



Making flatpaks from Fedora RPMs

Jan Beran

jaberan@redhat.com

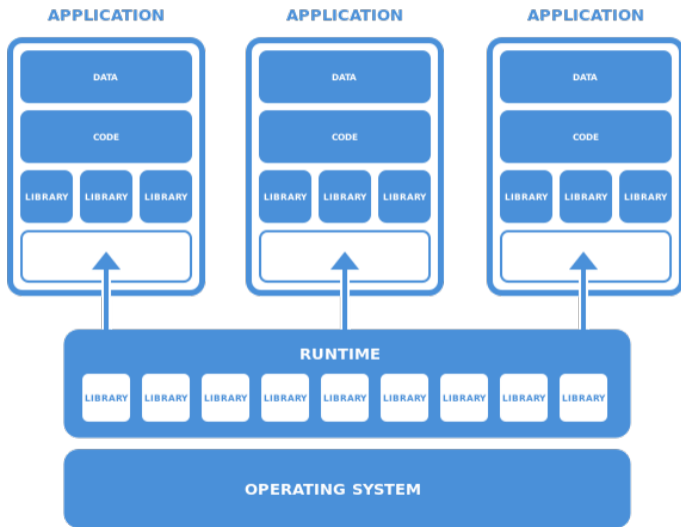
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What is a flatpak?



Why Fedora needs flatpak?



Diversity

- ▶ Flathub: 1200 applications (as of 25. 4. 2021)
- ▶ Fedora flatpak: +-100 applications
 - ▶ But thousands more in RPMs!



Reliability

- ▶ RPM specified by specfiles
- ▶ Processes how to bring new people to the community



Fedora Silverblue

- ▶ Immutable OS
- ▶ OSTree
- ▶ Toolbox
- ▶ Flatpaks



Fedora flatpak: short overview



Fedora flatpaks

- ▶ Based on existing RPMs
- ▶ Using Modularity - rebuild sources with /app prefix
- ▶ OCI images/containers
- ▶ Based on two files: application.yaml and container.yaml
- ▶ registry.fedoraproject.org



application.yaml

```
---
document: modulemd
version: 2
data:
  summary: Jump'n run like game
  description: >-
    SuperTux is a jump'n run like game, Run and jump through multiple worlds, fighting
    off enemies by jumping on them or bumping them from below. Grabbing power-ups
    and other stuff on the way.
  license:
    module:
      - MIT
  dependencies:
    - buildrequires:
        flatpak-common: [f33]
        flatpak-runtime: [f33]
        platform: [f33]
      requires:
        flatpak-common: [f33]
        flatpak-runtime: [f33]
        platform: [f33]
  profiles:
    default:
      rpms:
        - supertux
  components:
    rpms:
      supertux:
        rationale: Application package
        ref: f33
        buildorder: 10
...

```



container.yaml

```
compose:
  modules:
    - supertux:master
flatpak:
  id: org.supertuxproject.SuperTux
  branch: stable
  command: supertux2
  rename-appdata-file: supertux2.appdata.xml
  rename-desktop-file: supertux2.desktop
  rename-icon: supertux2
  finish-args: |-
    --socket=wayland
    --socket=x11
    --share=ipc
    --socket=pulseaudio
    --share=network
    --device=all
```



Building a flatpak: demo



Building a flatpak: step 0



- ▶ `sudo dnf install flatpak-module-tools fedmod`
- ▶ `mkdir app && cd app`
- ▶ `make app.yaml` and `container.yaml`
 - ▶ `app.yaml`: ModuleMD file -> info about rcperms and versions
 - ▶ `container.yaml`: module -> container info (e.g. permissions)
- ▶ `fedmod rpm2flatpak [--flatpak-common] [--flathub=app]`
`app`

Building a flatpak: step 1

- ▶ Rebuild packages with /app prefix (build module locally)
- ▶ Build a flatpak from the module
- ▶ Install and test it
- ▶ `flatpak-module local-build [--install]`
 - ▶ `flatpak-module module-build`
 - ▶ `flatpak-module build-container --from-local`
 - ▶ `flatpak-module install app-xyz-oci.tar.gz`



Building a flatpak: step 2

- ▶ Request repository
- ▶ Build everything in Fedora infrastructure
- ▶ Test it
- ▶ Submit new package update into Bodhi
- ▶ `fedpkg request-repo --namespace flatpaks appname`
- ▶ `fedpkg module-build && fedpkg flatpak-build`



Can you make your own flatpak?

YES!

- ▶ <https://docs.fedoraproject.org/en-US/flatpak/tutorial/>
- ▶ <https://fedoraproject.org/wiki/Flatpak:Easy>
- ▶ <http://janberan.tech/2021/02/rpm2flatpak/>
- ▶ <https://mojefedora.cz/jak-z-rpm-vytvorit-flatpak/>



Near(?) future



Near(?) future

- ▶ RHEL and Copr flatpaks
- ▶ Integrating community into the process
- ▶ Automation



How to activate Fedora flatpak repository?

- ▶ `flatpak remote-add fedora
oci+https://registry.fedoraproject.org`



The end

