

CentOS Stream 9 – The New Hope

CentOS Dojo, FOSDEM, 2022

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Agenda

- Changes to the CentOS Stream lifecycle
- CentOS Stream 9 VS RHEL 9 Beta
- Using CentOS Stream to build software for RHEL 9
- Adapting current pipelines from CentOS Stream 8 to CentOS Stream 9

Change is good

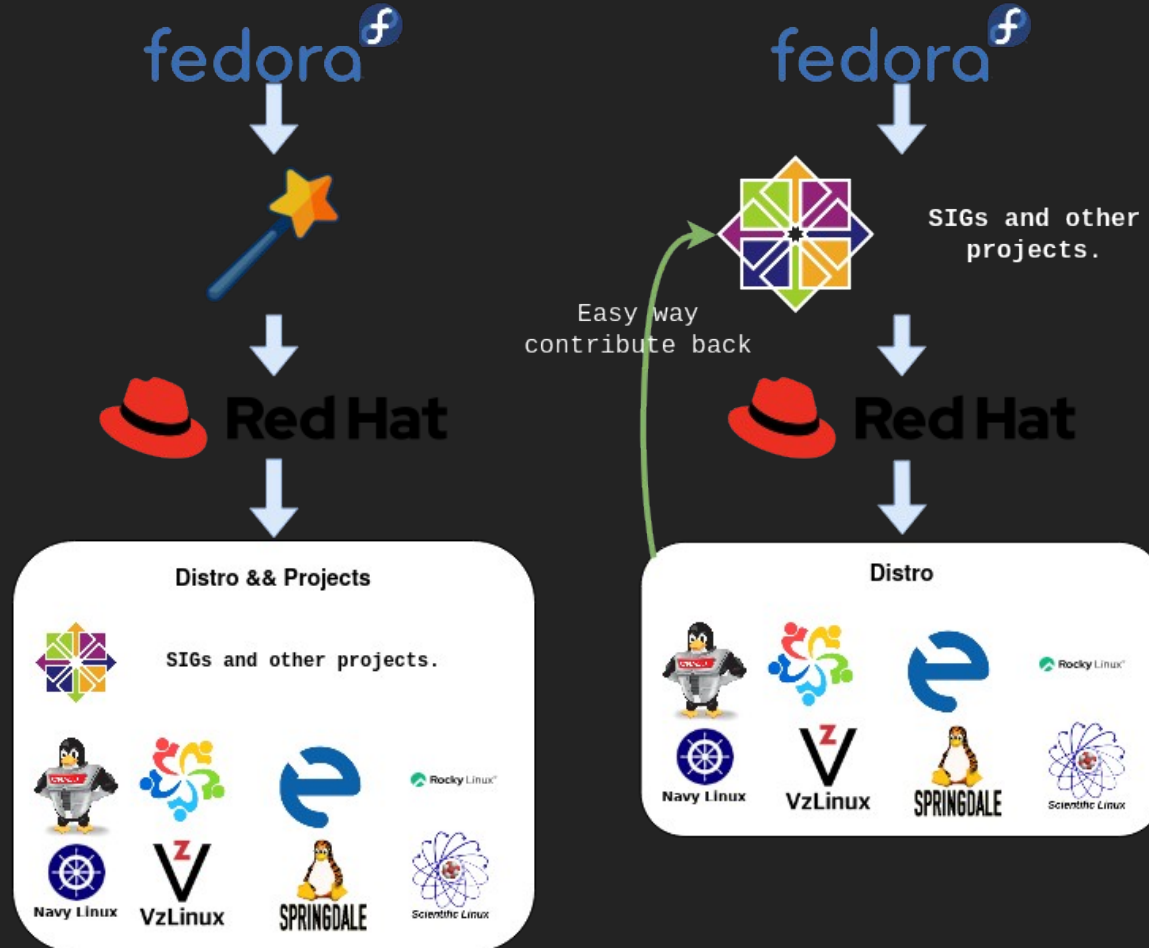
Before

- CentOS was RHEL clone
- CentOS waits for fixes
- CentOS was one of the many
- RHEL bootstrapping/CI/changes were magic process
- CentOS had a conflict of interest with RHEL
- CentOS had RHEL like life cycle
- A small number of packagers

