# Contributing to Zulip

Welcome to the Zulip community!

## Community

The

[Zulip community server](https://zulip.readthedocs.io/en/latest/contributing/chat-zulip-org.html)

is the primary communication forum for the Zulip community. It is a good

place to start whether you have a question, are a new contributor, are a new

user, or anything else. Make sure to read the

[community norms](https://zulip.readthedocs.io/en/latest/contributing/chat-zulip-org.html#community-norms)

before posting. The Zulip community is also governed by a

[code of conduct](https://zulip.readthedocs.io/en/latest/code-of-conduct.html).

You can subscribe to zulip-devel-announce@googlegroups.com or our

[Twitter](https://twitter.com/zulip) account for a lower traffic (~1

email/month) way to hear about things like mentorship opportunities with Google

Code-in, in-person sprints at conferences, and other opportunities to

contribute.

## Ways to contribute

To make a code or documentation contribution, read our

[step-by-step guide](#your-first-codebase-contribution) to getting

started with the Zulip codebase. A small sample of the type of work that

needs doing:

\* Bug squashing and feature development on our Python/Django

[backend](https://github.com/zulip/zulip), web

[frontend](https://github.com/zulip/zulip), React Native

[mobile app](https://github.com/zulip/zulip-mobile), or Electron

[desktop app](https://github.com/zulip/zulip-desktop).

\* Building out our

[Python API and bots](https://github.com/zulip/python-zulip-api) framework.

\* [Writing an integration](https://zulip.com/api/integrations-overview).

\* Improving our [user](https://zulip.com/help/) or

[developer](https://zulip.readthedocs.io/en/latest/) documentation.

\* [Reviewing code](https://zulip.readthedocs.io/en/latest/contributing/code-reviewing.html)

and manually testing pull requests.

\*\*Non-code contributions\*\*: Some of the most valuable ways to contribute

don't require touching the codebase at all. We list a few of them below:

\* [Reporting issues](#reporting-issues), including both feature requests and

bug reports.

\* [Giving feedback](#user-feedback) if you are evaluating or using Zulip.

\* [Translating](https://zulip.readthedocs.io/en/latest/translating/translating.html)

Zulip.

\* [Outreach](#zulip-outreach): Star us on GitHub, upvote us

on product comparison sites, or write for [the Zulip blog](https://blog.zulip.org/).

## Your first (codebase) contribution

This section has a step by step guide to starting as a Zulip codebase

contributor. It's long, but don't worry about doing all the steps perfectly;

no one gets it right the first time, and there are a lot of people available

to help.

\* First, make an account on the

[Zulip community server](https://zulip.readthedocs.io/en/latest/contributing/chat-zulip-org.html),

paying special attention to the community norms. If you'd like, introduce

yourself in

[#new members](https://chat.zulip.org/#narrow/stream/95-new-members), using

your name as the topic. Bonus: tell us about your first impressions of

Zulip, and anything that felt confusing/broken as you started using the

product.

\* Read [What makes a great Zulip contributor](#what-makes-a-great-zulip-contributor).

\* [Install the development environment](https://zulip.readthedocs.io/en/latest/development/overview.html),

getting help in

[#development help](https://chat.zulip.org/#narrow/stream/49-development-help)

if you run into any troubles.

\* Read the

[Zulip guide to Git](https://zulip.readthedocs.io/en/latest/git/index.html)

and do the Git tutorial (coming soon) if you are unfamiliar with

Git, getting help in

[#git help](https://chat.zulip.org/#narrow/stream/44-git-help) if

you run into any troubles. Be sure to check out the

[extremely useful Zulip-specific tools page](https://zulip.readthedocs.io/en/latest/git/zulip-tools.html).

### Picking an issue

Now, you're ready to pick your first issue! There are hundreds of open issues

in the main codebase alone. This section will help you find an issue to work

on.

