



CentOS Stream

- preview of RHEL
- solid base for CentOS SIGs

Troy Dawson

Principal Software Engineer, Red Hat

CentOS Stream / Emerging RHEL Team Member

Fedora

Fedora
Server

Fedora
ELN

Fedora
Silverblue

Fedora
CoreOS

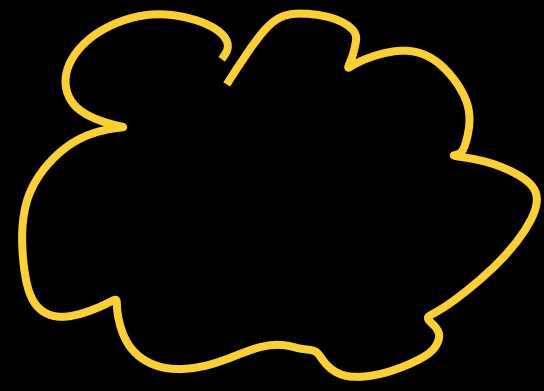
Fedora

Fedora
Kinoite

Fedora
Workstatio
n

Fedora
IoT

Fedora
KDE



Fedora
ELN

Fedora
Server



Fedora
Silverblue

Fedora
CoreOS



Fedora



Fedora
Kinoite

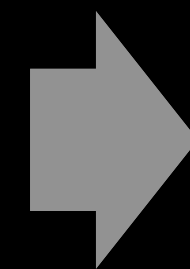
Fedora
IoT

Fedora
Workstatio
n



Fedora
KDE

Fedora

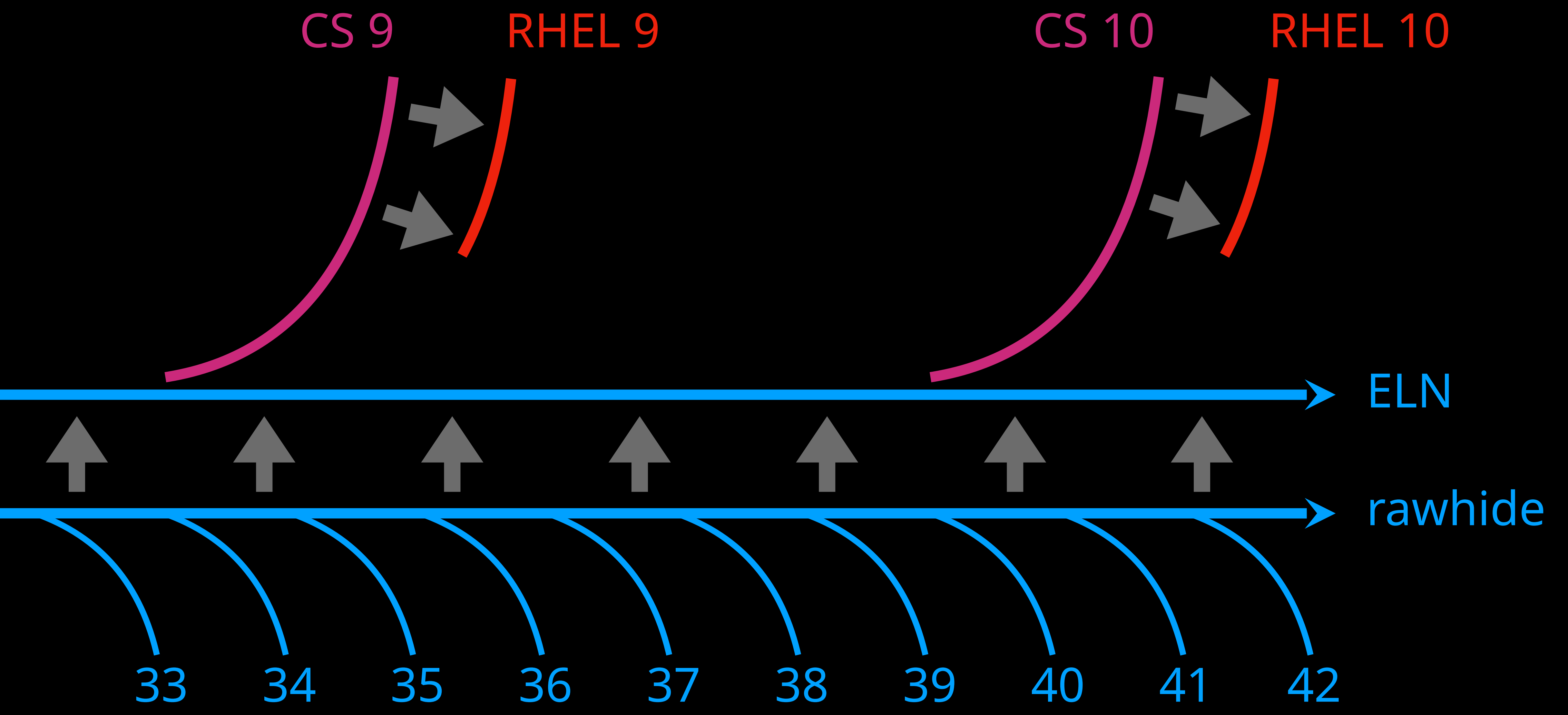


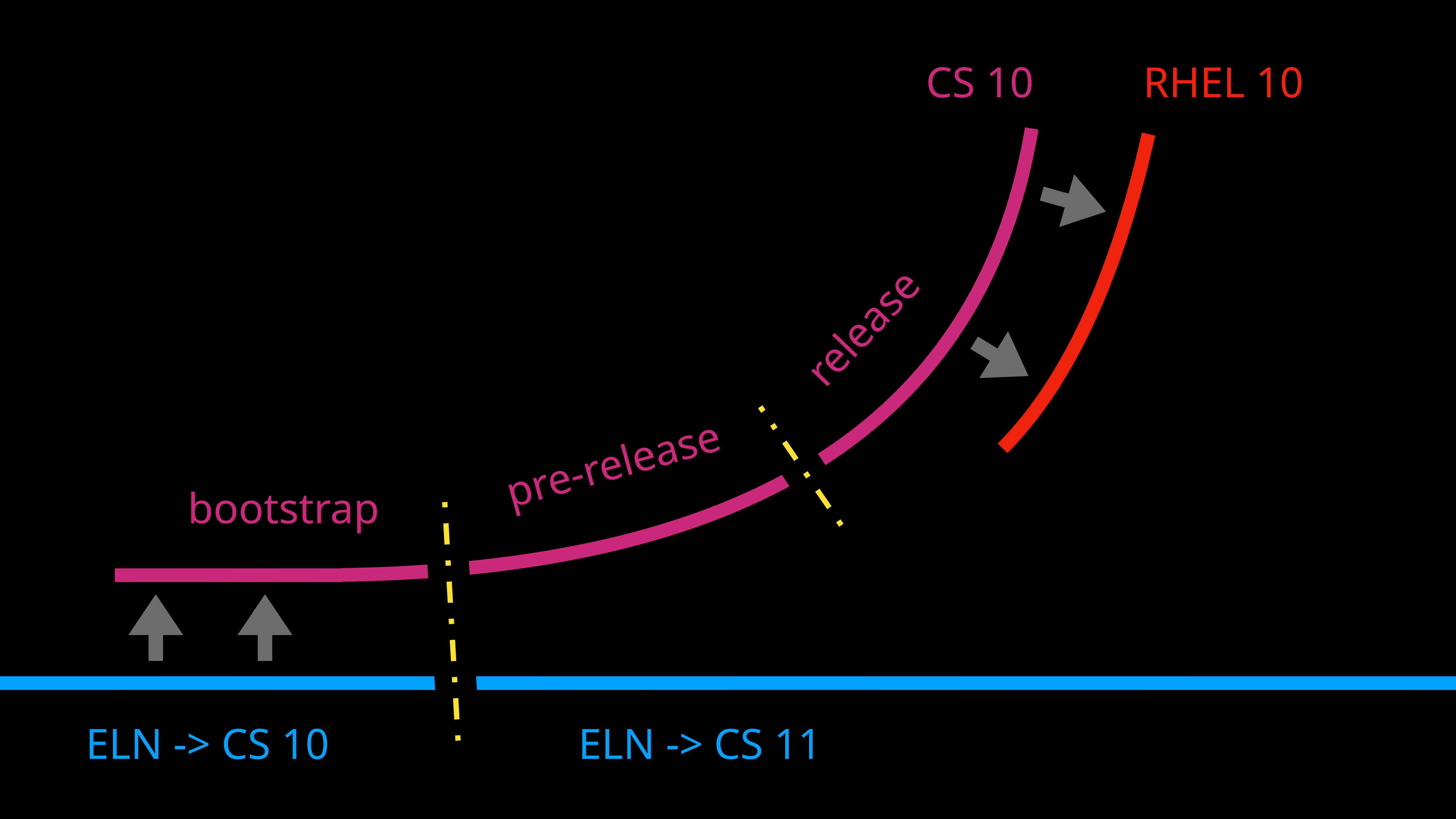
RHEL

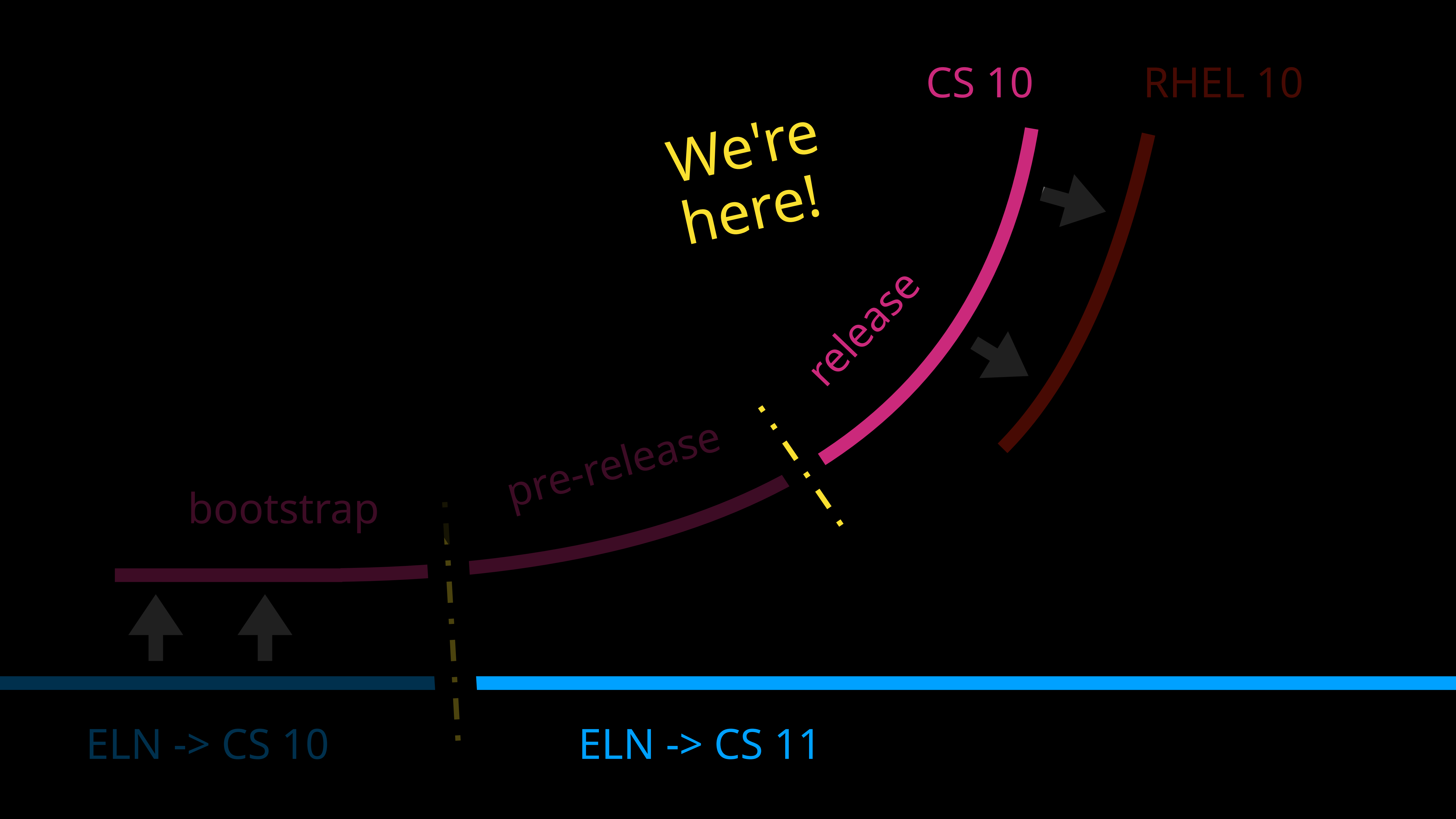


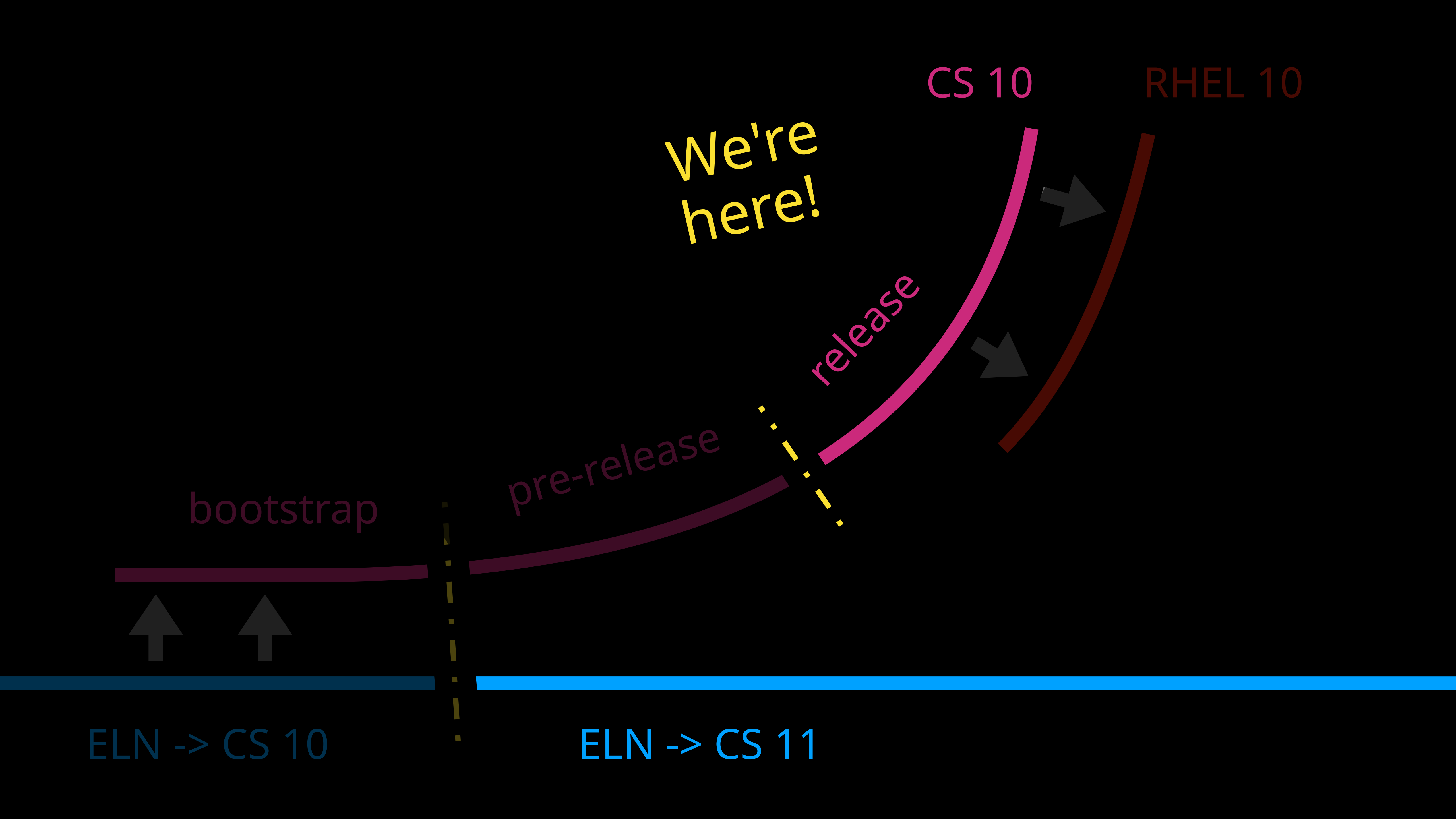
CentOS Stream

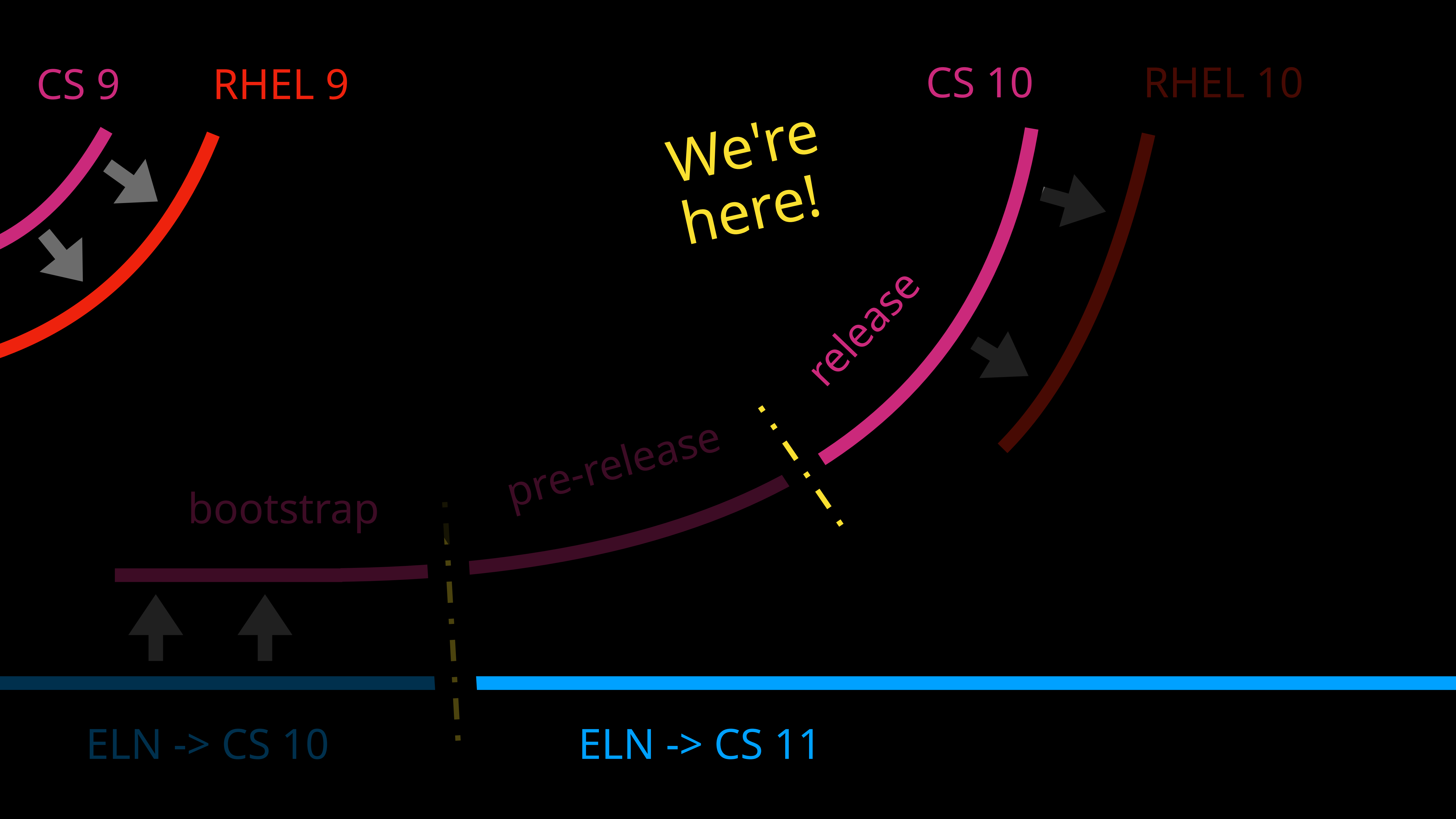
a Linux OS maintained by RHEL engineers













CentOS Stream Pipeline

1

Sources

CentOS Stream
dist-git

sync

RHEL
dist-git

2

Builds

CentOS Stream
Koji

sort of
coupled

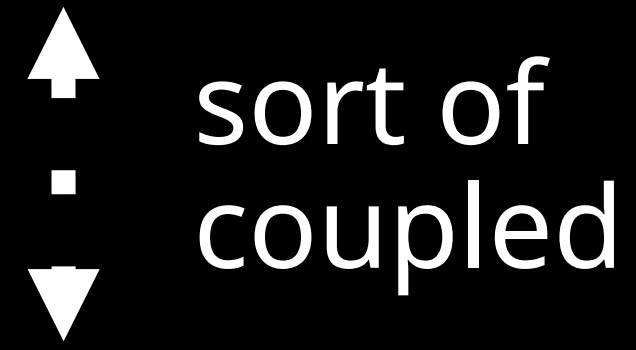
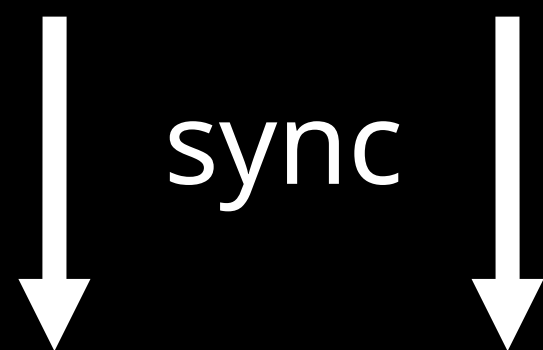
