

**Git Installation and Configuration**

**Course Number:** GIT-102  
**Duration:** 1 day

**Overview**

This Git training course teaches students everything they need to know to install and configure Git.

**Prerequisites**

No prior Git experience is presumed. Prior experience with other version control systems is helpful but not required. Experience with OS administration concepts suggested.

**Materials**

All attendees receive comprehensive courseware.

**Software Needed on Each Student PC**

* Git 2.x or later
* Internet access for all attendees and the instructor

**Objectives**

* Understand the fundamentals of Git and version control
* Install and configure Git
* Integrate Git with other version control systems you’re already using, such as Subversion
* Understand Git internals

**Outline**

* Introduction
* Overview of Git and Version Control Software Concepts
  + About Version Control
  + Local vs. Centralized vs. Distributed VCSs
  + History of Git
  + Differences between Git and other VCSs
  + Git Terminology & States
  + Git Tools & Clients
* Installing Git and Basic Configuration
  + Installing Git on a Client OS
  + Git GUI Options
  + Installing Git on a Server
  + Protocol Options
  + Generating SSH Keys
  + Smart HTTP
  + Git Daemon
  + GitWeb
  + GitLab
  + 3
* Configuring Git
  + git help
  + Server Configuration
  + Git Attributes
  + Git Hooks
  + Git-Enforced Policy
  + Security
* Git and Other VCSs
  + Bridges
  + Git and SVN
  + Setting Up Connection to SVN
  + Committing Back to SVN
  + Subversion Branching
  + Git and Team Foundation Server
  + git-tf vs. git-tfs
  + Git and Mercurial
  + git-remote-hg
  + Server-side Repository
  + Branches and Bookmarks
  + Git and Perforce
  + Git and P4
  + Migrating to Git
* Git Internals
  + Plumbing vs. Porcelain Commands
  + Git Objects
  + Git References
  + Packfiles
  + Refspec
  + Transfer Protocols
  + Maintenance and Data Recovery
  + Environment Variables
* Conclusion