025: 1 730 (excl. taxes)

EDUCATIONAL OBJECTIVES

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

Understand the basic concepts of managing versions and the benefits of decentralization

Install and configure the Git tool in Windows

Create and initialize a repository with Git.

Work with Git commands to manage files and branches

Implement a project in collaborative mode with Git.

THE PROGRAMME

last updated: 05/2024

1) Overview of Git

- Basic concepts of version control.
- Centralized or distributed management
- Different version management solutions: (Git, CVS, SVN, Mercurial, Bazaar, etc.).
- Benefits of decentralization. Operating principle.

2) Installation and configuration

- Installation on various systems: Unix/Windows.
- The Windows emulation system msysgit.
- Configuring the .gitconfig file. The console.
- Declaring a version differential analysis tool.

Hands-on work : Installing and configuring GIT in Windows.

3) Fundamentals of using Git

- The Git object model: Blob, tree, commit, and tag.
- The Git directory and working directory.
- The index or staging area.
- Creating and initializing a repository.
- The concepts of branches, tags, and repositories,
- Gitk visualization tool.

Hands-on work : Creating and initializing a repository. Using the Gitk visualization tool.

4) Local file management

- Checking the state of the working tree.
- Adding, ignoring, editing, deleting, and searching for files.
- Cancelling and viewing changes.
- Revision history trail.
- Logs (statistical, formating, etc.).

Hands-on work : Working with common Git commands to manage and edit files.

5) Branch management

- The "master" branch.
- Creating branches and sub-branches.
- Changing branches.

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.

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.

- Merging a branch and conflict management.
- Comparing two branches.

Hands-on work : Common Git commands to manage branches (create, merge, compare)

6) Work-sharing and collaboration

- Setting up a public or private remote repository
- Publishing edits (push operation).
- Retrieving the team's edits.
- Tracking branches. Failure management.

Hands-on work : Setting up a remote repository and simulating collaborative work.

7) Implementing Git tools

- Git-gui and TortoiseGIT, graphical browsing in Git.
- GitWeb, graphical browsing within the repositories.
- GitHub, BitBucket, GitLab, repository hosting and project management services.

Hands-on work : Working with several tools.

DATES

REMOTE CLASS
2025 : 13 nov.