RHEL
Build &
Gating

3

Release

CentOS Stream
stuff

RHEL
things





Red Hat
Jira

issues.redhat.com

the RHEL project

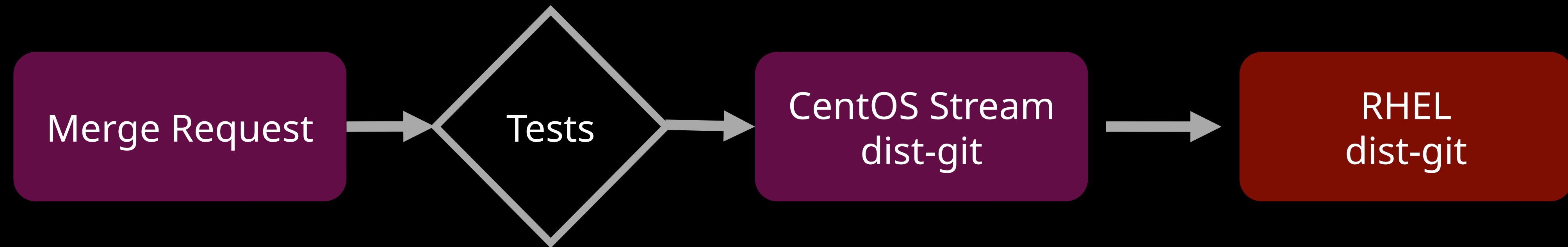
bug / change tracking

communication with RHEL maintainers



CentOS Stream
Sources

CentOS Stream Sources



[gitlab.com / redhat / centos-stream / rpms](https://gitlab.com/redhat/centos-stream/rpms)



https://gitlab.com/redhat/centos-stream/rpms/systemd/...



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Red Hat / centos-stream / rpms / systemd / Merge requests / !140

systemd-256-8

Code

Merged Jan Macku requested to merge jamacku/centos_rpms_syst... into c10s 5 days ago

Expand

Overview 2

Commits 1

Pipelines 2

Changes 5

Merge Request Required Information

Summary of Changes

Approved Development Ticket

All submissions to CentOS Stream must reference an approved ticket in [Red Hat Jira](#). Please follow the CentOS Stream [contribution documentation](#) for how to file this ticket and have it approved.



0



0



https://gitlab.com/redhat/centos-stream/rpms/systemd/...



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Red Hat / centos-stream / rpms / systemd / Merge requests / !140

Merged jamacku/centos_rpms_syst... into c10s

Overview 2 Commits 1 Pipelines 2 Changes 5

Activity

All activity ▾ ↑



CentOS Stream Zuul CI @centos-stream-zuul-ci-bot · 5 days ago

Developer

Starting check jobs. Status at <https://centos.softwarefactory-project.io/zuul/t/centos/status>



CentOS Stream Zuul CI @centos-stream-zuul-ci-bot · 5 days ago

Developer

Build succeeded. <https://centos.softwarefactory-project.io/zuul/t/centos/buildset/90adfb0744804e268b50ef80de0b2c89>

- mock-build <https://centos.softwarefactory-project.io/zuul/t/centos/build/7c34c67244d14788a53260eeeeab34885> : SUCCESS in 17m 58s
- check-for-sti-tests <https://centos.softwarefactory-project.io/zuul/t/centos/build/e57be50f9bac4acda8d3d83e34a98b47> : SUCCESS in 16s (non-voting)



https://gitlab.com/redhat/centos-stream/rpms/systemd/...