\* If you're interested in

[mobile](https://github.com/zulip/zulip-mobile/issues?q=is%3Aopen+is%3Aissue),

[desktop](https://github.com/zulip/zulip-desktop/issues?q=is%3Aopen+is%3Aissue),

or

[bots](https://github.com/zulip/python-zulip-api/issues?q=is%3Aopen+is%3Aissue)

development, check the respective links for open issues, or post in

[#mobile](https://chat.zulip.org/#narrow/stream/48-mobile),

[#desktop](https://chat.zulip.org/#narrow/stream/16-desktop), or

[#integration](https://chat.zulip.org/#narrow/stream/127-integrations).

\* For the main server and web repository, we recommend browsing

recently opened issues to look for issues you are confident you can

fix correctly in a way that clearly communicates why your changes

are the correct fix. Our GitHub workflow bot, zulipbot, limits

users who have 0 commits merged to claiming a single issue labeled

with "good first issue" or "help wanted".

\* We also partition all of our issues in the main repo into areas like

admin, compose, emoji, hotkeys, i18n, onboarding, search, etc. Look

through our [list of labels](https://github.com/zulip/zulip/labels), and

click on some of the `area:` labels to see all the issues related to your

areas of interest.

\* If the lists of issues are overwhelming, post in

[#new members](https://chat.zulip.org/#narrow/stream/95-new-members) with a

bit about your background and interests, and we'll help you out. The most

important thing to say is whether you're looking for a backend (Python),

frontend (JavaScript and TypeScript), mobile (React Native), desktop (Electron),

documentation (English) or visual design (JavaScript/TypeScript + CSS) issue, and a

bit about your programming experience and available time.

We also welcome suggestions of features that you feel would be valuable or

changes that you feel would make Zulip a better open source project. If you

have a new feature you'd like to add, we recommend you start by posting in

[#new members](https://chat.zulip.org/#narrow/stream/95-new-members) with the

feature idea and the problem that you're hoping to solve.

Other notes:

\* For a first pull request, it's better to aim for a smaller contribution

than a bigger one. Many first contributions have fewer than 10 lines of

changes (not counting changes to tests).

\* The full list of issues explicitly looking for a contributor can be

found with the

[good first issue](https://github.com/zulip/zulip/issues?q=is%3Aopen+is%3Aissue+label%3A%22good+first+issue%22)

and

[help wanted](https://github.com/zulip/zulip/issues?q=is%3Aopen+is%3Aissue+label%3A%22help+wanted%22)

labels. Avoid issues with the "difficult" label unless you

understand why it is difficult and are confident you can resolve the

issue correctly and completely. Issues without one of these labels

are fair game if Tim has written a clear technical design proposal

in the issue, or it is a bug that you can reproduce and you are

confident you can fix the issue correctly.

\* For most new contributors, there's a lot to learn while making your first

pull request. It's OK if it takes you a while; that's normal! You'll be

able to work a lot faster as you build experience.

### Working on an issue

To work on an issue, claim it by adding a comment with `@zulipbot claim` to

the issue thread. [Zulipbot](https://github.com/zulip/zulipbot) is a GitHub

workflow bot; it will assign you to the issue and label the issue as "in

progress". Some additional notes:

\* You can only claim issues with the

[good first issue](https://github.com/zulip/zulip/issues?q=is%3Aopen+is%3Aissue+label%3A%22good+first+issue%22)

or

[help wanted](https://github.com/zulip/zulip/issues?q=is%3Aopen+is%3Aissue+label%3A%22help+wanted%22)

labels. Zulipbot will give you an error if you try to claim an issue

without one of those labels.

\* You're encouraged to ask questions on how to best implement or debug your

changes -- the Zulip maintainers are excited to answer questions to help

you stay unblocked and working efficiently. You can ask questions on

chat.zulip.org, or on the GitHub issue or pull request.

\* We encourage early pull requests for work in progress. Prefix the title of

work in progress pull requests with `[WIP]`, and remove the prefix when

you think it might be mergeable and want it to be reviewed.

