

**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