

Contributing to Gerrit

Challenges and Rewards of Open Source Development

Agenda

- Introduction – Why Gerrit?
- Challenges of Contributing
- Rewards of Contributing
- Takeaways
- Q&A

Gerrit what?



Gerrit what?



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Gerrit Maintainer

Some numbers

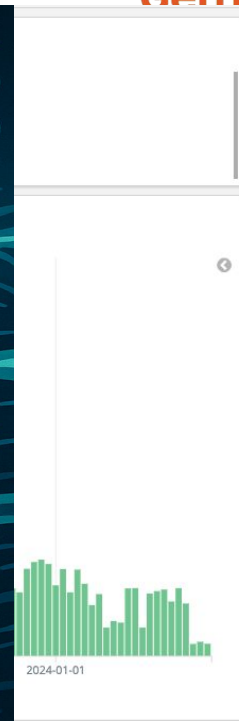
- **15** years of history
- **4k** java files
- **715k** lines of code



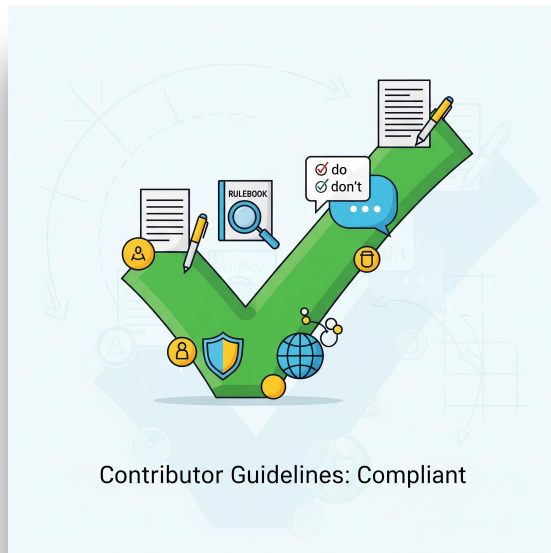
Challenge: Orienteering



Some (more) numbers...



Challenge: Guidelines



Challenge: Guidelines (cont.)



Merged 508962 • JettyServer: bound blocking HTTP callbacks by idleTimeout to avoid stuck threads

Change Info

Submitted Sep 11

Owner Tony

Reviewers Matthias Sohn, Luca

Repo/Branch gerrit/stable-3.10

Topic

Submit Requirements

- Code Review
- Code Style
- Verified

JettyServer: bound blocking HTTP callbacks by idleTimeout to avoid stuck threads

Under heavy concurrent Git/HTTP load (e.g. many git upload-pack to the same repo), some HTTP worker threads could remain WAITING indefinitely inside Jetty's `SharedBlockingCallback.block()` (via `HttpOutputChannel.write()`, even when `http.idleTimeout` was configured. This happens because Jetty's per-request `HttpConfiguration.blockingTimeout` was left at its default, which allows unbounded blocking on synchronous write callbacks; the `ServerConnector.idleTimeout` does not cap that wait.

Set `HttpConfiguration.blockingTimeout` to 0 so Jetty treats the blocking timeout as equal to the connector `idleTimeout`. With `http.idleTimeout` in Gerrit already wired to the connector, this change ensures blocking requests are capped by the same timeout and threads are released back to the pool instead of waiting forever.

Effect:

- Idle or stalled Git/HTTP requests are terminated after `http.idleTimeout`.
- Threads no longer get stuck indefinitely in `SharedBlockingCallback.block()`.
- Behavior aligns with administrator expectation that `http.idleTimeout` bounds all request I/O, including blocking callbacks.

Notes:

- `blockingTimeout=0` means "use the connector idle timeout."
- It affects synchronous response writes used for Git/HTTP traffic (e.g. git-upload-pack / git-receive-pack), where the Jetty worker thread is parked until the client consumes data.
- Newer Jetty deprecates `setBlockingTimeout` in favor of `minDataRate`, but this is the correct fix for Jetty 9.4 used here [1].

