

Git Overview and Use Case Example

Chris Olson

Thursday, 2019-02-14, 10:30 PST (17:30 UTC)

Connection Information

<https://global.gotomeeting.com/join/157892821>

You can also dial in using your phone.

United States: +1 (312) 757-3121

Access Code: 157-892-821

Presentation

[Slides](#)

[Recording](#)

[Demo Repository](#)

Attendees

Jocelyn Elya, Carolina Berys-Gonzalez, Joseph Gum, Renee Richardson, Chris Olson, Liqing Jiang, Karen Stocks, Samantha Kuglen, Shawn Smith, Mathew Biddle, Susan Becker, Steve Diggs

Minutes

1. Intro on Chris Olson
 - a. Geological Data Center at Scripps
 - b. Main projects: R2R, Proposal support database
2. Software Carpentry
 - a. Their intro to git: <http://swcarpentry.github.io/git-novice/>
 - b. <https://software-carpentry.org/>
3. "I swear it worked last week."
4. Git is set of command line tools to track changes
 - a. Built to facilitate coordination between developers
 - b. Git is not GitHub
5. Core Commands
 - a. git init, git status, git add, git commit, git diff, git checkout

6. Live demo
 - a. Hidden .git directory holds all files that git needs to track your repository
 - b. git commit -m "message about the commit"
 - c. Git diff to show changes between two commits
7. Rebase replays feature commits on top of master commits
8. Remotes - a place to put a repository. GitHub, Bitbucket, GitLab are popular.
 - a. "GitHub - the social media of coding"
 - b. GitHub - ~\$25 a month for 5 users.
 - c. GitLab is open source
 - d. Best practice to put a README doc in your repo if it's public on one of these sites.
 - i. Include software requirements, how to install
9. "git log --online --decorate" different way to view logs
10. Tips
 - a. Add aliases and user information to .gitconfig in home directory
 - b. Naming stable releases with tags
 - c. DOI-ing through Zenodo. To cite specific code version that was used to create a product. Free for academic institutions.
11. Discussion
 - a. Mathew Biddle: ESIP software and services citation cluster just released this: https://esip.figshare.com/articles/Software_and_Services_Citation_Guidelines_and_Examples/7640426 on how to cite software/services
 - b. Jocelyn Elya - How can you keep certain branches private?
 - i. You can configure different remotes for different branches
 1. But only do this if there's something you absolutely need to keep private, for security reasons for example
 - ii. It's convention that people know that code in feature branch is incomplete and they use at their own risk
 - c. Fork - like an external branch
 - i. Joseph Gum: All forks are branches, not all branches are forks. Forks generally come from repos you don't control.
 - d. Liqing Jiang - is GitHub a long-term storage solution?
 - i. GitHub's partnership w/ Zenodo gives Chris confidence that it is. They archive it outside of GitHub.
 - e. Mathew Biddle: How can you manage git repos on several different servers that aren't connected? Chris - put anything that's specific to a single machine in a configuration file that's ignored by git (listed in .gitignore file).