The GNOME™ Conference

GUADEC

Flathub

An App Store and Build Service for Flatpak Applications

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About us

Robert McQueen

- VP of Platform at Endless, previously CTO & Co-Founder at Collabora
- Flathub sysadmin & Flatpak contributor
- Just elected to GNOME Foundation board

About us

Jorge García Oncins

- Software Engineer based in Barcelona (Java, Spring, Angular, …)
- Longtime Linux user
- Contributing to Flatpak/Flathub for the last 2 years (flathub.org website, documentation, ideas, …)

About Flathub

About Flathub - What is Flathub?

MISSION

Provide a central place to get, build and distribute apps that can run safely in a sandboxed environment, on almost any Linux distribution and CPU architecture, utilizing Flatpak technology.

About Flathub - What is Flathub?

OPPORTUNITIES

Independent app distribution for Linux, providing an app platform where developers can automatically build and publish their apps and users can install them on any distro within minutes.

About Flathub - What is Flathub?

AREAS OF COLLABORATION

- App packaging and testing
- Web development
- Documentation
- Public relations

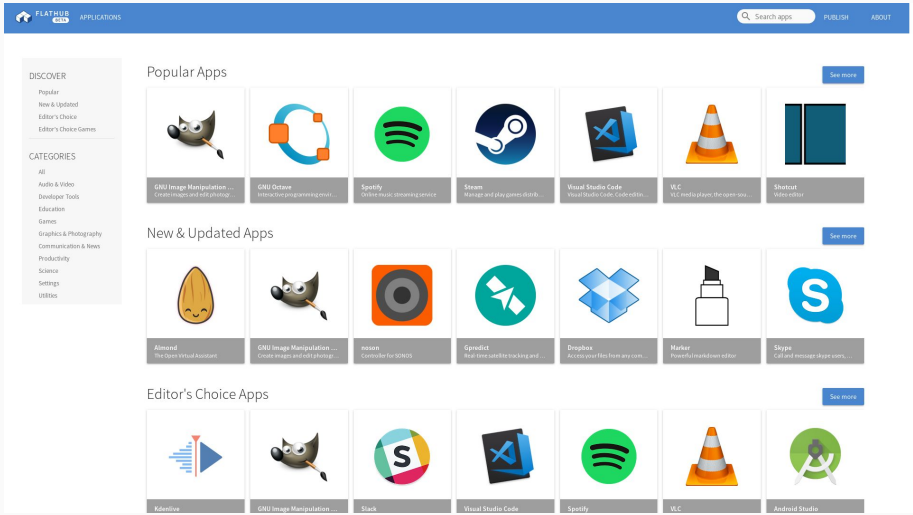
About Flathub - What is Flathub?

SKILLS REQUIRED

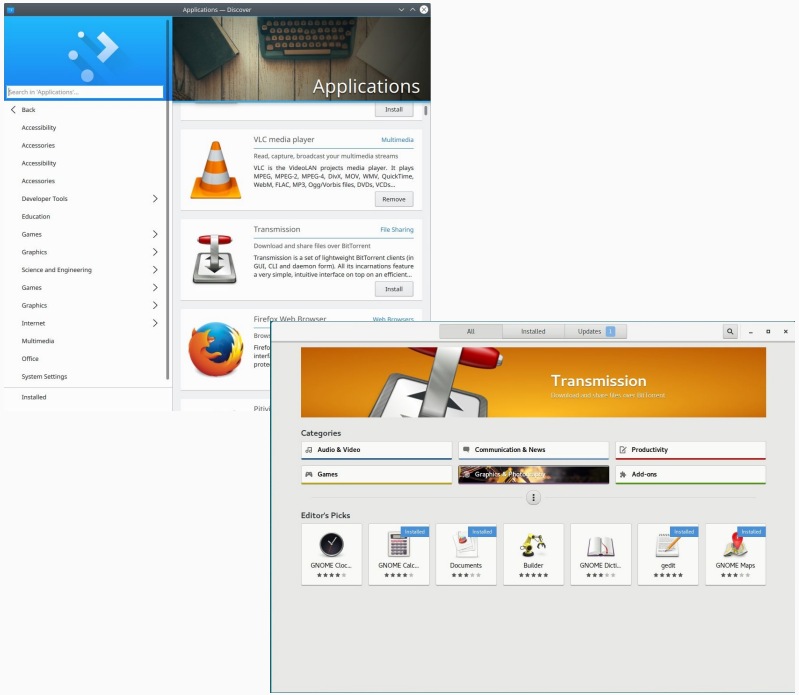
- Upstream app developers!
- Programming (flathub.org website, flatpak, …)
- Infrastructure/ops
- App packaging
- Web content, bug triage, translations, ...