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systemd-256-8

Code

Merged Jan Macku requested to merge jamacku/centos_rpms_syst... into c10s 5 days ago

Overview 2 Commits 1 Pipelines 2 **Changes 5**



Viewing commit 1a5fa31a

Show latest version



systemd-256-8

Jan Macku authored 5 days ago

1a5fa31a



Resolves: RHEL-40924

0072-Avoid-tmp-being-mounted-as-tmpfs-without-the-user-s-.patch 0 → 100644

+23 -0



1 + From 352f8ad0bfdd8a41f6aa34e3e43038ae75eedf73 Mon Sep 17 00:00:00 2001

2 + From: Jan Synacek <jsynacek@redhat.com>



https://issues.redhat.com/browse/RHEL-40924



Red Hat

Dashboards ▾ Projects ▾ Issues ▾

Search



Log In



RHEL / RHEL-40924

[Rebase] systemd to 256

ATTACHMENTS: Manual is...

Migration: Automation ...

Integration ▾

Share

Details

Type: 🔴 Bug Resolution: Unresolved

Priority: 🔴 Blocker Fix Version/s: [rhel-10.0.beta](#)

Affects Version/s: CentOS Stream 10

Component/s: [systemd](#)

Labels: [rebase](#) [systemd-rebase](#)

Field Tab People Planning Development PX Automations

Fixed in Build: [systemd-256-8.el10](#)

Regression: None

Keywords: Rebase

Commit Hashes: <https://github.com/systemd/systemd/releases/tag/v256>

People

Assignee: [Jan Macku](#) ⓘ

Reporter: [Pat Riehecky](#) ⓘ

Developer: [systemd maint mailing list](#)

QA Contact: [Frantisek Sumsal](#)

Votes: 1 Vote for this issue



https://gitlab.com/redhat/centos-stream/rpms/systemd/...



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Red Hat / centos-stream / rpms / systemd / Merge requests / !140

systemd-256-8

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https://gitlab.com/redhat/centos-stream/rpms/systemd/...



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Red Hat / centos-stream / rpms / systemd

S

systemd

☆ Star

3



Project information

The systemd rpms

150 Commits 3 Branches 0 Tags

Created on

January 15, 2021

c9s

systemd

History

Find file

Code



systemd-252-39

57b9bd38





https://gitlab.com/redhat/centos-stream/rpms/systemd/...



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Red Hat / centos-stream / rpms / systemd

sources	spec: rebase rhel-net-naming-sysattr...	4 months ago
split-files.py	spec: move `systemd-oomd.conf` to ...	5 months ago
sysctl.conf.README	RHEL 9.0.0 Alpha bootstrap	3 years ago
systemd-container-coredu...	systemd-252-33	3 months ago
systemd-journal-gatewayd....	RHEL 9.0.0 Alpha bootstrap	3 years ago
systemd-journal-remote.xml	RHEL 9.0.0 Alpha bootstrap	3 years ago
systemd-udev-trigger-no-r...	RHEL 9.0.0 Alpha bootstrap	3 years ago
systemd-user	pam: add a call to pam_namespace	1 year ago
systemd.rpmlintrc	RHEL 9.0.0 Alpha bootstrap	3 years ago
systemd.spec	systemd-252-39	1 week ago



```
rpm-lint-tedora-license-data-1.51-1.fc40.noarch
rust-srpm-macros-26.3-1.fc40.noarch
sdbus-cpp-1.4.0-2.fc40.x86_64
shadow-utils-subid-2:4.15.1-3.fc40.x86_64
shared-mime-info-2.3-5.fc40.x86_64
systemd-255.10-1.fc40.x86_64
systemd-container-255.10-1.fc40.x86_64
systemd-networkd-255.10-1.fc40.x86_64
systemd-pam-255.10-1.fc40.x86_64
systemd-resolved-255.10-1.fc40.x86_64
systemd-rpm-macros-255.10-1.fc40.noarch
systemd-udev-255.10-1.fc40.x86_64
unzip-6.0-63.fc40.x86_64
usermode-1.114-9.fc40.x86_64
util-linux-2.40.1-1.fc40.x86_64
xkeyboard-config-2.41-1.fc40.noarch
xxhash-libs-0.8.2-2.fc40.x86_64
yajl-2.1.0-23.fc40.x86_64
zig-srpm-macros-1-2.fc40.noarch
zip-3.0-40.fc40.x86_64
```

Complete!

```
[root@199d0cc90e4a /]# mkdir directory-somewhere
```

```
[root@199d0cc90e4a /]# cd directory-somewhere/
```

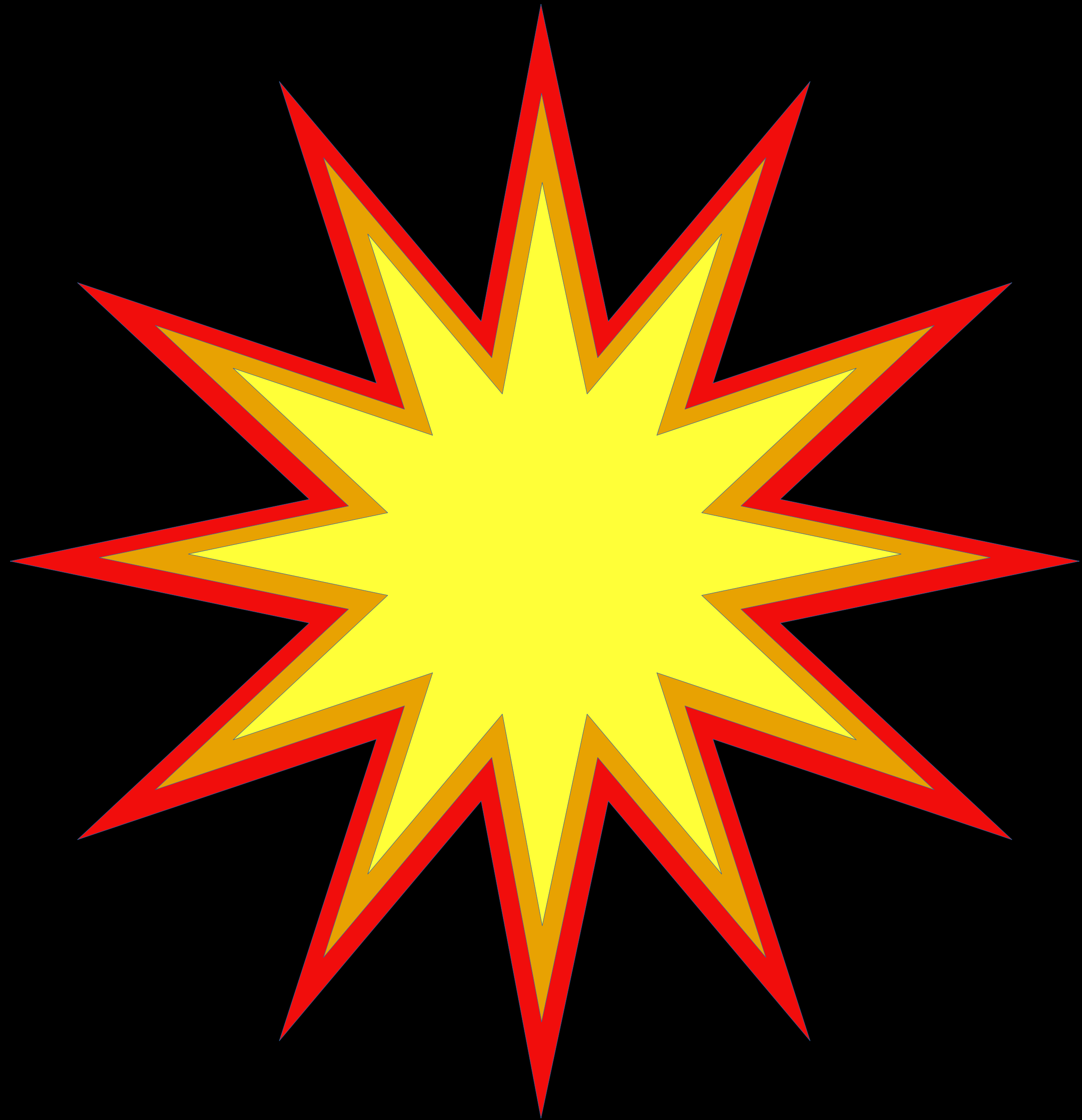
```
[root@199d0cc90e4a directory-somewhere]# centpkg clone -a sys  
temd
```

```
systemd-udev-255.10-1.fc40.x86_64
unzip-6.0-63.fc40.x86_64
usermode-1.114-9.fc40.x86_64
util-linux-2.40.1-1.fc40.x86_64
xkeyboard-config-2.41-1.fc40.noarch
xxhash-libs-0.8.2-2.fc40.x86_64
yajl-2.1.0-23.fc40.x86_64
zig-srpm-macros-1-2.fc40.noarch
zip-3.0-40.fc40.x86_64
```

