Kannolo
a pure-KDE Fedora Remix (without GTK+)

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Self-Introduction

- ▶ Kevin Kofler
- ▶ `mailto:kevin.kofler@chello.at`
- ▶ Kevin_Kofler on IRC
- ▶ Fedora packager since 2007
  - ▶ KDE SIG (Special Interest Group) (2007-2015)
  - ▶ still (co)maintainer of 47 packages
- ▶ PhD in Mathematics (University of Vienna, Austria)
- ▶ employer: DAGOPT Optimization Technologies GmbH

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Introduction

What is Kannolo?

- ▶ Fedora Remix
- ▶ remixed from the Fedora KDE Spin
  - ▶ KDE Plasma Desktop workspace, Calligra, Kontact, . . .
- ▶ goal: pure KDE experience (no GTK+ by default)
- ▶ KDE software packaging taken from Fedora
  - ▶ coming from the Fedora KDE SIG
    - ▶ Rex Dieter et al.
  - ▶ unmodified Fedora packages
  - ▶ only `kde-print-manager` rebuilt (renamed to `kde-print-manager-no-scp`) to
    - ▶ remove `system-config-printer` dependency
    - ▶ patch out runtime complaints about it being missing
  - ▶ small add-on repository (Copr) with a handful packages
- ▶ installable: Calamares installer

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Introduction

Kannolo vs. Fedora KDE Spin

- ▶ only KDE/Qt software
- ▶ **no** GTK+ on the (graphical, installable) image
  - ▶ upstream Fedora repositories enabled by default
  - ▶ GTK+ and GTK+ applications available from there
- ▶ GTK+ applications replaced with KDE/Qt applications
  - ▶ see section *Package Choices*
- ▶ built with **livecd-creator** (from livecd-tools)
  - ▶ "old" Fedora live image creation tool
  - ▶ ported to Python 3 and DNF by Neal Gompa and me
  - ▶ chosen over "new" livemedia-creator for practical reasons
- ▶ naming:
  - ▶ *torta fedora*: Sicilian cake
  - ▶ *cannolo*: similar Sicilian sweet with different shape
  - ▶ *K*: for "KDE"

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Features

Kannolo Features

- ▶ installable live image
- ▶ 64-bit native (x86_64)
- ▶ includes latest updates as of image compose time
  - ▶ current: Kannolo 26 and 27 with updates up to February
  - ▶ plan: frequent respins
- ▶ netinstall of optional packages
  - ▶ powered by Calamares `netinstall` module
  - ▶ hybrid live+netinstall (live install + extra packages)
  - ▶ offline installation without netinstall possible
- ▶ significantly smaller than upstream distro (Fedora KDE)
  - ▶ no GTK+, no Anaconda stack, etc.
  - ▶ less software on the image thanks to the netinstall

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Package Choices

Browser: Falkon by default, no Firefox

- ▶ Firefox requires GTK+
  - ▶ also system integration, freedom and privacy concerns
- ▶ **Falkon** (ex **QupZilla**): modern browser for end users
- ▶ based (since QupZilla 2.0) on QtWebEngine
  - ▶ based on Google Chromium (Blink)
  - ▶ up to date with current web standards
  - ▶ security updates backported to the stable branch
- ▶ optimal desktop integration
  - ▶ native: icons, file dialogs, notifications, etc.
  - ▶ support for KWallet through optional plugin
- ▶ (still called QupZilla in the current February 2018 images)

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Package Choices

Installer: Calamares instead of Anaconda

- ▶ Anaconda requires GTK+
- ▶ **Calamares**: distribution-independent installer framework
- ▶ upstream project instead of Not Invented Here
  - ▶ Blue Systems, several distributions
- ▶ C++, Qt 5, Python 3, Boost::Python
- ▶ advanced partitioning module using KPMcore
  - ▶ = the core of KDE Partition Manager
- ▶ unique features
  - ▶ netinstall module: allows hybrid live+netinstall

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Package Choices

Firewall: UFW instead of firewalld

- ▶ firewall-config requires GTK+
- ▶ no KDE/Qt configuration frontend
- ▶ **UFW** (Uncomplicated FireWall)
  - ▶ alternative to firewalld
  - ▶ developed by Canonical for Ubuntu
  - ▶ also written in Python
- ▶ has **UFW-KDE** frontend
  - ▶ currently based on kdelibs4
  - ▶ integration into Plasma 5 System Settings not possible
  - ▶ standalone menu entry (using kcmshell4)
- ▶ KF5 port wanted!
  - ▶ 2 experimental and abandoned ports on GitHub
  - ▶ Nomad Firewall: missing crucial features, dropping UFW
  - ▶ promised firewalld-config Qt port never happened

Crash handler: DrKonqi only, no ABRT

- ▶ ABRT-GUI requires GTK+
- ▶ no KDE/Qt user interface
- ▶ crashes in KDE applications already caught by KCrash
  - ▶ spawns the **DrKonqi** user interface automatically
- ▶ DrKonqi reports crashes upstream, not downstream
  - ▶ directly to the right people

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Package Choices

SELinux disabled by default

- ▶ SETroubleShoot requires GTK+
- ▶ no KDE/Qt user interface
    - ▶ i.e., no denial feedback whatsoever without GTK+
    - ▶ unacceptable default user experience
- ▶ SELinux not necessary or useful on Kannolo
    - ▶ targeted policy protects mainly servers
    - ▶ main protected desktop application: browser (Firefox)
    - ▶ SELinux has no policy for Falkon
    - ▶ **Falkon is already protected** by Chromium sandbox
        - ▶ provides protection comparable to the SELinux sandbox
          for Firefox with **no** SELinux/external dependency
- ▶ SELinux disabled, some packages omitted to save space

Links

- https://kannolo.sourceforge.io/
- https://kde.fedoraproject.org/
- https://www.falkon.org/
- https://calamares.io/
- https://wiki.ubuntu.com/UncomplicatedFirewall
- https://launchpad.net/ufw-kde
- https://www.spinics.net/lists/fedora-devel/
  msg227128.html