\* After updating a PR, add a comment to the GitHub thread mentioning that it

is ready for another review. GitHub only notifies maintainers of the

changes when you post a comment, so if you don't, your PR will likely be

neglected by accident!

### And beyond

A great place to look for a second issue is to look for issues with the same

`area:` label as the last issue you resolved. You'll be able to reuse the

work you did learning how that part of the codebase works. Also, the path to

becoming a core developer often involves taking ownership of one of these area

labels.

## What makes a great Zulip contributor?

Zulip has a lot of experience working with new contributors. In our

experience, these are the best predictors of success:

\* Posting good questions. This generally means explaining your current

understanding, saying what you've done or tried so far, and including

tracebacks or other error messages if appropriate.

\* Learning and practicing

[Git commit discipline](https://zulip.readthedocs.io/en/latest/contributing/version-control.html#commit-discipline).

\* Submitting carefully tested code. This generally means checking your work

through a combination of automated tests and manually clicking around the

UI trying to find bugs in your work. See

[things to look for](https://zulip.readthedocs.io/en/latest/contributing/code-reviewing.html#things-to-look-for)

for additional ideas.

\* Posting

[screenshots or GIFs](https://zulip.readthedocs.io/en/latest/tutorials/screenshot-and-gif-software.html)

for frontend changes.

\* Being responsive to feedback on pull requests. This means incorporating or

responding to all suggested changes, and leaving a note if you won't be

able to address things within a few days.

\* Being helpful and friendly on chat.zulip.org.

These are also the main criteria we use to select candidates for all

of our outreach programs.

## Reporting issues

If you find an easily reproducible bug and/or are experienced in reporting

bugs, feel free to just open an issue on the relevant project on GitHub.

If you have a feature request or are not yet sure what the underlying bug

is, the best place to post issues is

[#issues](https://chat.zulip.org/#narrow/stream/9-issues) (or

[#mobile](https://chat.zulip.org/#narrow/stream/48-mobile) or

[#desktop](https://chat.zulip.org/#narrow/stream/16-desktop)) on the

[Zulip community server](https://zulip.readthedocs.io/en/latest/contributing/chat-zulip-org.html).

This allows us to interactively figure out what is going on, let you know if

a similar issue has already been opened, and collect any other information

we need. Choose a 2-4 word topic that describes the issue, explain the issue

and how to reproduce it if known, your browser/OS if relevant, and a

[screenshot or screenGIF](https://zulip.readthedocs.io/en/latest/tutorials/screenshot-and-gif-software.html)

if appropriate.

\*\*Reporting security issues\*\*. Please do not report security issues

publicly, including on public streams on chat.zulip.org. You can

email security@zulip.com. We create a CVE for every security

issue in our released software.

## User feedback

Nearly every feature we develop starts with a user request. If you are part

of a group that is either using or considering using Zulip, we would love to

hear about your experience with the product. If you're not sure what to

write, here are some questions we're always very curious to know the answer

to:

\* Evaluation: What is the process by which your organization chose or will

choose a group chat product?

\* Pros and cons: What are the pros and cons of Zulip for your organization,

and the pros and cons of other products you are evaluating?

\* Features: What are the features that are most important for your

organization? In the best-case scenario, what would your chat solution do

for you?

\* Onboarding: If you remember it, what was your impression during your first

few minutes of using Zulip? What did you notice, and how did you feel? Was

there anything that stood out to you as confusing, or broken, or great?

\* Organization: What does your organization do? How big is the organization?

A link to your organization's website?

## Outreach programs

Zulip participates in [Google Summer of Code

(GSoC)](https://developers.google.com/open-source/gsoc/) every year.

In the past, we've also participated in

[Outreachy](https://www.outreachy.org/), [Google

Code-In](https://developers.google.com/open-source/gci/), and hosted

summer interns from Harvard, MIT, and Stanford.