About Flathub - How does it look?

Flathub website

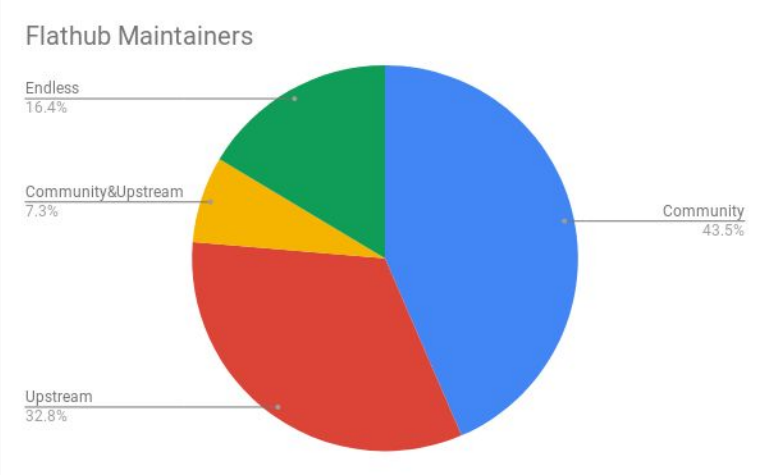


Flathub integrated in app centers



Flathub is a community project

- Driven by a wide range of individuals
- **21 individuals** provided some money for infrastructure expenses (June 2017)
- Currently **208 contributors** to github.com/flathub/app repos!
- Flathub reviewers team: **5 people**
- Flathub website team: **5 people**



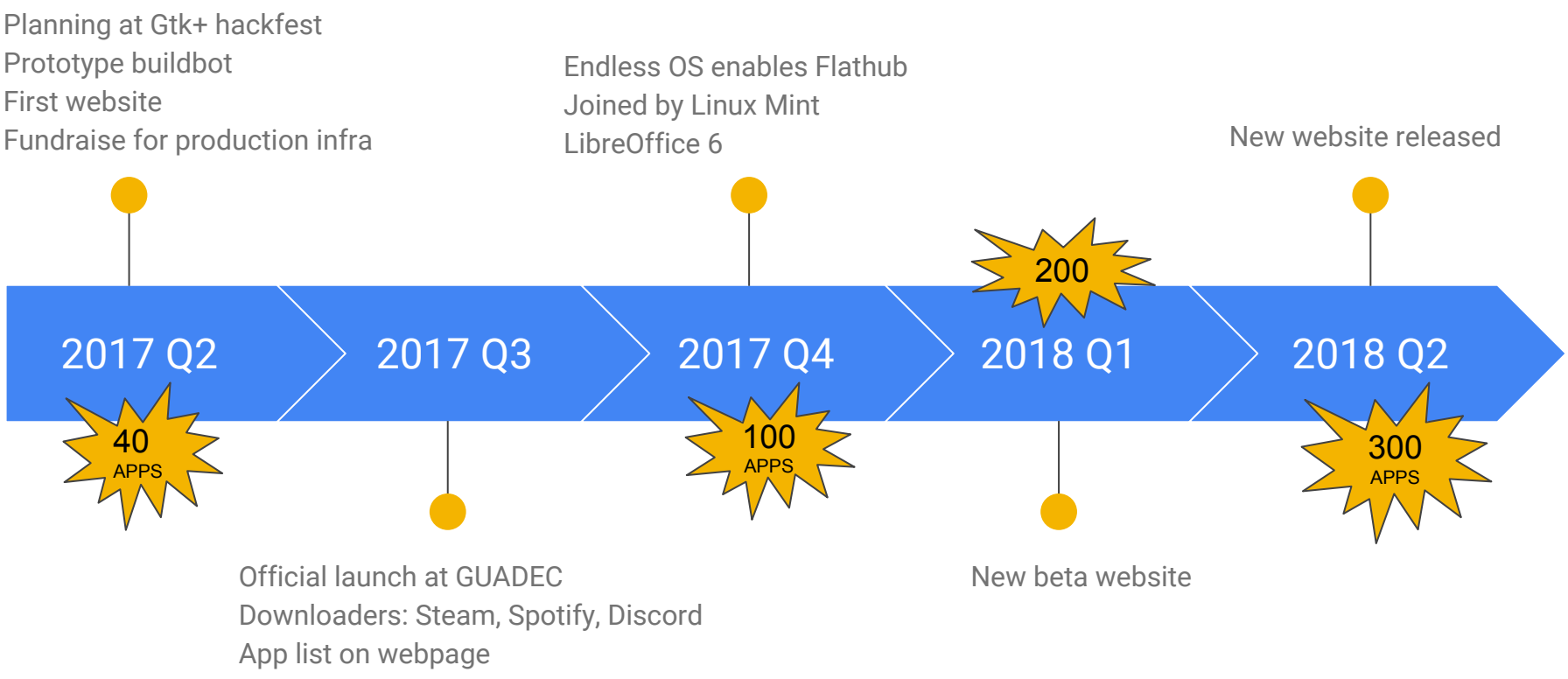
About Flathub - Who is running Flathub?

