Universal Packages

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Introduction

What are packages?

A **package** is an archive containing a collection of executable files or source code, along with metadata, which represent a computer program.

What is a package format?

A **package format** is an organizational structure for delivering packages to users.

Why do we need package formats?

- They provide a common way to bundle executables, libraries, assets, etc. for deployment on user machines.
- They provide metadata about programs for use in package managers.
- It would suck if we had to go find the source code for every single program we want to use and compile from source.[1]

[1] Actually, some package formats do require compilation from source (for example some AUR packages) but at least it helps automate this process.

A bit of history

1994 `dpkg` — the package format behind `apt` and `apt-get`. Used by Debian-based systems.

1997 `RPM` — the package format behind `yum` and `dnf`. Used by RHEL-like systems.

2002 `pacman` — the package manager for Arch Linux. It just uses `tar` files.

2004 `klik`/`PortableLinuxApps` (2011)/`AppImage` (2013) — a package format built to be Linux-distro agnostic.

2006 `nix` — a purely functional package format. Primarily used by NixOS.

June 2016 `snapd` — the Canonical-backed universal package format is ported to a wide range of Linux distros.

June 2016 `Flatpak` — the Red Hat-backed universal package format becomes generally available.

AppImage

Objectives

- binary compatibility
- distro agnosticism
- no installation
- no root permission
- portability
- keeping the underlying operating system untouched.

snapd

flatpak

nix

Love to Hate Them

Proprietary enterprise applications are coming to Linux

Currently, when enterprises want to make a cross-platform application, they see this:

macOS	`.dmg`
Windows	`.exe`
Linux	`.deb` and `.rpm` and `PKGBUILD` and …then deal with the dependency hell

However, when companies like Canonical come in and say "just target snaps", all of a sudden, it may tip the scale at enterprises for them to start targeting Linux. If they create a snap, then they capture all of the Linux market, not just the subset that uses a particular format.

Pros and cons

Pros

- More application availability.

Cons

- The applications are going to be crap. Electron, enterprise crap.

Live Demo

Questions?

Resources

- https://

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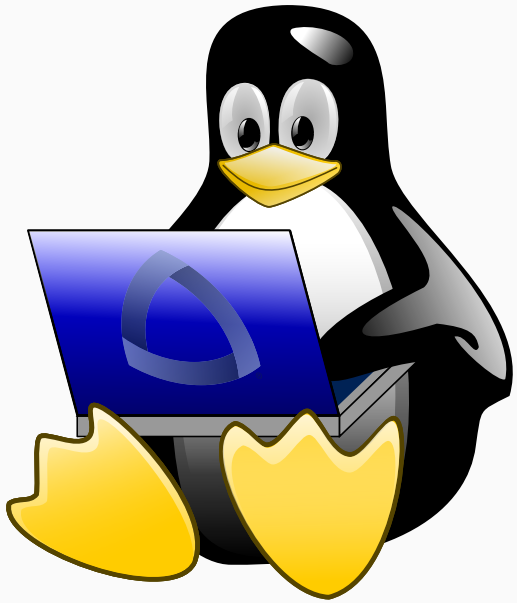

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