GIT QUICK REFERENCE CARD

Most frequently used GIT commands – Version v1.1 May 2014

Main commands

add.......... Add file contents to the index

-A [:/] adds all file changes including deletions to the staging area [for the whole tree]

-f allow adding otherwise ignored files

-p choose hunks of patch between the index and the work tree and add them to the index

am........... Apply a series of patches from a mailbox

archive...... Create an archive of files from a named tree

bisect....... Find by binary search the change that introduced a bug

⇒ search for existence of *file* in last commits: `bisect run test -f` *file.txt*

branch....... List, create, or delete branches

-a lists all branches including the remote branches

-d delete ... `branch`

-m rename branch: ...`old_name new_name`

-v lists more information about the branches

bundle....... Move objects and refs by archive

checkout..... checkout a branch or paths to the working tree (prepend -- before path to avoid ambiguousity).

-b create a branch `new_name` and switch to it instantly

⇒ restore working tree and reset index: `checkout HEAD - -` *dir*

cherry-pick . can be used to change order of commits

citool....... Graphical alternative tocommit

clean........ Remove untracked files from the working tree

-f force (required!)

-x include hidden files

-d directories as well

clone........ Clone a repository into a new directory

commit....... Record changes to the repository

-a adding changes of files known by the Git repository to the commit

-m Set comment for commitment – correct it with prepending --amend to argument

describe..... Show the most recent tag that is reachable from a commit

diff .... Show changes between commits, commit and working tree, etc.

--cached compare stage area with last commit

fetch .... Download objects and refs from another repository

format-patch Prepare patches for e-mail submission

gc........... Cleanup unnecessary files and optimize the local repository

grep .... Print lines matching a pattern

gui.......... A portable graphical interface to Git

init .... Create an empty git repository or reinitialize an existing one

log.......... Show commit logs (prepend -- before path to avoid ambiguousity)

-p show diffs of each commit

--stat precise output with some stats

--abbrev-commit
shortend (but unique) SHA-1 values for the commit objects

--oneline show logs as shortened oneliner

--reverse reverse log-history output

--follow entire history including renames

--graph show visual timeline

⇒ show all files that ever existed in HEAD: `git log --pretty=format: --name-status | cut -f2- | sort -u`

merge .... Join two or more development histories together

-s specify your merge strategy (see man git-merge)

-X apply option to strategy (eg. *ours*, *theirs*)

--ff only update the branch pointer, without creating a merge commit (default)

mv........... Move or rename a file, a directory, or a symlink

notes........ Add/inspect commit notes

pull .... Fetch from and merge with another repository or a local branch

push .... Update remote refs along with associated objects

⇒ delete branch in remote repo called testbranch: `push origin :testbranch`

rebase....... Forward-port local commits to the updated upstream head

-i rebase interactively

--autosquash
When the commit log message begins with "squash! ..." (or "fixup! ..."), automatically modify the todo list of `rebase -i`

reset........ Reset current HEAD to the specified state (Remove a *file* from staging area)

--soft move HEAD pointer only

--mixed resets staging area to new HEAD (default!)

--hard resets staging area and working tree to new HEAD

revert .... Revert an existing commit

rm........... Remove files from the working tree and from the index

-r remove recursive – for removing additionally from repo, add --cached *

shortlog..... Summarize git log output

show .... Show various types of objects

⇒ allows you to see and retrieve files from branches, commits and tags: `show [reference]:[filename] > out.txt`

stash........ Stash the changes in a dirty working directory away

status .... Show the working tree status

submodule ... Initialize, update, add or inspect sub-modules
  --recurse-submodules
        pull changes from main repo + sub-modules

tag .... Create, list, delete or verify a tag object signed with GPG

gitk .... The git repository browser

Manipulators

config .... Get and set repository or global options
  --list   show all items in config
  --get-regexp
        show given pattern in my configuration, e.g. 'alias'
  --global write to global ~/.gitconfig file
  --system write to system-wide configuration
  --local   to repository's configuration .git/config
⇒   set alias for staged file prompt: config --global alias.staged 'diff --cached'

fast-export . Git data exporter

fast-import . Backend for fast Git data importers

filter-branch
        Rewrite branches

mergetool ... Run merge conflict resolution tools to resolve merge conflicts

pack-refs ... Pack heads and tags for efficient repository access

prune .... Prune all unreachable objects from the object database

reflog .... Manage reflog information

relink .... Hardlink common objects in local repositories

remote .... Manage set of tracked repositories
      -v show details about the remotes
⇒   remove all branches which are not in the remote anymore: remote update --prune