Companies donating services:

- Codethink
- Fastly
- Mythic Beasts
- Packet
- Prerender.io
- Scaleway

Companies donating time:

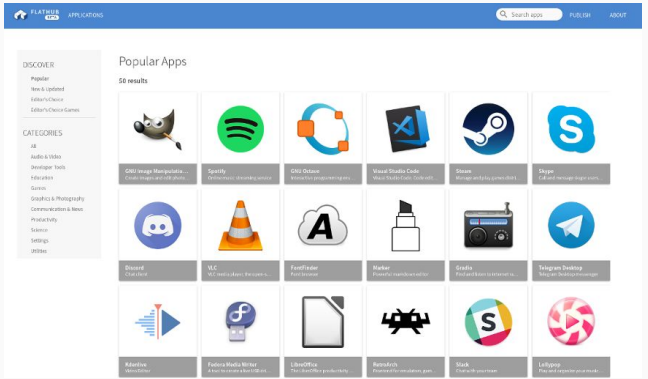
- Codethink
- Endless
- RedHat
- … and many apps!


Planning at Gtk+ hackfest
Prototype buildbot
First website
Fundraise for production infra
Endless OS enables Flathub
Joined by Linux Mint
LibreOffice 6
New website released
2017 Q2
2017 Q3
2017 Q4
2018 Q1
2018 Q2
200
40
APPS
100
APPS
300
APPS
Official launch at GUADEC
Downloaders: Steam, Spotify, Discord
App list on webpage
New beta website

Flathub for Users & Developers

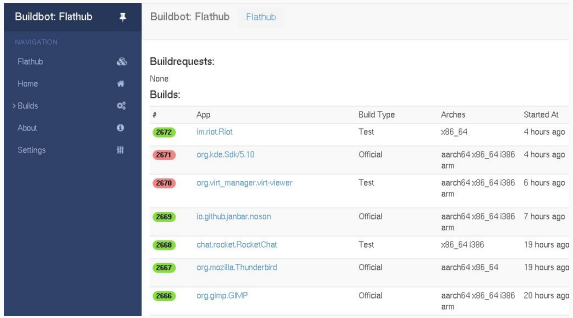
Flathub for end users

- App store: apps, themes, runtimes
- Browse apps with the website or using Gnome Software/KDE Discover
- Flatpak benefits vs standard distro packages:
  - Get the experience from the app developer
  - Up-to-date versions regardless of distro
  - Easy and efficient updates
  - Sandboxing



