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git / Documentation / git-clone.txt



gitster Merge branch 'en/sparse-checkout-set' ...

History

67 contributors



364 lines (313 sloc) | 13.5 KB

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```

1  git-clone(1)
2  =====
3
4  NAME
5  ----
6  git-clone - Clone a repository into a new directory
7
8
9  SYNOPSIS
10  -----
11  [verse]
12  'git clone' [--template=<template-directory>]
13             [-l] [-s] [--no-hardlinks] [-q] [-n] [--bare] [--mirror]
14             [-o <name>] [-b <name>] [-u <upload-pack>] [--reference <repository>]
15             [--dissociate] [--separate-git-dir <git-dir>]
16             [--depth <depth>] [--[no-]single-branch] [--no-tags]
17             [--recurse-submodules[=<pathspec>]] [--[no-]shallow-submodules]
18             [--[no-]remote-submodules] [--jobs <n>] [--sparse] [--[no-]reject-shallow]
19             [--filter=<filter>] [--] <repository>
20             [<directory>]
21
22  DESCRIPTION
23  -----
24
25  Clones a repository into a newly created directory, creates
26  remote-tracking branches for each branch in the cloned repository
27  (visible using `git branch --remotes`), and creates and checks out an
28  initial branch that is forked from the cloned repository's
29  currently active branch.
```

```

30
31 After the clone, a plain `git fetch` without arguments will update
32 all the remote-tracking branches, and a `git pull` without
33 arguments will in addition merge the remote master branch into the
34 current master branch, if any (this is untrue when "--single-branch"
35 is given; see below).
36
37 This default configuration is achieved by creating references to
38 the remote branch heads under `refs/remotes/origin` and
39 by initializing `remote.origin.url` and `remote.origin.fetch`
40 configuration variables.
41
42
43 OPTIONS
44 -----
45 -l::
46 --local::
47     When the repository to clone from is on a local machine,
48     this flag bypasses the normal "Git aware" transport
49     mechanism and clones the repository by making a copy of
50     HEAD and everything under objects and refs directories.
51     The files under `.git/objects/` directory are hardlinked
52     to save space when possible.
53 +
54 If the repository is specified as a local path (e.g., `/path/to/repo`),
55 this is the default, and --local is essentially a no-op. If the
56 repository is specified as a URL, then this flag is ignored (and we
57 never use the local optimizations). Specifying `--no-local` will
58 override the default when `/path/to/repo` is given, using the regular
59 Git transport instead.
60 +
61 *NOTE*: this operation can race with concurrent modification to the
62 source repository, similar to running `cp -r src dst` while modifying
63 `src`.
64
65 --no-hardlinks::
66     Force the cloning process from a repository on a local
67     filesystem to copy the files under the `.git/objects`
68     directory instead of using hardlinks. This may be desirable
69     if you are trying to make a back-up of your repository.
70
71 -s::
72 --shared::
73     When the repository to clone is on the local machine,
74     instead of using hard links, automatically setup
75     `.git/objects/info/alternates` to share the objects
76     with the source repository. The resulting repository
77     starts out without any object of its own.
78 +

```

NOTE: this is a possibly dangerous operation; do **not** use it unless you understand what it does. If you clone your repository using this option and then delete branches (or use any other Git command that makes any existing commit unreferenced) in the source repository, some objects may become unreferenced (or dangling). These objects may be removed by normal Git operations (such as ``git commit``) which automatically call ``git maintenance run --auto``. (See `linkgit:git-maintenance[1]`.) If these objects are removed and were referenced by the cloned repository, then the cloned repository will become corrupt.

+

Note that running ``git repack`` without the ``--local`` option in a repository cloned with ``--shared`` will copy objects from the source repository into a pack in the cloned repository, removing the disk space savings of ``clone --shared``. It is safe, however, to run ``git gc``, which uses the ``--local`` option by default.

+

If you want to break the dependency of a repository cloned with ``--shared`` on its source repository, you can simply run ``git repack -a`` to copy all objects from the source repository into a pack in the cloned repository.

`--reference[-if-able] <repository>::`

If the reference repository is on the local machine, automatically setup ``.git/objects/info/alternates`` to obtain objects from the reference repository. Using an already existing repository as an alternate will require fewer objects to be copied from the repository being cloned, reducing network and local storage costs. When using the ``--reference-if-able``, a non existing directory is skipped with a warning instead of aborting the clone.

+

NOTE: see the NOTE for the ``--shared`` option, and also the ``--dissociate`` option.

`--dissociate::`

Borrow the objects from reference repositories specified with the ``--reference`` options only to reduce network transfer, and stop borrowing from them after a clone is made by making necessary local copies of borrowed objects. This option can also be used when cloning locally from a repository that already borrows objects from another repository--the new repository will borrow objects from the same repository, and this option can be used to stop the borrowing.

`-q::`

`--quiet::`

Operate quietly. Progress is not reported to the standard error stream.