While each third-party program has its own rules and requirements, the

Zulip community's approaches all of these programs with these ideas in

mind:

\* We try to make the application process as valuable for the applicant as

possible. Expect high-quality code reviews, a supportive community, and

publicly viewable patches you can link to from your resume, regardless of

whether you are selected.

\* To apply, you'll have to submit at least one pull request to a Zulip

repository. Most students accepted to one of our programs have

several merged pull requests (including at least one larger PR) by

the time of the application deadline.

\* The main criteria we use is quality of your best contributions, and

the bullets listed at

[What makes a great Zulip contributor](#what-makes-a-great-zulip-contributor).

Because we focus on evaluating your best work, it doesn't hurt your

application to makes mistakes in your first few PRs as long as your

work improves.

Most of our outreach program participants end up sticking around the

project long-term, and many have become core team members, maintaining

important parts of the project. We hope you apply!

### Google Summer of Code

The largest outreach program Zulip participates in is GSoC (14

students in 2017; 11 in 2018; 17 in 2019). While we don't control how

many slots Google allocates to Zulip, we hope to mentor a similar

number of students in future summers.

If you're reading this well before the application deadline and want

to make your application strong, we recommend getting involved in the

community and fixing issues in Zulip now. Having good contributions

and building a reputation for doing good work is the best way to have

a strong application. About half of Zulip's GSoC students for Summer

2017 had made significant contributions to the project by February

2017, and about half had not. Our

[GSoC project ideas page][gsoc-guide] has lots more details on how

Zulip does GSoC, as well as project ideas (though the project idea

list is maintained only during the GSoC application period, so if

you're looking at some other time of year, the project list is likely

out-of-date).

We also have in some past years run a Zulip Summer of Code (ZSoC)

program for students who we didn't have enough slots to accept for

GSoC but were able to find funding for. Student expectations are the

same as with GSoC, and it has no separate application process; your

GSoC application is your ZSoC application. If we'd like to select you

for ZSoC, we'll contact you when the GSoC results are announced.

[gsoc-guide]: https://zulip.readthedocs.io/en/latest/overview/gsoc-ideas.html

[gsoc-faq]: https://developers.google.com/open-source/gsoc/faq

## Zulip Outreach

\*\*Upvoting Zulip\*\*. Upvotes and reviews make a big difference in the public

perception of projects like Zulip. We've collected a few sites below

where we know Zulip has been discussed. Doing everything in the following

list typically takes about 15 minutes.

\* Star us on GitHub. There are four main repositories:

[server/web](https://github.com/zulip/zulip),

[mobile](https://github.com/zulip/zulip-mobile),

[desktop](https://github.com/zulip/zulip-desktop), and

[Python API](https://github.com/zulip/python-zulip-api).

\* [Follow us](https://twitter.com/zulip) on Twitter.

For both of the following, you'll need to make an account on the site if you

don't already have one.

\* [Like Zulip](https://alternativeto.net/software/zulip-chat-server/) on

AlternativeTo. We recommend upvoting a couple of other products you like

as well, both to give back to their community, and since single-upvote

accounts are generally given less weight. You can also

[upvote Zulip](https://alternativeto.net/software/slack/) on their page

for Slack.

\* [Add Zulip to your stack](https://stackshare.io/zulip) on StackShare, star

it, and upvote the reasons why people like Zulip that you find most

compelling. Again, we recommend adding a few other products that you like

as well.

We have a doc with more detailed instructions and a few other sites, if you

have been using Zulip for a while and want to contribute more.

\*\*Blog posts\*\*. Writing a blog post about your experiences with Zulip, or

about a technical aspect of Zulip can be a great way to spread the word

about Zulip.

We also occasionally [publish](https://blog.zulip.org/) long-form

articles related to Zulip. Our posts typically get tens of thousands

of views, and we always have good ideas for blog posts that we can

outline but don't have time to write. If you are an experienced writer

or copyeditor, send us a portfolio; we'd love to talk!