Complete!

```
[root@199d0cc90e4a /]# mkdir directory-somewhere
[root@199d0cc90e4a /]# cd directory-somewhere/
[root@199d0cc90e4a directory-somewhere]# centpkg clone -a sys
temd
Cloning into 'systemd'...
remote: Enumerating objects: 9305, done.
remote: Counting objects: 100% (9169/9169), done.
remote: Compressing objects: 100% (5746/5746), done.
remote: Total 9305 (delta 3410), reused 9161 (delta 3402), pa
ck-reused 136 (from 1)
Receiving objects: 100% (9305/9305), 7.75 MiB | 65.05 MiB/s,
done.
Resolving deltas: 100% (3470/3470), done.
[root@199d0cc90e4a directory-somewhere]# cd systemd/
[root@199d0cc90e4a systemd]# centpkg srpm
```







CentOS Stream
Builds

1

Sources

2

Builds

3

Release

CentOS Stream
dist-git

CentOS Stream
Koji

CentOS Stream
stuff

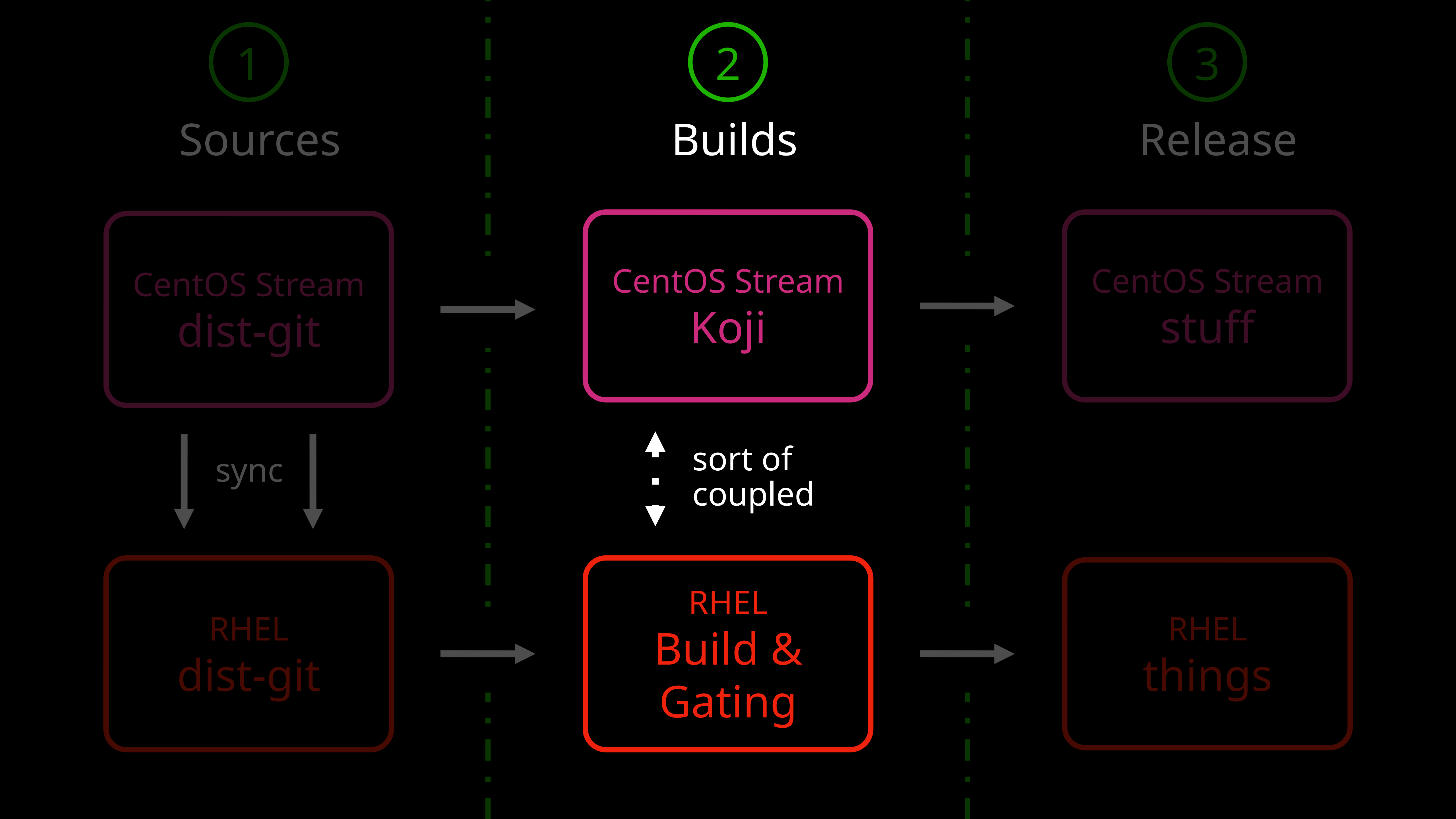
RHEL
dist-git

RHEL
Build &
Gating

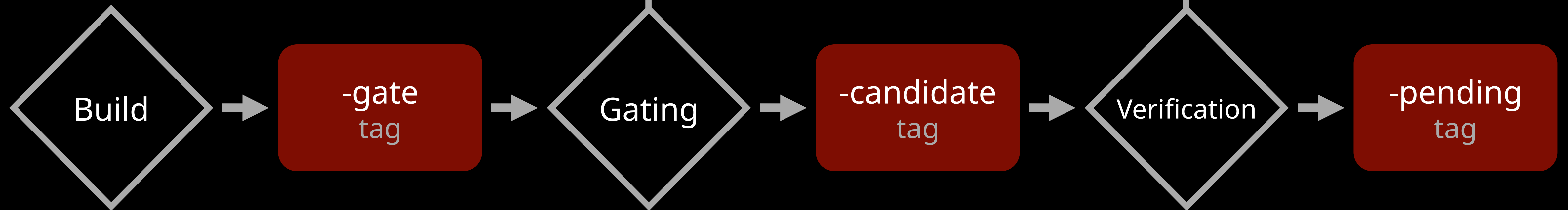
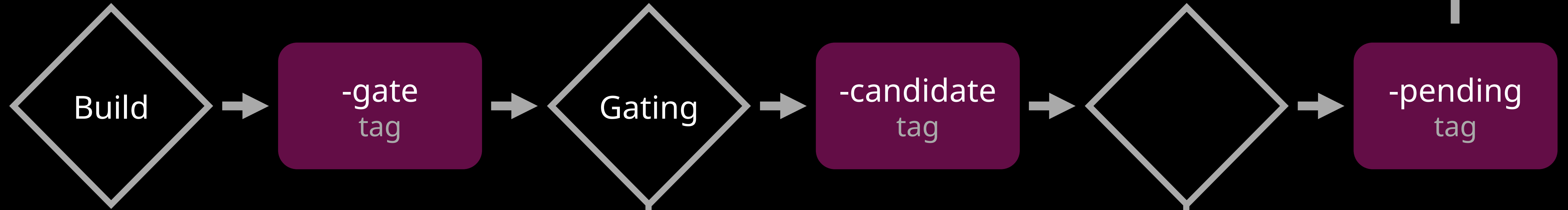
RHEL
things

sync

sort of
coupled



CentOS Stream



RHEL (internal)



https://kojihub.stream.centos.org/koji/buildinfo?buildID=73469



CentOS
Stream Build Service

Mon, 27 Jan 2025 15:29:51 UTC | [login](#)

Packages

SEARCH

Summary

Packages

Builds

Tasks

Tags

Build Targets

Users

Hosts

Reports

Search

API

Information for build [firefox-128.6.0-1.el10](#)

ID	73469
Package Name	firefox
Version	128.6.0
Release	1.el10
Epoch	
Draft	False
Source	git+https://gitlab.com/redhat/centos-stream/rpms/firefox.git#dc6b65f6717403f4fc3004e338c6c073cbc09e90
Summary	Mozilla Firefox Web browser
Description	Mozilla Firefox is an open-source web browser, designed for standards compliance, performance and portability.
Built by	erathke
State	complete



https://kojihub.stream.centos.org/koji/buildinfo?buildID=73469

Built by [erathke](#)