```
128
129 -v::
130 --verbose::
131     Run verbosely. Does not affect the reporting of progress status
132     to the standard error stream.
133
134 --progress::
135     Progress status is reported on the standard error stream
136     by default when it is attached to a terminal, unless `--quiet`
137     is specified. This flag forces progress status even if the
138     standard error stream is not directed to a terminal.
139
140 --server-option=<option>::
141     Transmit the given string to the server when communicating using
142     protocol version 2. The given string must not contain a NUL or LF
143     character. The server's handling of server options, including
144     unknown ones, is server-specific.
145     When multiple `--server-option=<option>` are given, they are all
146     sent to the other side in the order listed on the command line.
147
148 -n::
149 --no-checkout::
150     No checkout of HEAD is performed after the clone is complete.
151
152 --[no-]reject-shallow::
153     Fail if the source repository is a shallow repository.
154     The 'clone.rejectShallow' configuration variable can be used to
155     specify the default.
156
157 --bare::
158     Make a 'bare' Git repository. That is, instead of
159     creating `<directory>` and placing the administrative
160     files in `<directory>/.git`, make the `<directory>`
161     itself the `$GIT_DIR`. This obviously implies the `--no-checkout`
162     because there is nowhere to check out the working tree.
163     Also the branch heads at the remote are copied directly
164     to corresponding local branch heads, without mapping
165     them to `refs/remotes/origin/`. When this option is
166     used, neither remote-tracking branches nor the related
167     configuration variables are created.
168
169 --sparse::
170     Employ a sparse-checkout, with only files in the toplevel
171     directory initially being present. The
172     linkgit:git-sparse-checkout[1] command can be used to grow the
173     working directory as needed.
174
175 --filter=<filter-spec>::
176     Use the partial clone feature and request that the server sends
```

177 a subset of reachable objects according to a given object filter.
178 When using `--filter`, the supplied `<filter-spec>` is used for
179 the partial clone filter. For example, `--filter=blob:none` will
180 filter out all blobs (file contents) until needed by Git. Also,
181 `--filter=blob:limit=<size>` will filter out all blobs of size
182 at least `<size>`. For more details on filter specifications, see
183 the `--filter` option in `linkgit:git-rev-list[1]`.

184 ...
185 `--mirror::`

186 Set up a mirror of the source repository. This implies `--bare`.
187 Compared to `--bare`, `--mirror` not only maps local branches of the
188 source to local branches of the target, it maps all refs (including
189 remote-tracking branches, notes etc.) and sets up a refsconfig configuration such
190 that all these refs are overwritten by a `git remote update` in the
191 target repository.

192
193 `-o <name>::`

194 `--origin <name>::`

195 Instead of using the remote name `origin` to keep track of the upstream
196 repository, use `<name>`. Overrides `clone.defaultRemoteName` from the
197 config.

198
199 `-b <name>::`

200 `--branch <name>::`

201 Instead of pointing the newly created HEAD to the branch pointed
202 to by the cloned repository's HEAD, point to `<name>` branch
203 instead. In a non-bare repository, this is the branch that will
204 be checked out.
205 `--branch` can also take tags and detaches the HEAD at that commit
206 in the resulting repository.

207
208 `-u <upload-pack>::`

209 `--upload-pack <upload-pack>::`

210 When given, and the repository to clone from is accessed
211 via ssh, this specifies a non-default path for the command
212 run on the other end.

213
214 `--template=<template-directory>::`

215 Specify the directory from which templates will be used;
216 (See the "TEMPLATE DIRECTORY" section of `linkgit:git-init[1]`.)

217
218 `-c <key>=<value>::`

219 `--config <key>=<value>::`

220 Set a configuration variable in the newly-created repository;
221 this takes effect immediately after the repository is
222 initialized, but before the remote history is fetched or any
223 files checked out. The key is in the same format as expected by
224 `linkgit:git-config[1]` (e.g., `core.eol=true`). If multiple
225 values are given for the same key, each value will be written to

