



In Praise of Small Pull Requests

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Note: A “pull request” refers to one self-contained change that has been submitted to version control or which is undergoing code review. At Google, this is referred to as a “CL”, which is short for “changelist”.

Prefer small, focused pull requests that do exactly one thing each. Why? Several reasons:

- **Small pull requests are easier to review.** A mistake in a focused pull request is more obvious. In a 40 file pull request that does several things, would you notice that one `if` statement had reversed the logic it should have and was using `true` instead of `false`? By contrast, if that `if` block and its test were the only things that changed in a pull request, you’d be a lot more likely to catch the error.
- **Small pull requests can be reviewed quickly.** A reviewer can often respond quickly by slipping small reviews in between other tasks. Larger pull requests are a big task by themselves, often waiting until the reviewer has a significant chunk of time.
- If something does go wrong and your continuous build breaks on a small pull request, **the small size makes it much easier to figure out exactly where the mistake is.** They are also easier to rollback if something goes wrong.
- By virtue of their size, **small pull requests are less likely to conflict with other developers’ work.** Merge conflicts are less frequent and easier to resolve.
- **If you’ve made a critical error, it saves a lot of work** when the reviewer can point this out after you’ve only gone a little way down the wrong path. Better to find out after an hour than after several weeks.
- Pull request descriptions are more accurate when pull requests are focused on one task. The revision history becomes easier to read.
- Small pull requests can lead to increased code coverage because **it’s easier to make sure each individual pull request is completely tested.**

Small pull requests are not always possible. In particular:

- **Frequent pull requests require reviewers to respond quickly** to code review requests. If it takes multiple hours to get a pull request reviewed, developers spend more time blocked. Small pull requests often work better when reviewers are co-located (ideally within Nerf gun range for gentle reminders).
- Some features cannot safely be committed in partial states. If this is a concern, try to put the new feature behind a [flag](#).
- Refactorings such as changing an argument type in a public method may require modifying many dozens of files at once.

Nonetheless, **even if a pull request can’t be small, it can still be focused**, e.g., fixing one bug, adding one feature or UI element, or refactoring one method.

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