

Git

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What is git?

Git is *not* SVN++

I. Git is *a filesystem*

The Git Filesystem Has

- content-addressable data
- trees
- history
- remote synchronization
- local metadata

2. Git is a toolkit

git git-add git-add--interactive git-am git-annotate git-apply git-archimport
git-archive git-bisect git-blame git-branch git-bundle git-cat-file git-
check-attr git-check-ref-format git-checkout git-checkout-index git-cherry
git-cherry-pick git-citool git-clean git-clone git-commit git-commit-tree
git-config git-count-objects git-cvsexportcommit git-cvsimport git-cvsserver
git-daemon git-describe git-diff git-diff-files git-diff-index git-diff-tree
git-fast-export git-fast-import git-fetch git-fetch--tool git-fetch-pack git-
filter-branch git-fmt-merge-msg git-for-each-ref git-format-patch git-fsck
git-fsck-objects git-gc git-get-tar-commit-id git-grep git-gui git-hash-
object git-http-fetch git-http-push git-imap-send git-index-pack git-init
git-init-db git-instaweb git-log git-lost-found git-ls-files git-ls-remote
git-ls-tree git-mailinfo git-mailsplit git-merge git-merge-base git-merge-
file git-merge-index git-merge-octopus git-merge-one-file git-merge-ours git-
merge-recursive git-merge-resolve git-merge-stupid git-merge-subtree git-
merge-tree git-mergetool git-mktag git-mktree git-mv git-name-rev git-pack-
objects git-pack-redundant git-pack-refs git-parse-remote git-patch-id git-
peek-remote git-prune git-prune-packed git-pull git-push git-quiltimport git-
read-tree git-rebase git-rebase--interactive git-receive-pack git-reflog git-
relink git-remote git-repack git-repo-config git-request-pull git-rerere git-
reset git-rev-list git-rev-parse git-revert git-rm git-send-email git-send-
pack git-sh-setup git-shell git-shortlog git-show git-show-branch git-show-
index git-show-ref git-stash git-status git-stripSPACE git-submodule git-svn
git-symbolic-ref git-tag git-tar-tree git-unpack-file git-unpack-objects git-
update-index git-update-ref git-update-server-info git-upload-archive git-
upload-pack git-var git-verify-pack git-verify-tag git-web--browse git-
whatchanged git-write-tree gitk

Why git?

Git Advantages

- crazy fast
- works disconnected
- allows many distribution models
- as granular as you need
- encourages agile

Individual Workflows

- basics
- little branches
 - merging and rebasing
 - staging
 - stashing
- cleaning up history

Navigation

- treeish
- console tools
- graphical tools

Team Workflows

- basics
- central repository
- dictator and lieutenants
- release manager

The Politics of Git

- forking: good
- testing: more important than ever
- code: naturally open
- leadership: based on merit

Git Resources

Chacon, Scott. <http://onrails.org/articles/2008/06/01/railsconf-2008-git-talk-by-scot-chacon-video>. Git presentation at RailsConf

Chacon, Scott. <https://peepcode.com/products/git-internals-pdf>. Git internals.

Grosenbach, Geoffrey. <http://peepcode.com/products/git>. Git peepcode screencasts.

Halloway, Stuart. <http://github.com/relevance/git-control>. This presentation and accompanying samples.

Torvalds, Hamano, et al. <http://git.or.cz/>. Git