

How to build QubesOS?



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Outline of talk

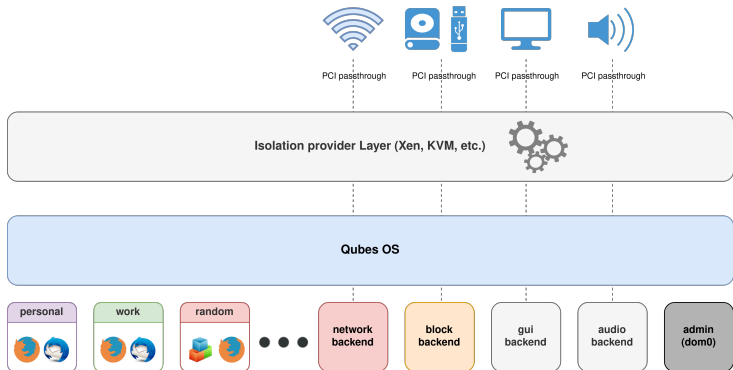
1. Qubes OS Overview
2. Get Hands Dirty
3. Summary
4. Q&A

@fepitre



- PhD in Applied Mathematics,
- Space dynamics,
- (How to) build OS.
- github.com/fepitre
- frederic.pierret@qubes-os.org

Qubes OS Overview



Qubes OS Overview

- dom0: Fedora
 - Why? *FreeBSD* would..., *Debian* is..., *mykillingdistro* rocks...
 - Historically supports large hardware collection,
 - We don't have resource to spend on changing dom0 yet.
- VMs:
 - Fedora,
 - Debian,
 - Whonix,
 - CentOS,
 - Archlinux,
 - Ubuntu,
 - MirageOS (currently unpackaged),
 - openSUSE (on the road),
 - Gentoo (on the road) (HardenedBSD, ClipOS, etc.),
 - LFS (on the road).

Qubes OS Overview



Isolation provider Layer (Xen, KVM, etc.)



Qubes (daemons, agents, etc.)



UX (Tools, Desktops, etc.)



dom0



dom0/VM



VM

How? Entry point

The screenshot shows the GitHub page for the Qubes OS Project. At the top, there's a navigation bar with links for Pull requests, Issues, Marketplace, and Explore. Below this, the repository header for 'Qubes OS Project' is visible, including its logo and a verified URL. The main content area is divided into sections: 'Pinned repositories' featuring 'qubes-secpack', 'qubes-issues', and 'updates-status'; a search bar with filters for Type and Language; and a list of repository results for 'qubes'. The results include 'qubes-doc', 'qubes-secpack', 'qubes-core-admin', and 'qubes-builder', each with its description, language, star count, and update status. On the right side, there are sidebars for 'Top languages' (Python, Makefile, Shell, C, Ruby) and 'People' (a grid of contributor avatars).

Search or jump to... Pull requests Issues Marketplace Explore

Qubes OS Project
<https://www.qubes-os.org/> Verified

Repositories 129 Packages People 21 Teams 1 Projects

Pinned repositories

- qubes-secpack**
Qubes Security Pack
Python 315 44
- qubes-issues**
The Qubes OS Project issue tracker
327 39
- updates-status**
Track packages in testing repository
23 1

qubes Type: All Language: All New

124 results for repositories matching **qubes** Clear filter

qubes-doc
Qubes documentation
HTML 391 213 0 10 Updated 8 hours ago

qubes-secpack
Qubes Security Pack
Python 44 315 0 10 Updated on Apr 15

qubes-core-admin
Qubes component: core-admin
Python LGPL-2.1 79 69 0 7 Updated yesterday

qubes-builder
Qubes Builder
Python 60 49 0 2 Updated 6 days ago

Top languages
Python Makefile Shell C Ruby

People 21 >

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qubes-builder

- Individual packages and putting them into repositories,
- Template images (and then packaged into RPM),
- Installation image,
- All-in-one place for working or releasing:
 - Production pipeline (through *qubes-infrastructure*)
 - Development pipeline
- We don't publish prepared sources as is (builder-dependent).

How? Entry point

It's time for a the how-to!

qubes-builder-v2

- New design for qubes-builder,
- Integration with other build tools (e.g. OBS or COPR),
- Keep modular aspects (plugins),
- Plugins:
 - Sources (get, update, prepare),
 - Build,
 - Release (sign, upload).
- Ideas and WIP:
 - Python instead of Make,
 - Build with/in Dockers (cache layers, time saving),
 - Publish prepared sources repos for other build tools,
 - OpenBuildService (multi-packaging distros),
 - Qubes dev/community ideas.

Q&A

Thank you for your attention!