Flathub for developers - Features

- Single point of entry for distributing apps on the most popular Linux distributions
- Apps run **exactly as you build/configure them**
- A growing number of users:
  - some Linux distributions enabling it by default (Endless OS, Linux Mint)
  - simple setup steps for those that don't
- Build service: reproducible builds, multiple archs (x86_64, i386, arm, aarch64)



Publish and update an app in Flathub

- Before publishing
- Publish
- Update

Things to do before publishing a new app in Flathub

Checklist

Flatpak workshop
with Alex Larsson
Monday 9th am

- Check if it's published already or already a work in progress
- Check app requirements (License, AppId, Desktop integration, permission, …)
- If you are not the app developer contact the author first to ask them to submit it or offer your help
- Write your Flatpak manifest
  - Runtimes: freedesktop.org, GNOME and KDE
  - Shared modules: save time building common dependencies

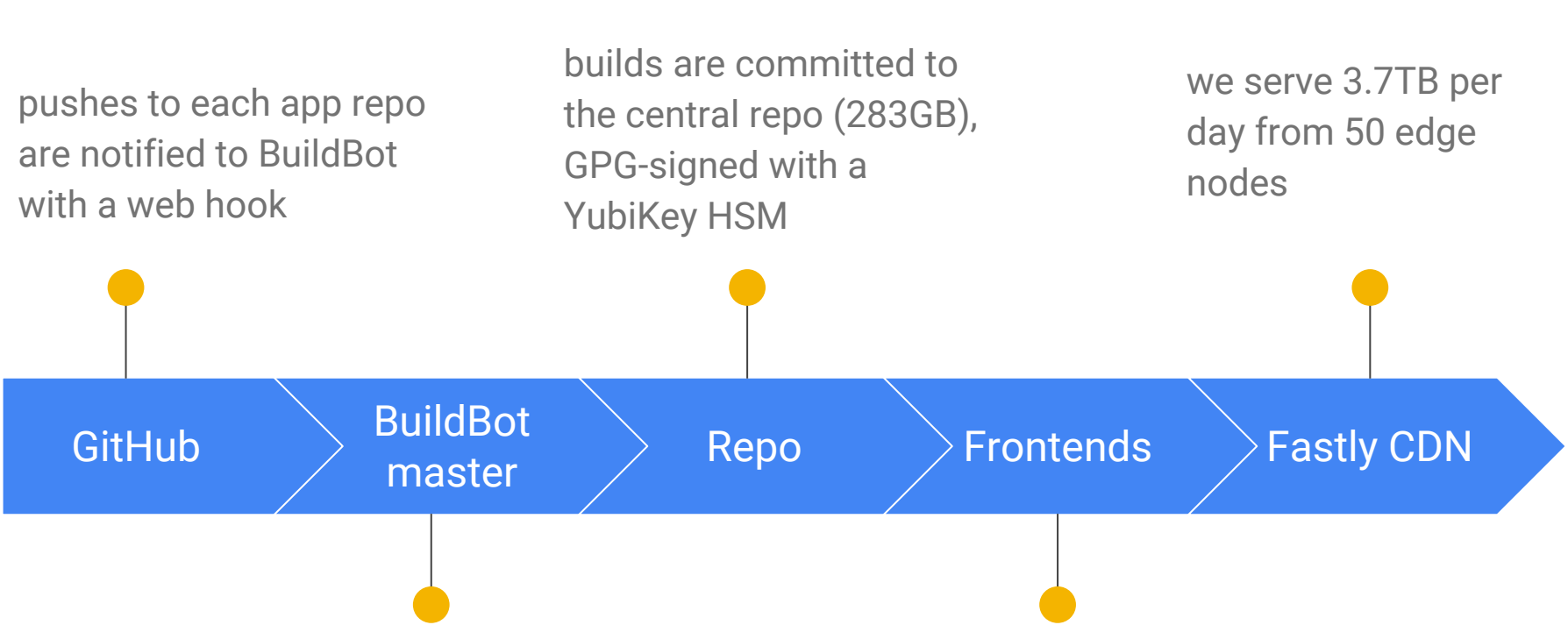
Publishing

1) Fork the Flathub repository on GitHub
2) Clone the fork: `git clone --branch=new-pr git@github.com:your_github_username/flathub.git`
3) Create a new branch with your app's name: `git checkout -b your_app_name`
4) Add your app's manifest to the branch, commit it and push the commit
5) Open a pull request against the new-pr branch on Github
6) Your pull request will then be reviewed by the Flathub reviewers