repack .... Pack unpacked objects in a repository

replace ...... Create, list, delete refs to replace objects

Interrogators

annotate ..... Annotate file lines with commit information

blame .... Show what revision and author last modified each line of a file

cherry .... Find commits not merged upstream

count-objects
        Count unpacked number of objects and their disk consumption

difftool ..... Show changes using common diff tools

fsck .... Verifies the connectivity and validity of the objects in the database

get-tar-commit-id
        Extract commit ID from an archive created usingarchive

help .... Display help information about git

instaweb ..... Instantly browse your working repository in gitweb

merge-tree .. Show three-way merge without touching index

rerere .... Reuse recorded resolution of conflicted merges

rev-parse ... Pick out and massage parameters

show-branch . Show branches and their commits

verify-tag .. Check the GPG signature of tags

whatchanged . Show logs with difference each commit introduces

Interacting with Others

archimport .. Import an Arch repository into git

cvsexportcommit
        Export a single commit to a CVS checkout

cvsimport ... Salvage your data out of another SCM people love to hate

cvsserver ... A CVS server emulator for git

imap-send ... Send a collection of patches from stdin to an IMAP folder

quiltimport . Applies a quilt patchset onto the current branch

request-pull Generates a summary of pending changes

send-email .. Send a collection of patches as emails

svn .... Bidirectional operation between a Subversion repository and git

Manipulators (plumbing)

apply .... Apply a patch to files and/or to the index

checkout-index
        Copy files from the index to the working tree

commit-tree . Create a new commit object

hash-object . Compute object ID and optionally creates a blob from a file

index-pack .. Build pack index file for an existing packed archive

merge-file .. Run a three-way file merge

merge-index . Run a merge for files needing merging

mktag .... Creates a tag object

mktree .... Build a tree-object from ls-tree formatted text

pack-objects Create a packed archive of objects

prune-packed Remove extra objects that are already in pack files

read-tree ... Reads tree information into the index

symbolic-ref Read and modify symbolic refs

unpack-objects
        Unpack objects from a packed archive

update-index Register file contents in the working tree to the index

update-ref .. Update the object name stored in a ref safely

write-tree .. Create a tree object from the current index

Interrogators (plumbing)

cat-file..... Provide content or type and size information for repository objects

diff-files .. Compares files in the working tree and the index

diff-index .. Compares content and mode of blobs between the index and repository

diff-tree ... show files which have been changed by last commit

--name-only
show only names of files

-r recursively

for-each-ref Output information on each ref

ls-files..... Show information about files in the index and the working tree

ls-remote ... List references in a remote repository

ls-tree...... List the contents of a tree object

⇒ **list all files for specific branch: ls-tree -r master --name-only**

merge-base .. Find as good common ancestors as possible for a merge

name-rev..... Find symbolic names for given revs

pack-redundant
Find redundant pack files

rev-list..... Lists commit objects in reverse chronological order

show-index .. Show packed archive index

show-ref..... List references in a local repository

unpack-file . Creates a temporary file with a blobs contents

var.......... Show a git logical variable

verify-pack . Validate packed git archive files

Synching repositories

daemon .... A really simple server for git repositories

fetch-pack .. Receive missing objects from another repository

http-backend Server side implementation of Git over HTTP

send-pack ... Push objects over git protocol to another repository

update-server-info
Update auxiliary info file to help dumb servers

Helper commands

http-fetch .. Download from a remote git repository via HTTP

http-push ... Push objects over HTTP/DAV to another repository

parse-remote Routines to help parsing remote repository access parameters

receive-pack Receive what is pushed into the repository

shell .... Restricted login shell foronly SSH access

upload-archive
Send archive back toarchive

upload-pack . Send objects packed back tofetch-pack

Internal helper commands

check-attr .. Display gitattributes information

check-ref-format
Ensures that a reference name is well formed

fmt-merge-msg
Produce a merge commit message

mailinfo..... Extracts patch and authorship from a single e-mail message

mailsplit ... Simple UNIX mbox splitter program

merge-one-file
The standard helper program to use withmerge-index

patch-id..... Compute unique ID for a patch

sh-setup..... Common git shell script setup code

stripspace .. Filter out empty lines

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