[1] https://bugzilla.java.net/bugs/show_bug.cgi?id=823189

Bug: Issue 44689514

Release-Notes: Prevent blocking HTTP calls to wait indefinitely

Change-Id: I871c1c6f7abde822ef78e19e9345357024bf

Show Less

Comments 5 resolved

Checks 3

Create AI Review Prompt

Files Comments Checks

Base → Patchset 4 • 45d9bb

File

Commit message

M Documentation/config-gerrit.txt

M java/com/google/gerrit/ggn/http/jetty/JettyServer.java

FILE FILE

```
421 421 Server server, int acceptors, HttpConfiguration config) {
422 422     return new ServerConnector(
423 423         server, null, null, 0, acceptors, new HttpConnectionFactory(config));
424 424 }
425 425
426 426 private HttpConfiguration defaultConfig(int requestHeaderSize) {
427 427     HttpConfiguration config = new HttpConfiguration();
428 428     config.setRequestHeaderSize(requestHeaderSize);
429 429     config.setSendServerVersion(false);
430 430     config.setSendDateHeader(true);
431 431     config.setBlockingTimeout(0);
432 432     return config;
433 433 }
```



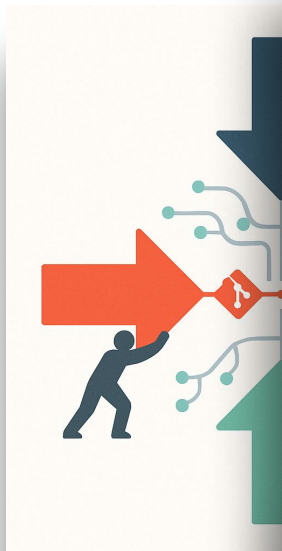
Challenge: Code-Review



A screenshot of the Gerrit web interface. At the top, a navigation bar shows 'Merged' and '116211'. Below it, a dropdown menu is open, showing 'Abandoned' (highlighted with a red circle), '109693', and 'PolyGerrit: Implement support for New'. The main content area shows details for change '109693' titled 'PolyGerrit: Redesign the registra'. The 'Change Info' section lists the owner 'Paladox', reviewers 'viktard', 'Wyatt Allen', 'Logan Hanks', 'Kasper Nilsson', 'Becky Siegel', and 'GerritCI', and CC 'David P.'. The 'Repo | Branch' is 'gerrit | master'. The 'Submit Requirements' section is loading. The 'Label Votes' section shows 'Verified +1' and 'Code-Style +1'. The 'Files' tab is active, showing a diff for 'Patchset 99' (highlighted with a red circle) with a commit hash 'e10b603'. The 'Comments' tab is also visible. A sidebar on the right shows a 'Sign in' button and a list of recent changes.



Challenge: Common goals



Gerrit CHANGES ▾ YOUR ▾ DOCUMENTATION ▾

Abandoned ☆ 380614 ▾ Add delete group button 📄

Change Info Show All ▾ Reply

Owner 👤 Khai

Author 👤 Tran Tuan Khai Phan

Reviewers 👤 Sven Selberg -2 👤 Paladox +2
👤 Matthias Sohn 👤 Luca
👤 Nguyen Tuan ... 👤 GerritCI
👤 LUCI ✎

Repo | Branch gerrit | stable-3.10

Topic delete-group ✕

Submit Requirements

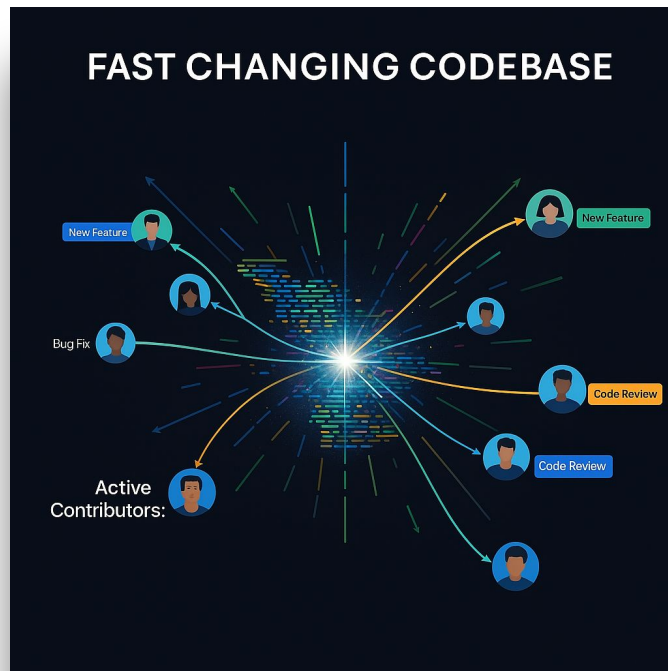
- ✕ Code-Review +2 -2
- ✓ Code-Style +1
- ✓ Verified +1

Add delete
Give perm:
Release-No
Change-Id

Comments
Checks



Challenge: Shifting ground



Soooo...



Rewards of contributing



Rewards of contributing



Working with the best.



Rewards of contributing



Call for action