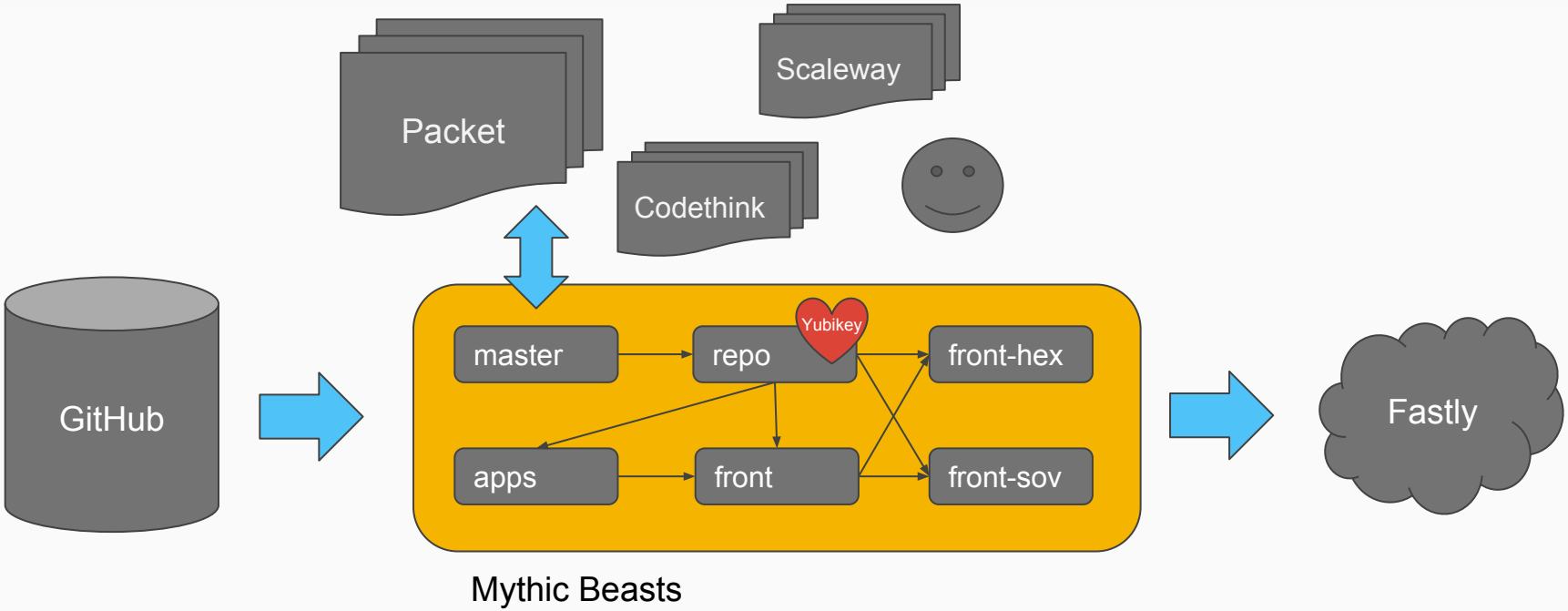
Updating

- Once your pull request has been approved, a new repository will be created for your application, containing your app’s flatpak manifest
- You will have write access for the repository
- The Flathub service then uses the manifest from your repository to continuously build and distribute your application on every commit.