```

226         the config file. This makes it safe, for example, to add
227         additional fetch refsspecs to the origin remote.
228 +
229 Due to limitations of the current implementation, some configuration
230 variables do not take effect until after the initial fetch and checkout.
231 Configuration variables known to not take effect are:
232 `remote.<name>.mirror` and `remote.<name>.tagOpt`. Use the
233 corresponding `--mirror` and `--no-tags` options instead.
234
235 --depth <depth>::
236     Create a 'shallow' clone with a history truncated to the
237     specified number of commits. Implies `--single-branch` unless
238     `--no-single-branch` is given to fetch the histories near the
239     tips of all branches. If you want to clone submodules shallowly,
240     also pass `--shallow-submodules`.
241
242 --shallow-since=<date>::
243     Create a shallow clone with a history after the specified time.
244
245 --shallow-exclude=<revision>::
246     Create a shallow clone with a history, excluding commits
247     reachable from a specified remote branch or tag. This option
248     can be specified multiple times.
249
250 --[no-]single-branch::
251     Clone only the history leading to the tip of a single branch,
252     either specified by the `--branch` option or the primary
253     branch remote's `HEAD` points at.
254     Further fetches into the resulting repository will only update the
255     remote-tracking branch for the branch this option was used for the
256     initial cloning. If the HEAD at the remote did not point at any
257     branch when `--single-branch` clone was made, no remote-tracking
258     branch is created.
259
260 --no-tags::
261     Don't clone any tags, and set
262     `remote.<remote>.tagOpt=--no-tags` in the config, ensuring
263     that future `git pull` and `git fetch` operations won't follow
264     any tags. Subsequent explicit tag fetches will still work,
265     (see linkgit:git-fetch[1]).
266 +
267 Can be used in conjunction with `--single-branch` to clone and
268 maintain a branch with no references other than a single cloned
269 branch. This is useful e.g. to maintain minimal clones of the default
270 branch of some repository for search indexing.
271
272 --recurse-submodules[=<pathspec>]::
273     After the clone is created, initialize and clone submodules
274     within based on the provided pathspec. If no pathspec is

```

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275         provided, all submodules are initialized and cloned.
276         This option can be given multiple times for pathspecs consisting
277         of multiple entries. The resulting clone has `submodule.active` set to
278         the provided pathspec, or "." (meaning all submodules) if no
279         pathspec is provided.
280     +
281     Submodules are initialized and cloned using their default settings. This is
282     equivalent to running
283     `git submodule update --init --recursive <pathspec>` immediately after
284     the clone is finished. This option is ignored if the cloned repository does
285     not have a worktree/checkout (i.e. if any of `--no-checkout`, `--bare`,
286     or `--mirror` is given)
287
288     --[no-]shallow-submodules::
289         All submodules which are cloned will be shallow with a depth of 1.
290
291     --[no-]remote-submodules::
292         All submodules which are cloned will use the status of the submodule's
293         remote-tracking branch to update the submodule, rather than the
294         superproject's recorded SHA-1. Equivalent to passing `--remote` to
295         `git submodule update`.
296
297     --separate-git-dir=<git-dir>::
298         Instead of placing the cloned repository where it is supposed
299         to be, place the cloned repository at the specified directory,
300         then make a filesystem-agnostic Git symbolic link to there.
301         The result is Git repository can be separated from working
302         tree.
303
304     -j <n>::
305     --jobs <n>::
306         The number of submodules fetched at the same time.
307         Defaults to the `submodule.fetchJobs` option.
308
309     <repository>::
310         The (possibly remote) repository to clone from. See the
311         <<URLS,GIT URLS>> section below for more information on specifying
312         repositories.
313
314     <directory>::
315         The name of a new directory to clone into. The "humanish"
316         part of the source repository is used if no directory is
317         explicitly given (`repo` for `/path/to/repo.git` and `foo`
318         for `host.xz:foo/.git`). Cloning into an existing directory
319         is only allowed if the directory is empty.
320
321     :git-clone: 1
322     include::urls.txt[]
323

```

```
324  EXAMPLES
325  -----
326
327  * Clone from upstream:
328  +
329  -----
330  $ git clone git://git.kernel.org/pub/scm/.../linux.git my-linux
331  $ cd my-linux
332  $ make
333  -----
334
335
336  * Make a local clone that borrows from the current directory, without checking things out:
337  +
338  -----
339  $ git clone -l -s -n . ../copy
340  $ cd ../copy
341  $ git show-branch
342  -----
343
344
345  * Clone from upstream while borrowing from an existing local directory:
346  +
347  -----
348  $ git clone --reference /git/linux.git \
349      git://git.kernel.org/pub/scm/.../linux.git \
350      my-linux
351  $ cd my-linux
352  -----
353
354
355  * Create a bare repository to publish your changes to the public:
356  +
357  -----
358  $ git clone --bare -l /home/proj/.git /pub/scm/proj.git
359  -----
360
361
362  GIT
363  ---
364  Part of the linkgit:git[1] suite
```