



Generic standalone Linux app packages

presented by
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FLATPAK

About me: Jens Petersen

Worked on Fedora since the beginning

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Disclaimer: not a Flatpak contributor/expert

Introduction

Packaging applications for generic Linux is painful

Different distributions in multiple versions,
each with their own versions of libraries and packaging formats

Flatpack

is here to change that

- Flatpak apps can be installed on different distros and versions
- Uses **sandboxes** to isolate binary apps from your system

Flatpak assumes Linux

Author

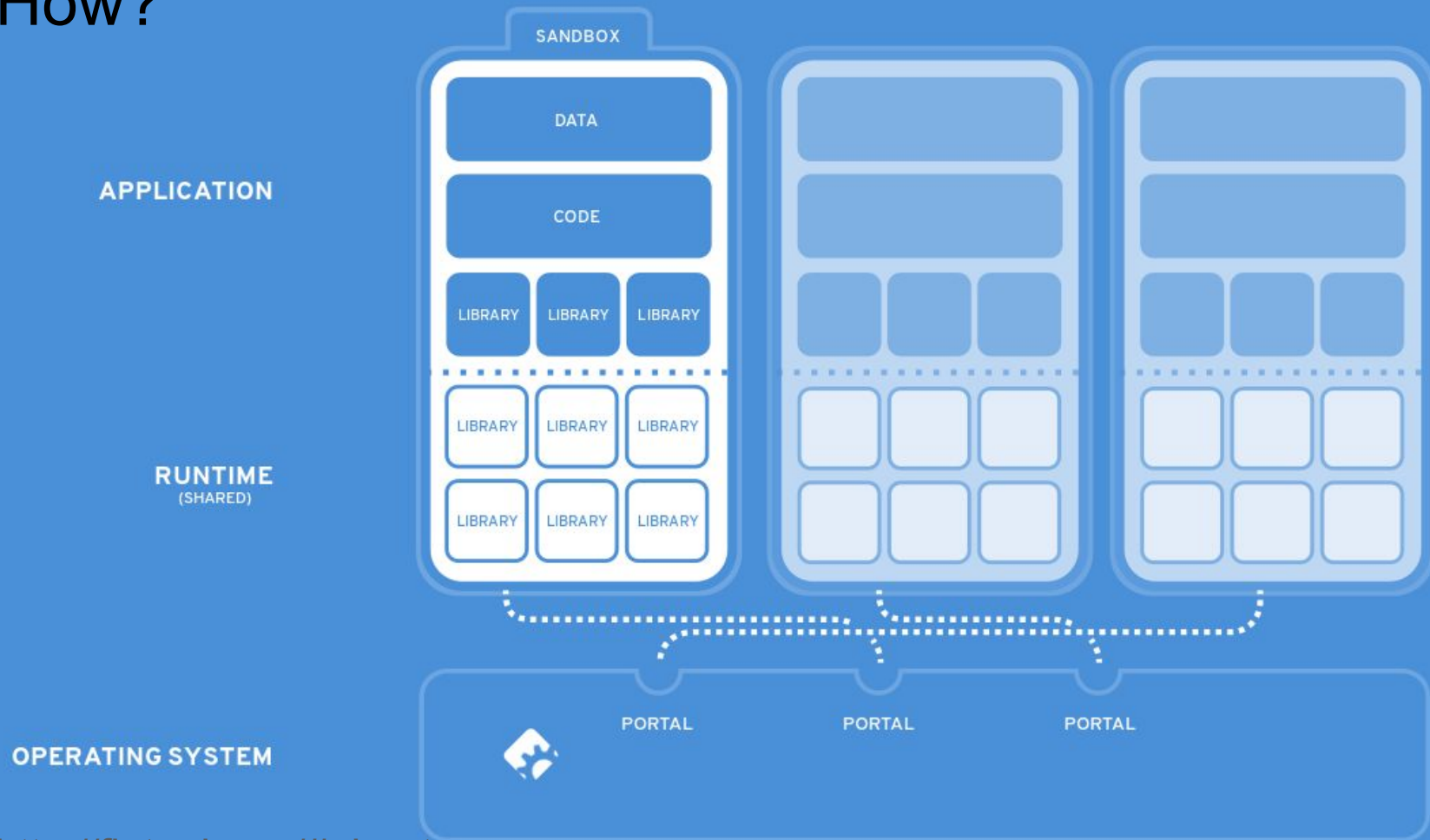
Flatpak is created and authored by Alex Larsson

Flatpak was formerly called xdg-app

<https://2016.guadec.org/tag/flatpak/>



How?



Concepts

- Runtimes
- Bundled libraries
- SDKs
- Sandboxes

<http://flatpak.org/developer.html>

Identifiers

Flatpak identifies runtimes, SDKs and applications by a triple of:
name/arch/branch

- name is in inverse-dns notation
 - needs to match the D-Bus name used for the application
 - Eg `org.gnome.Sdk/x86_64/3.14` or `org.gnome.Builder/i386/master`

Technologies

Many of the important ingredients for Flatpak are inherited from Linux containers and related initiatives:

- bubblewrap utility from Project Atomic lets unprivileged users set up and run containers, using kernel features like Cgroups, Namespaces, Bind mounts, Seccomp rules
- systemd to set up cgroups for the sandbox
- D-Bus, a well-established way to provide high-level APIs to applications
- OCI format from the Open Container Initiative, as a convenient transport format for single-file bundles
- The OSTree system for versioning and distributing filesystem trees
- Appstream metadata for Flatpak apps to show up in Gnome Software

Anatomy of a flatpak app

http://flatpak.org/developer.html#Anatomy_of_a_Flatpak_App

No package versions?

Sandboxes

http://flatpak.org/developer.html#Working_with_the_Sandbox

Installation

Flatpak is available in Fedora, Ubuntu, Debian, etc

```
$ flatpak --help
```

Demo

Running

Let's try <http://flatpak.org/index.html#users>

Build

We will try <http://flatpak.org/index.html#developers>

Tools, IDE

- flatpak-builder
- GNOME Builder supports flatpak
 - since 3.20, improved in 3.22

Alternatives

Snap from Ubuntu

Nix/guix

ApplImage

Thank you

Contributing:

- Homepage: <http://flatpak.org/>
- Mailing list: <http://lists.freedesktop.org/mailman/listinfo/xdg-app>
- IRC: *#flatpak* on Freenode
- Github: <https://github.com/flatpak/flatpak>