Silverblue: On the way to the future of Fedora Workstation

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fedora

"Fedora system for living in the container world."

Matthew Miller, Flock 2019

Silverblue

- Next generation desktop OS
- Parts of the filesystem are mounted as read-only
- Utilizing the OSTree and rpm-ostree projects
- Atomic updates
    - necessary to restart into the new deployment
- Primarily the end-user focused system

SILVERBLUE

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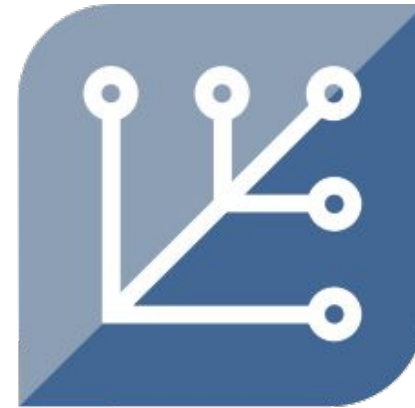
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Base OS is the most important part - into a degree it doesn't matter if a container breaks or an application doesn't run, but it's totally unacceptable to not have the main OS working.

Could Silverblue replace the current Fedora Workstation?

Only if certain criteria are met.

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  - Software decoupled from the base OS
- Package overlaying
  - A way to install traditional RPM packages
  - Should be used with caution to kept the base OS minimal and robust

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Fedora

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Flathub

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Fedora Flatpaks - current problems

- No automation - automatic rebuilds when any RPM package changes (currently blocked on the lack of notifications)
- No policy set for the long term support and maintainer's role in it (package maintainer vs. Flatpak maintainer)
- Too few applications available
  - ~ 1000 packages with desktop files, target is to have around 30% available as Flatpaks
- No support for delta updates
- No localization
- No caching when doing builds locally
- SPEC files have to be adapted or fixed
  - */app* vs. */usr*

Toolbox

- Moving development and playground away from the main OS
- Easy way to get the traditional Fedora
- CLI and GUI applications
- Toolboxes per projects
- Specialized Toolboxes
 - Software that's hard to install/configure
  - Tensorflow, …

TOOLBOX

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Toolbox

- Shell wrapper around the Podman project
- Golang rewrite
  - Podman and its regressions
- Integration into the OS
  - GNOME Terminal

TOOLBOX

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GNOME Software

- GUI for common and advanced OS operations
  - Currently only the update (*rpm-ostree upgrade*) is supported
  - System upgrade (*rpm-ostree rebase*)
  - Rollbacks (*rpm-ostree rollback*) and persistent rollbacks
  - Flatpak rollbacks
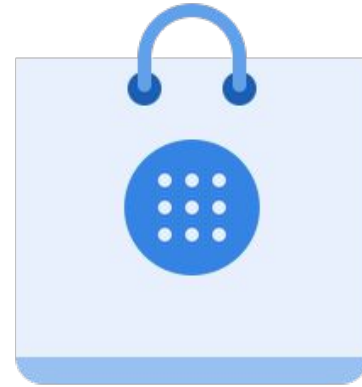
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- Slow down the cycle to 2 - 3 weeks
  - Need to cooperate with Fedora QA
  - More time to test the update as a unit (manually and automatically)
  - Early adopters
  - Opt-in for regular cadence
  - Critical vulnerabilities pushed asynchronously

Other problems

- Read-only base OS (*/usr* not writable)
  - Drivers
  - 3rd-party software
- Debugging experience
  - Debuginfo packages installation
- Dual boot UX

Official site:
silverblue.fedoraproject.org
Discussions:
discussion.fedoraproject.org/c/desktop/silverblue
Documentation:
docs.fedoraproject.org/en-US/fedora-silverblue
Issue tracker:
github.com/fedora-silverblue/issue-tracker
Planning:
teams.fedoraproject.org/project/silverblue

Questions?

Thank you for your attention!