Flatpak and KDE

Albert Astals Cid
aacid@kde.org
@tsdgeos
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Who is this?

KDE developer since 2003

KDE+Flathub
KPDF/Okular
Translations
Releases
kdegames
kdeedu
KDE España
KDE e.V.
A little bit of everything :)

From the Startling Story of MYSTERY AND MODERN ADVENTURE
Produced in Splendid Selznick Style Under the Direction of Henry Kolker

An All Star Cast: Including Claire Anderson and Niles Welch
Happy birth-KDE-day to me!

Account for Albert Astals Cid (aacid) created by dfaure.

20 years
What is flatpak?

flatpak.org says

“The future of apps on Linux”
“A new world for application developers”

It helps the user by helping the developer
## Why flatpak?

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<th>Packaging status</th>
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What is flatpak? - runtimes

“Build for every distro”
“Stable platforms”
“Consistent environments”
“Future-proof builds”

A runtime provides a set of libraries that can be used by flatpak-ed applications.

e.g:

org.freedesktop.Platform
org.kde.Platform
org.gnome.Platform
...
What is flatpak? - run-time things

Flatpak can run either containerized (ideally) or not (for applications no 100% ready)

There are ~30 portals that help the application punch-out of the container and provide a more desktop adequate UI.

Some of the portals are supported by Qt or KDE Frameworks, others you may need to implement directly in the app.

What is flatpak? - distribution

“Distribution made easy”

One flatpak works for all distros, you can host your own repository or put the flatpak package in an existing one

$ flatpak remotes -d

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<th>Flatpak</th>
<th>Description</th>
<th>URL</th>
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<tr>
<td>kdeapps</td>
<td>KDE Testing Applications</td>
<td><a href="http://distribute.kde.org/flatpak-apps-testing/">http://distribute.kde.org/flatpak-apps-testing/</a></td>
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<tr>
<td>katomic-origin</td>
<td>org.kde.katomic build nr 2440</td>
<td><a href="https://dl.flathub.org/build-repo/2440">https://dl.flathub.org/build-repo/2440</a></td>
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<td>choqok-origin</td>
<td>-</td>
<td><a href="https://dl.flathub.org/build-repo/107491">https://dl.flathub.org/build-repo/107491</a></td>
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</table>
What is flatpak? - building

“Full control over dependencies”
“Easy build tools”

"id": "org.kde.kgeography",
"runtime": "org.kde.Platform",
"command": "kgeography",
"buildsystem": "cmake-ninja",
"type": "archive",
"url": "https://.../src/kgeography-23.04.3.tar.xz",
"sha256": "459...b7d1646617a9fea5099ecf777b9b"
What is flatpak? - building (II)

Obviously not everything is so easy ^_^

Kontact json file is 1500 lines long
  67 dependencies

Okular json file is 500 lines long
  21 dependencies
Flash Lightning talk!

SAY *NO* TO OPTIONAL DEPENDENCIES

Okular has 18 optional dependencies
Poppler has 6 optional dependencies
LCMS has 5 optional dependencies
  ...got tired to check more ...

Make dependencies mandatory and add the possibility of disabling them one by one with an explicit parameter
What is flathub?

Flathub is one of many flatpak remotes[1]

- Has its own CI to build packages
- Has its own extra rules to what is considered a valid package
- Hosted in github[*]

[1] Probably the biggest one
Flathub – KDE some statistics

- 147 apps on the KDE group
- Firefox has ~3M installs
- Kdenlive has ~575K installs
- Okular has ~200K installs
- KGeography has ~10K installs
The KDE runtime

Hosted at https://invent.kde.org/packaging/flatpak-kde-runtime

Built in flathub CI

One branch per Qt version [*]

The Qt6 branches do not include KDE Frameworks yet

Updates are manual
The KDE flathub manifests

Hosted at https://github.com/flathub/org.kde.*

Built in flathub CI

Just one branch for the latest stable version

Updates are automatic [*]
The KDE flatpak repository

Nightlies repository, not for stable user use

Hosted at https://invent.kde.org/packaging/flatpak-kde-applications

Built in binary-factory

Manifest files are duplicated from flathub :(

Updates are not automatic
The KDE flatpak CI in gitlab

Can be enabled with .../gitlab-templates/flatpak.yml

Manifest should be named .flatpak-manifest.json

Make sure to change the Manifest in https://invent.kde.org/packaging/flatpak-kde-applications to be a .remoteapp file

Manifest files still duplicated from flathub :(

Updates are not automatic
Questions

Who?

When?

How?

Why?