Now

- CentOS is RHEL upstream
- CentOS creates fixes
- CentOS is central point for EL community
- CentOS is much more open
- CentOS has no conflict of interest with anyone
- CentOS has shorter life cycle
- Huge number of packagers

Central point



Resources invested in CentOS 9 Stream vs CentOS 8 Stream

Build hosts:

- 11 - CentOS Stream 8 - 4 architectures (i686, x86_64, aarch64, ppc64le)
- 21 - CentOS Stream 9 - 5 architectures (i686, x86_64, aarch64, ppc64le, s390x)

Users (including robot users):

- 14 - CentOS Stream 8
- 368 - CentOS Stream 9 (about 60 users did not submit build)

Median tasks (excluding users with 0 and including robot users):

- 10 000 For CentOS Stream 8
- 10 for CentOS Stream 9

Sources:

- <https://kojihub.stream.centos.org/koji/> (9)
- <https://koji.mbox.centos.org/koji/> (8)

Drawbacks of CentOS Stream and mitigation

Shorter life cycle:

- Not as short as some people like to cry about
- Move faster

More updates:

- It's not a bad thing
- Have a rollback strategy

Stability:

- More resources are put into the project than ever
- Have a rollback strategy
- CERN
- Rolling might be more stable

CentOS Stream 9 vs RHEL 9 Beta updates – 7, 14, 30 days

Source: <https://github.com/AlexBaranowski/centos-dojo-fosdem-2022/tree/master/built-in-14-days>

Run 3.02.2022 – BaseOS && AppStream repos

CentOS Stream 9:

- 304
- 971
- 2007

RHEL 9 Beta:

- 0
- 0
- 413

CentOS Stream 9 and RHEL 9 beta compatibility - libabigail

Source: <https://github.com/AlexBaranowski/centos-dojo-fosdem-2022/tree/master/libabigail>

- Some packages like kernel require debuginfo, that was not included
- OK packages: 5665
FAIL packages: 84
Problem with download: 285
- About 98% of packages are binary compatible

CentOS Stream 9 and RHEL 9 beta compatibility – software builds

Source: <https://github.com/AlexBaranowski/centos-dojo-fosdem-2022/tree/master/mock-build>

- CentOS Stream 9 buildroot is not as full as might be expected
- It might be smarter to use EPEL in the future
- In worst case scenario packager can always download from Koji
- In example → One package (atop) built as expected, second (terminator) has issue with dependencies
- For some reason mocks works well on EL9 but has problem on my personal EL8

CentOS Stream 9 and RHEL 9 beta compatibility – EuroLinux

- We run our internal test that allow us to create and maintain multiple forks – we call them Vardoger and Striga
- We used C9S as 0 level buildroot for EuroLinux 9
- EuroLinux 9 [beta ofc] will be released in two weeks

Adapting Pipelines – Vagrant & AWS

- Source: <https://github.com/AlexBaranowski/centos-dojo-fosdem-2022/tree/master/vagrant-changes>
- Our pipelines are Packer based
- Trivial changes to kickstart
- Trivial changes like `inst.text` `inst.ks` instead of `text ks`
- <https://app.vagrantup.com/eurolinux-vagrant/boxes/centos-stream-9>

Adapting Pipelines - Containers

- We used scripts that setup devices etc. then run yum install on changed root
- For CentOS 9 we have to move from EL 7 to EL 8, as there are conditionals installations
- During CentOS Dojo Neal Gomp & Davide Cavalca showed: <https://pagure.io/centos-sig-hyperscale/containers-releng/blob/main/f/make-hyperscale-container.sh>

Final thoughts

- CentOS Stream 9 has new identity
- CentOS Stream 9 is in many cases better choice than any other distribution
- CentOS Stream 9 is central point for whole EL community
- CentOS Stream 9 is resourceful project
- Due to compatibility CentOS Stream 9 can be used to build software for RHEL 9 Beta
- Adapting current pipelines from CentOS Stream 9 to CentOS Stream 9 is simple