State [complete](#)

Volume koji02

Started Thu, 16 Jan 2025 14:30:09 UTC

Completed Thu, 16 Jan 2025 15:36:57 UTC

Task [build \(c10s-candidate, /redhat/centos-stream/rpms/firefox.git:dc6b65f6717403f4fc3004e338c6c073cbc09e90\)](#)

Extra {'custom_user_metadata': {'rhel-target': 'latest'}, 'source': {'original_url': 'git+https://gitlab.com/redhat/centos-stream/rpms/firefox.git#dc6b65f6717403f4fc3004e338c6c073cbc09e90'}}

Tags [c10s-candidate](#)

[c10s-gate](#)

[c10s-pending](#)

[c10s-pending-signed](#)

RPMs [src](#)

[firefox-128.6.0-1.el10.src.rpm \(info\) \(download\)](#)

aarch64

[firefox-128.6.0-1.el10.aarch64.rpm \(info\) \(download\)](#)

[firefox-x11-128.6.0-1.el10.aarch64.rpm \(info\) \(download\)](#)




CentOS Stream

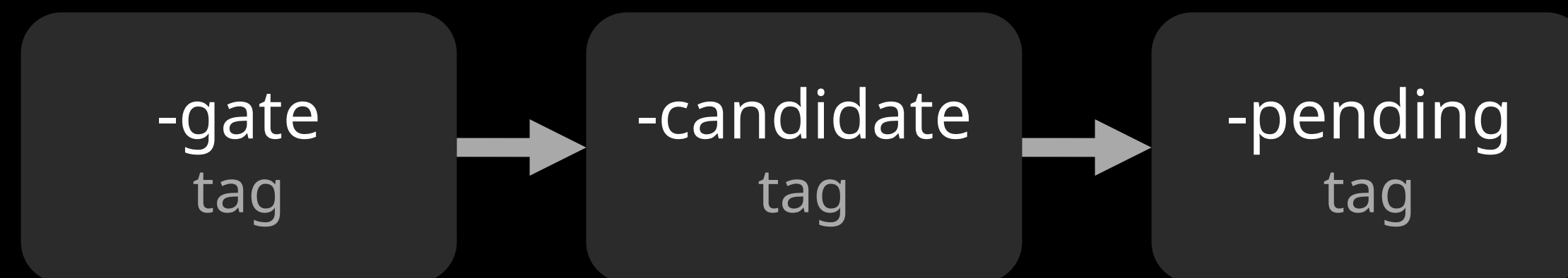
Release

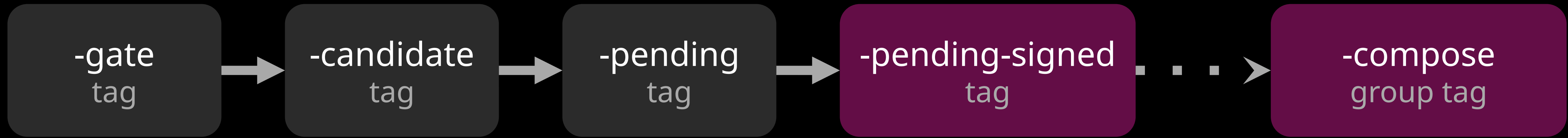
- 1) Composes

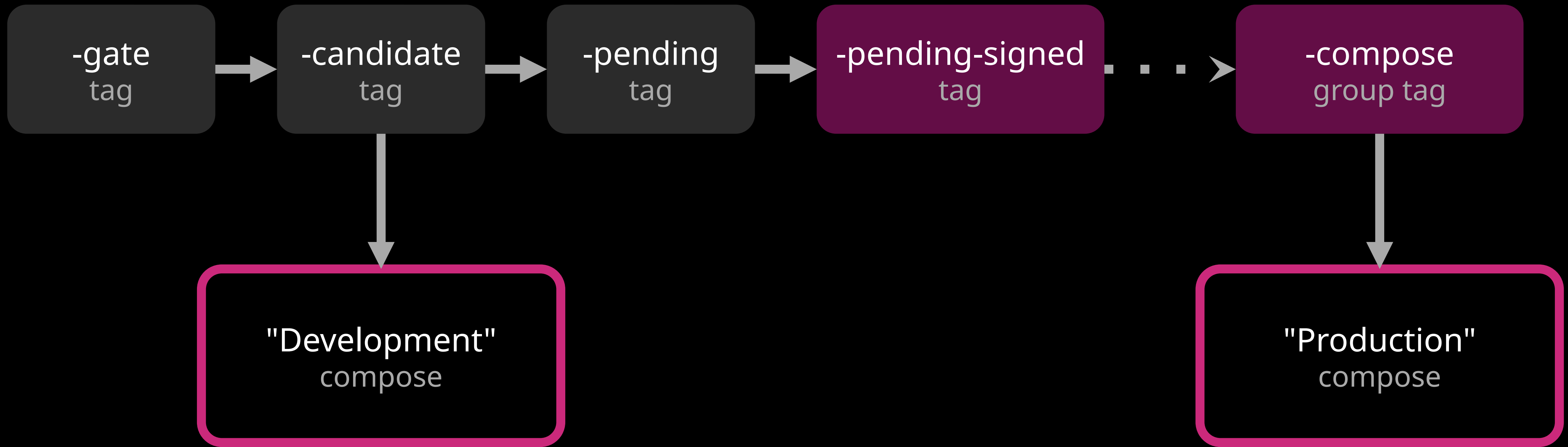
- 2) Testing

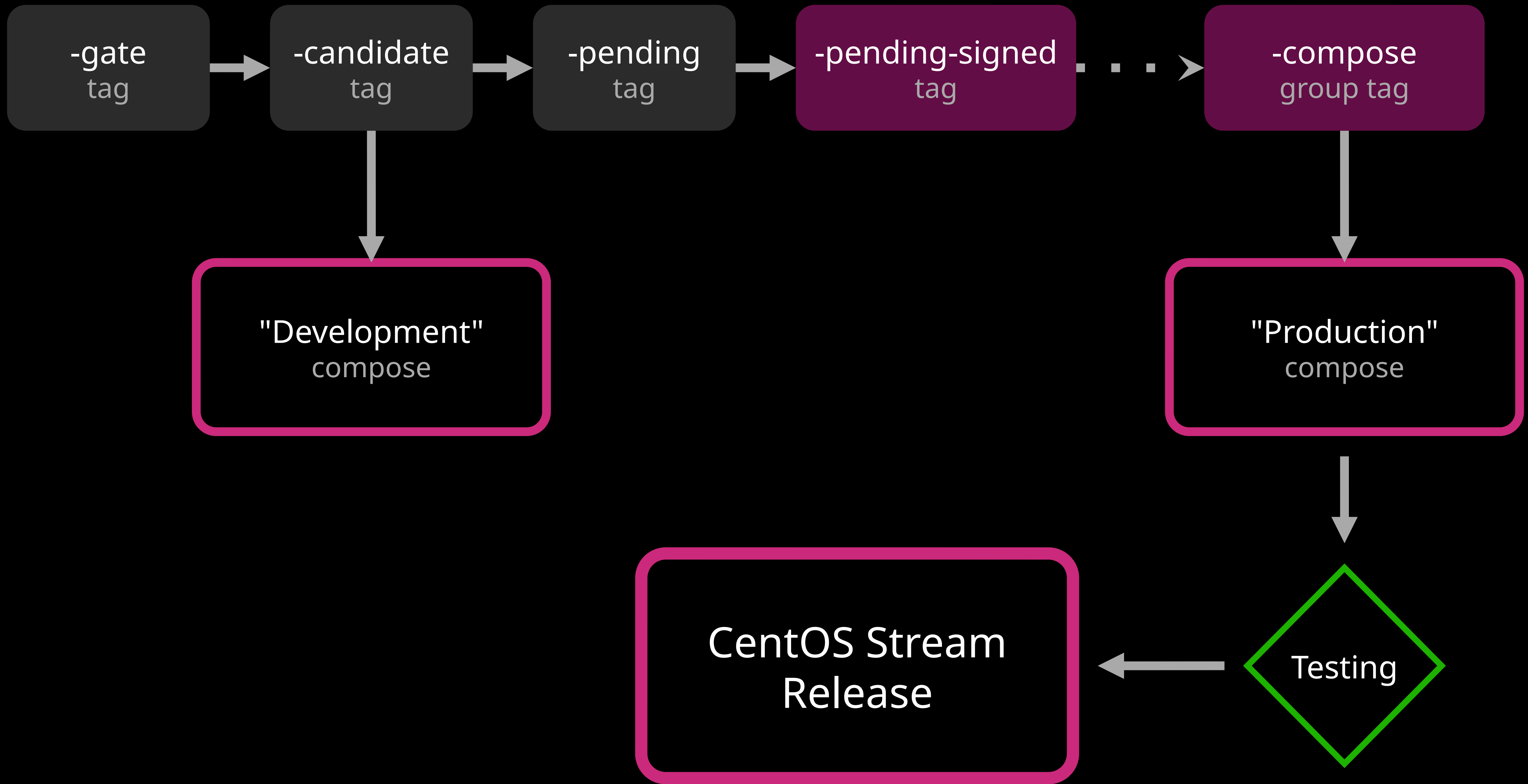
- 3) Release to mirrors etc.

