

## Git Version Control For Software Developers And Administrators

### Course Summary

#### Description

This course will introduce the student to the concepts and practical commands of Git, provide best practices and guidelines.

Git is the most popular modern version control system. Originally developed by Linus Torvald for the 4,000 of Linux kernel developers, Git took the world by storm and became a de-facto standard for new software projects, especially in the Big Data world.

#### Topics

- Git Terminology
- Basic Git operations
- Making changes, staging and committing
- Merge and Conflict resolution

#### Audience

This course is designed for Software Developers

#### Prerequisites

- Basic computer (Windows or Mac or Linux) literacy
- Optional command line skills
- Desire to learn and use a version control
- Zero Install: There is no need to install hadoop software on students' machines! A working git repository will be provided for students.
- A SSH client (Linux and Mac already have ssh clients, for Windows Putty is recommended)

#### Duration

One Day

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### Course Outline

#### *I. Git Terminology*

- A. Repository
- B. Working Copy
- C. Index/Staging area
- D. Blobs, Trees
- E. Cloning
- F. Remotes
- G. Pulling + Pushing
- H. Local history vs. Public history

#### *II. Basic Git operations*

- A. Viewing a commit
- B. Switching branches

#### *III. Making changes, staging and committing*

- A. Staging a commit
- B. Making a commit
- C. Pushing your change
- D. Undoing latest local commit
- E. Reverting a commit

#### *IV. Merge and Conflict resolution*

- A. How merge conflicts happen
- B. Preventing merge conflicts
- C. How to resolve a merge conflict