



# MFE-IT

Reference: 2B/EN/GA

## Advanced Git Training Course

Deepen your Git Expertise for Complex Projects, Structured Teams and Clean Deliveries

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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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You already use Git on a daily basis, but sometimes encounter complex situations: merge conflicts, chaotic histories, multiple branching strategies, errors to correct without data loss. This advanced training gives you the keys to master Git in depth, optimise your workflows and secure your delivery cycles.

Through challenging practical cases, you will learn how to manipulate history with finesse, choose the right workflows for your projects, and integrate Git into your CI/CD processes with clarity and performance.

## LEARNING OBJECTIVES

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

- Review advanced concepts (rebase, cherry-pick, amend, reflog, reset)
- Properly correct Git handling errors
- Clean up and rewrite history to make it readable and maintainable
- Understand the differences between merge, rebase, squash and fast-forward
- Implement a Git Flow, trunk-based development or custom strategy
- Integrate Git into CI/CD pipelines with rigour (GitLab, Jenkins, GitHub Actions)
- Manage versions, tags, releases, hotfixes and rollbacks

## PREREQUISITES

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- Knowledge of basic commands: init, clone, commit, branch, merge, push, pull
- Previous experience using Git in a real collaborative project
- Comfortable with the command line and GitHub/GitLab interfaces

*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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Intended for developers, tech leads, DevOps engineers and architects with prior experience using Git.

## 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 – Advanced concepts of Git history

- Interactive rebase, amend, squash, cherry-pick and bisect
- Advanced log filtering and reflog
- Understanding Git's object model: blobs, trees, commits, refs

### Module 2 – Resolution of complex conflicts

- Conflicts during rebasing and merging
- Manual editing and conflict markers
- Resolution strategy by file or section

### Module 3 – History rewriting and cleaning

- Clean rewrite before public merge
- Cleaning up unnecessary commits and anonymisation
- When NOT to rewrite shared history

### Module 4 – Git incident management

- Restoring lost commits and rollbacks
- Common errors: force push, incorrect rebase base, persistent conflict
- Recovery toolkit using reflog and filter-branch

### Module 5 – Branching strategies and integration

- Git Flow, trunk-based development and GitHub Flow
- Monorepo versus multirepo trade-offs
- Submodules and subtrees in real projects

### Module 6 – Professional workflows

- Hooks and automated pipelines
- Merge rules and branch protection
- Release automation patterns

## Module 7 – Version and delivery management

- Creation and maintenance of tags
- Release branches and hotfixes
- Backward compatibility and semantic versioning

## 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