- 1) Composes  Repos + images
etc.
- 2) Testing
- 3) Release to mirrors etc.









CentOS Stream Release

Most of the content

BaseOS repository

AppStream repository

-devel packages, etc.

CRB repository

add-ons

HighAvailability repository

NFV repository

ResilientStorage repository

RT repository

SAP repository

SAPHANA repository

DVD iso image

netinstall iso image

container image

AWS image

qcow2 image

CentOS Stream Release

Most of the
content

BaseOS
repository

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SAPHANA
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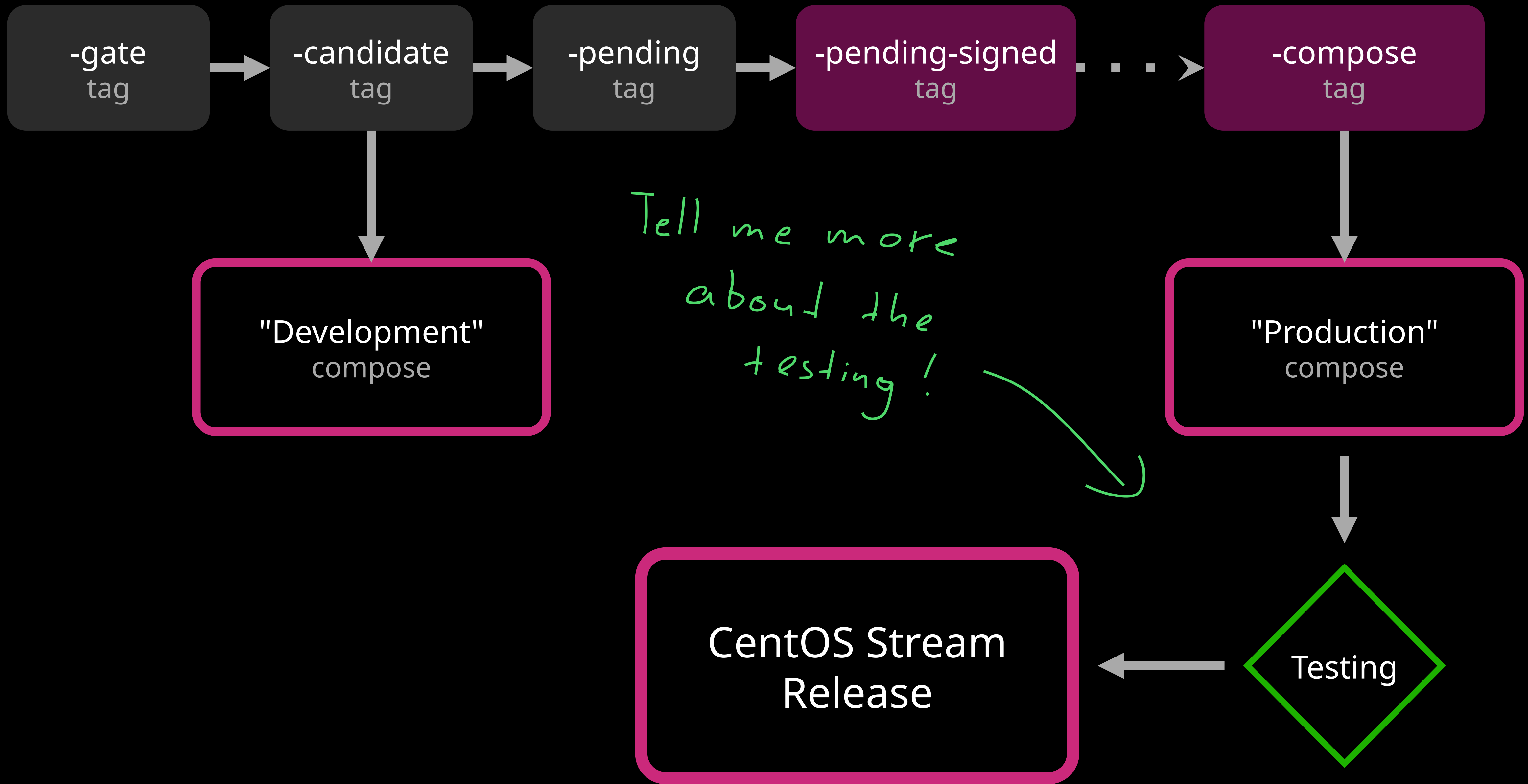
netinstall iso
image

container
image

AWS
image

qcow2
image

More images? -> [Alternative Images SIG](#)





CentOS
Integration SIG



https://testing.stream.centos.org



Jenkins

Search (CTRL+K)



log in

Dashboard >

Build History

Build Queue

No builds in the queue.

Build Executor Status

0/15

Tests the latest [CentOS Stream 9 production compose](#).

Currently it uses the [functional test suite](#), but will soon be replaced by the TMT tests maintained by [CentOS Integration SIG](#) (like for c10s).

All c10s - compose c9s - compose

S	W	Name ↓	Last Success	Last Failure	Last Duration	Built On
✓	☀	CentOS_9-stream_aarch64_kvm	11 hr #288	N/A	34 min	Jenkins
✓	☁	CentOS_9-stream_all	11 hr #265	7 days 11 hr #262	34 min	Jenkins
✓	☀	CentOS_9-stream_ppc64le_kvm	11 hr #298	N/A	26 min	Jenkins
✓	☀	CentOS_9-stream_x86	11 hr #270	N/A	25 min	Jenkins



https://testing.stream.centos.org



Jenkins

Search (CTRL+K)



log in

Dashboard > c10s - compose >

Build History

Build Queue



No builds in the queue.

Build Executor Status

0/15

This is running the TMT tests maintained by the [CentOS Integration SIG](#).

[Learn how to contribute and/or join the SIG!](#)

All **c10s - compose** c9s - compose

S	W	Name ↓	Last Success	Last Failure	Last Duration	Built On
✓	☁	CentOS_10-stream_aarch64_kvm	11 hr #152	3 days 21 hr #149	31 min	Jenkins
✗	☁⚡	CentOS_10-stream_all	8 mo 8 days #3	11 hr #135	9 min 10 sec	Jenkins
✗	☁⚡	CentOS_10-stream_ppc64le_kvm	8 mo 5 days #6	11 hr #144	6 min 56 sec	Jenkins



https://sig.centos.org/integration



CentOS Integration SIG



Search



integration/docs
☆0 🗨2

CentOS Integration SIG

Overview

Introduction

Purpose of the SIG

Goals

Deliverables

First work items

How to join

Questions

Architecture

Compose Tests

Overview



Introduction

Integration is verifying that products and services built on top of RHEL or CentOS Stream will continue to work on CentOS Stream and the next release of RHEL and will not break on package updates.

As RHEL content becomes available only after the release, RHEL-based services traditionally use a *catching-up integration* pattern: people have to adjust their products and services to work on new RHEL after the update is shipped. Adjusting the services takes time, eating into the supported RHEL lifecycle period. It also reduces the options for how we can deal with breaking changes.

CentOS Stream provides a way to enable *forward-looking integration*: you can do the integration early during the development before the change is shipped to the CentOS Stream or RHEL repositories. This allows us to prevent or at least prepare better for any breaking changes, which might be shipped via CentOS Stream or RHEL updates.

Purpose of the SIG

Provide a shared space to develop and maintain tooling and knowledge base on collaborative gating and testing of CentOS Stream updates before they are published to CentOS mirrors. This includes both - package-level and compose-level integration.

