Use Git Like a Boss

Kevin W. Gisi

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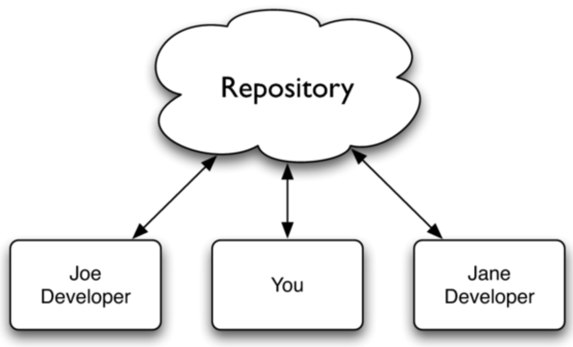
Summary

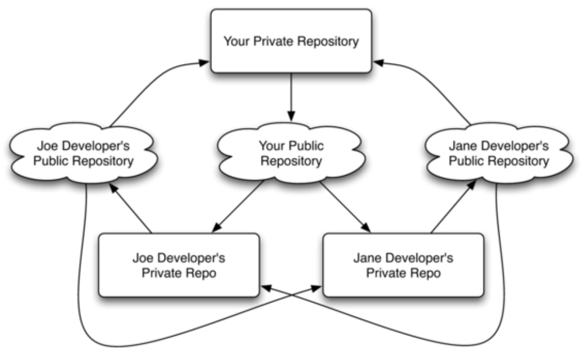
Move out Subversion; there's a new man in town. Learn how a decentralized version control system can help make your workflow easier, regardless of what language you use. We'll walk through how to manage a project using Git, and use some branching, tagging, recovery, and a host of other features along the way. Come see how easy it is to branch and merge without the usual headaches.

Centralized Versioning



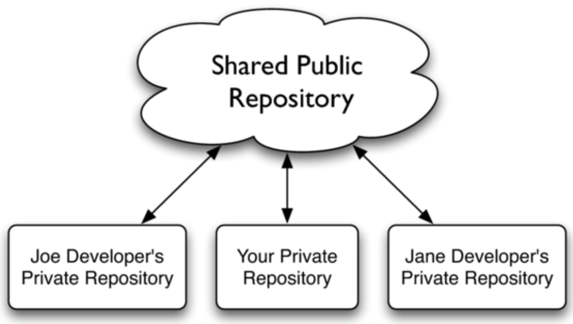
For some version control systems, the structure is centralized. This means that the code is actually hosted on a single server (or cluster of servers). Clients are able to able to pull down copies of the code, and push back changes, but any branching, merging, committing, is all done on a single versioning server. Subversion is an example of a centralized version control system.

Decentralized Versioning


Your Private Repository
Joe Developer's Public Repository
Your Public Repository
Jane Developer's Public Repository
Joe Developer's Private Repo
Jane Developer's Private Repo

Decentralized version control sytems such as Git follow a different philosophy. They, in fact, do away with clients. Instead, users are able to create local repositories, and commit, branch, merge all on their own machine. Once they are satisfied with their changes, they can push their repository's commits to another repository, but there is no requirement that there be any single repository that is considered the "master" repository. This has the added benefit of allowing users to make shorter commit cycles, and use the version control system almost like a word-processor's auto-save tool.

Git in Practice


Shared Public Repository
Joe Developer's Private Repository
Your Private Repository
Jane Developer's Private Repository

While Git is a decentralized system, most users tend to use Git in a hybridized manner - each user has a local repository, but there is also a remote repository that acts as a single point from which all users pull updates and push changes. For many, Github is this shared repository.

Linus's Take on Source Control

Tarballs are better than CVS

Feature Branching