

Limiting Log Output

In addition to output-formatting options, `git log` takes a number of useful limiting options; that is, options that let you show only a subset of commits. You’ve seen one such option already — the `-2` option, which displays only the last two commits. In fact, you can do `-<n>`, where `n` is any integer to show the last `n` commits. In reality, you’re unlikely to use that often, because Git by default pipes all output through a pager so you see only one page of log output at a time.

However, the time-limiting options such as `--since` and `--until` are very useful. For example, this command gets the list of commits made in the last two weeks:

```
git log --since=2. weeks
```

This command works with lots of formats — you can specify a specific date like `"2008-01-15"`, or a relative date such as `"2 years 1 day 3 minutes ago"`.

You can also filter the list to commits that match some search criteria. The `--author` option allows you to filter on a specific author, and the `--grep` option lets you search for keywords in the commit messages.

You can specify more than one instance of both the `--author` and `--grep` search criteria, which will limit the commit output to commits that match *any* of the `--author` patterns and *any* of the `--grep` patterns; however, adding the `--all-match` option further limits the output to just those commits that match *all* `--grep` patterns.

Another really helpful filter is the `-S` option (colloquially referred to as Git’s “pickaxe” option), which takes a string and shows only those commits that changed the number of occurrences of that string. For instance, if you wanted to find the last commit that added or removed a reference to a specific function, you could call:

```
git log -S function_name
```

The last really useful option to pass to `git log` as a filter is a path. If you specify a directory or file name, you can limit the log output to commits that introduced a change to those files. This is always the last option and is generally preceded by double dashes (`--`) to separate the paths from the options.

In [Options to limit the output of `git log`](#) we’ll list these and a few other common options for your reference.

Table 3. Options to limit the output of `git log`

Option	Description
<code>-<n></code>	Show only the last n commits
<code>--since</code> , <code>--after</code>	Limit the commits to those made after the specified date.
<code>--until</code> , <code>--before</code>	Limit the commits to those made before the specified date.
<code>--author</code>	Only show commits in which the author entry matches the specified string.
<code>--committer</code>	Only show commits in which the committer entry matches the specified string.
<code>--grep</code>	Only show commits with a commit message containing the string
<code>-S</code>	Only show commits adding or removing code matching the string

For example, if you want to see which commits modifying test files in the Git source code history were committed by Junio Hamano in the month of October 2008 and are not merge commits, you can run something like this:

```
git log --pretty="%h - %s" --author='Junio C Hamano' --since="2008-10-01" \
--before="2008-11-01" --no-merges -- t/
610e3b - Fix testcase failure when extended attributes are in use
cd3b9e - Enhance hold_lock_file_for_{update,append}() API
563754 - demonstrate breakage of detached checkout with symbolic link HEAD
1a43f2 - reset --hard/read-tree --reset -u: remove unmerged new paths
1a94af - Fix "checkout --track -b newbranch" on detached HEAD
9ad11e - pull: allow "git pull origin $something:$current_branch" into an unborn branch
```

Of the nearly 40,000 commits in the Git source code history, this command shows the 6 that match those criteria.

Preventing the display of merge commits

Depending on the workflow used in your repository, it's possible that a sizable percentage of the commits in your log history are just merge commits, which typically aren't very informative. To prevent the display of merge commits cluttering up your log history, simply add the log option `--no-merges`.