How does Flathub work?


pushes to each app repo are notified to BuildBot with a web hook
builds are committed to the central repo (283GB), GPG-signed with a YubiKey HSM
we serve 3.7TB per day from 50 edge nodes
GitHub
BuildBot master
Repo
Frontends
Fastly CDN
sources are fetched and cached, flatpak-builder is run on each of the 4 supported architectures
two separate nginx frontends cache the working set (125GB for 30 days)

Infrastructure



Future developments

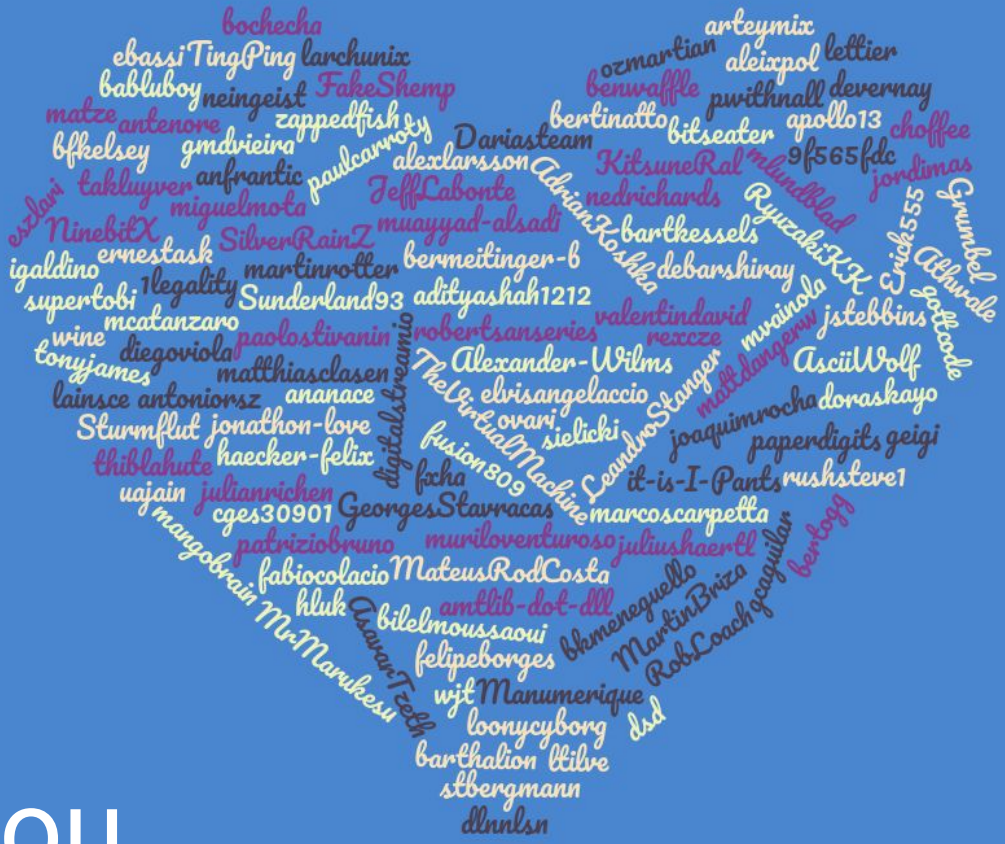
What plans are there for future development?

- Closer support from the GNOME Foundation, full-time dev/ops, sharing infrastructure
- flathub.org improvements: i18n, ratings, reviews, stats, search by license/arch/rating, show app extensions, ...
- Support for beta/scratch builds
- Infrastructure improvements: better build system, staging server, scaling!

How can I contribute to Flathub?

Contributing to Flathub

- **As a user:** use it, enjoy the apps, tell your friends, tweet about it, report issues.
- **As a developer:** publish (and update) your apps & themes at Flathub
- **As a company:** become an sponsor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babluboy
neingeist
FakeShemp
benwaffle
pwithnall
devernay
matze
antenore
zappedfish
bertinatto
bitseater
apollo13
choffee
bfkelsey
gmdvieira
paulcarroty
Dariasteam
alexlarsson
KitsuneRal
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anfrantic
JeffLabonte
AdrianKoshka
nedrichards
RyuzakiKK
Erick555
Grumbel
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RobLoach
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Thank you