GOALS

- Document existing integration workflows used by other SIGs.
- Identify common issues.



https://sig.centos.org/integration

CentOS Integration SIG

Overview

Architecture

Compose Tests

Where to see the tests in action

How to run the compose tests locally

How to debug a specific test failure

How to contribute

Compose Tests

Thanks to the work done by [Carlos Rodriguez-Fernandez](#) the compose tests have been ported from the `t_functional` test wrapper to the `tmt (Test Management Tool)`.

You can find new tests repository in the Integration SIG namespace on Gitlab.com:

- <https://gitlab.com/CentOS/Integration/compose-tests>

Where to see the tests in action

For CentOS Stream 9 these tests run in the experimental Jenkins job:

- https://testing.stream.centos.org/job/CentOS_9-stream_x86_64_kvm_Experimental%20-%20TMT%20test%20suite/

For CentOS Stream 10 we run the tests in the main Jenkins pipeline:

- https://testing.stream.centos.org/job/CentOS_10-stream_all/

How to run the compose tests locally

1. Install the tmt tool and tmt plugin with libvirt support:

```
# dnf install tmt tmt+provision-virtual
```



https://gitlab.com/CentOS/Integration/compose-tests



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CentOS / Integration SIG / compose-tests

C

compose-tests

☆ Star

0



main

compose-tests

History

Find file

Code



Merge branch 'cleanup-ci' into 'main'

Carlos R.F. authored 1 week ago

da20d868



Name	Last commit	Last update
.fmf	setup poc with podman	8 months ago
plans	remove SKIP_QA_HARNES...	1 week ago
tests	Merge branch 'cleanup-ci'...	1 week ago
.gitlab-ci.yml	clean up ci	1 week ago
Readme.md	doc:use virtual/connect pr...	2 weeks ago

Project information

67 Commits

2 Branches

0 Tags

README

Created on

November 16, 2023



CentOS

SIGS (special interest groups)

CentOS Project

CentOS
Stream

Hyperscale
SIG

Artwork
SIG

Alternative
Images
SIG

Cloud
SIG

Automotiv
e
SIG

Kmods
SIG

CentOS Project

CentOS (the project) has two build systems:

1) CS Koji

2) CBS Koji

CentOS (the project) has two build systems:

1) CS Koji

2) CBS Koji

Aren't
just
acronyms
lovely! :D

CentOS (the project) has two build systems:

1) CentOS Stream Koji

- read-only outside Red Hat

2) Community Build System (Koji)

- this is where CentOS SIGs build



https://www.centos.org/about/governance/sigs/



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The CentOS SIGs

The Special Interest Groups (SIGs), are the teams responsible for their specific CentOS Project variants. Variants are specialized and focused rebuilds of CentOS to meet the needs and requirements of their corresponding communities and the technology associated with those communities.

SIGs are usually self-forming around a technology by a small community of enthusiasts and interested parties. In addition to the existing CentOS SIGs, it is expected that additional SIGs, as approved by the CentOS Board, will be created.

Each group will be responsible for its own variant in CentOS that is specifically targeted towards its community (e.g., The CentOS FooBar SIG creates a CentOS variant targeted to FooBar users and developers, the CentOS Hosting SIG builds a variant for web hosters, included in the CentOS distribution). The SIG is the deciding authority on what is required in their variant to satisfy the needs of their community, with the understanding that the Board has ultimate oversight as explained elsewhere. If required, the CentOS Board will help the individual SIGs

[Home](#) / [About](#) / [Governance](#) / [The CentOS SIGs](#)

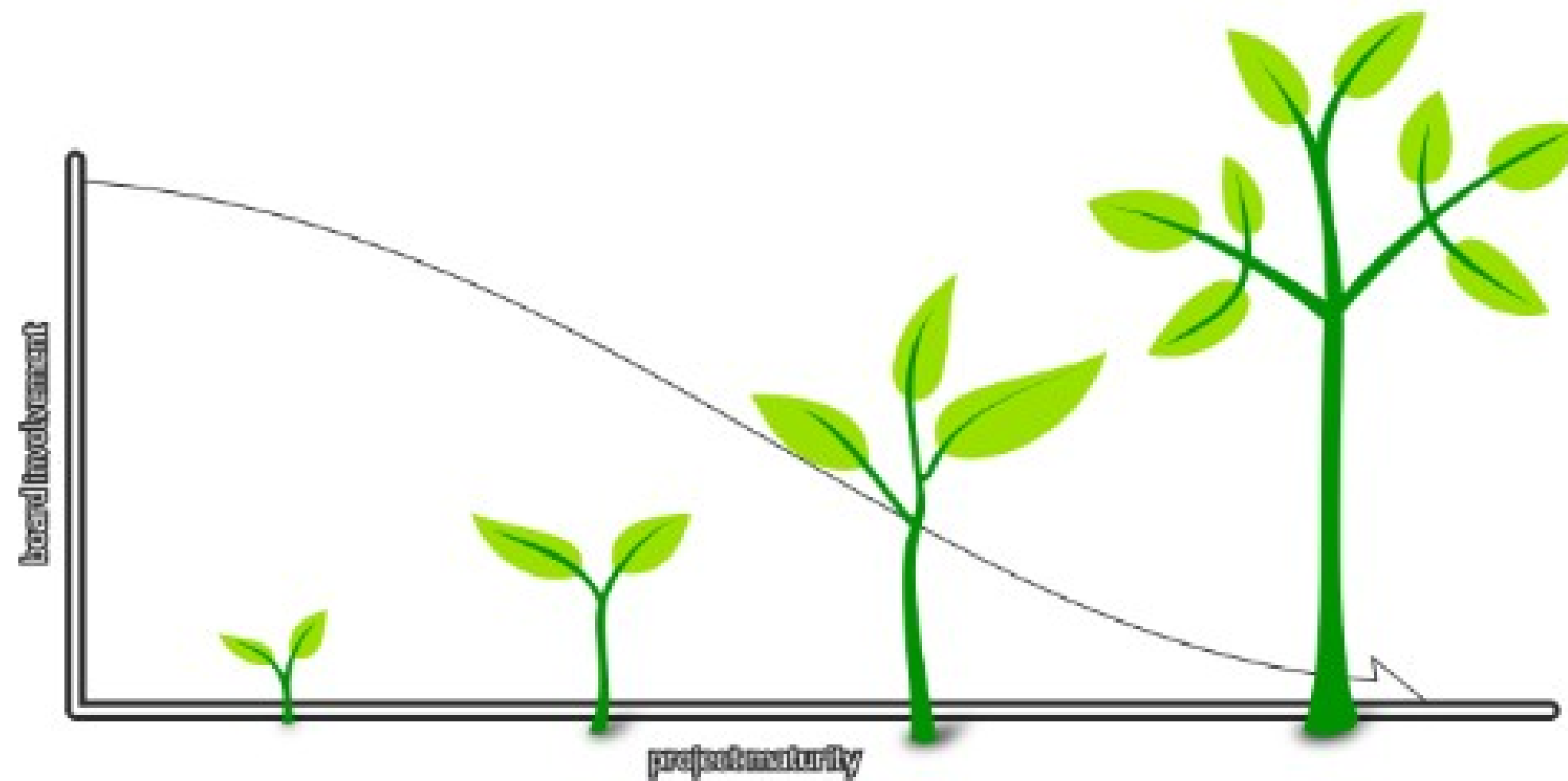
On this page:

- [CentOS Core SIG Responsibilities](#)
- [Variant SIG Responsibilities](#)
- [Functional SIG Responsibilities](#)
- [SIG Governance](#)
- [Community and SIGs](#)
- [Creating a new SIG](#)



https://www.centos.org/about/governance/sigs/

SIG Governance



The SIGs themselves also have a merit path toward autonomy and accountability for Project aspects. The determination of merit level is reflected in the amount of oversight required by the Board and the SIGs ability to self-sign and release software builds. As merit increases, Board oversight goes down, with a transition spot in the middle where the SIG naturally obtains more autonomy, usually toward the end of the “Early” phase.

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https://www.centos.org/about/governance/sigs/



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Creating a new SIG

The process of creating a new SIG involves two major components: community building and the administrative side.

Bring your SIG proposal first to the centos-devel mailing list to find other like-minded people who wish to start the SIG with you. Also look around outside of the CentOS project for people who may want to distribute projects on CentOS

Once you have a core group that wants to make this happen, open a ticket on the [board issue tracker](#) with your proposed SIG, and someone there will walk you through the process.

For the current list of active SIGs, refer to <http://wiki.centos.org/SpecialInterestGroup>

Retiring a SIG

If a SIG misses two of their quarterly reports in a row: then the community manager should contact the members listed in the account system. More than a single attempt at contact should be made. If the SIG responds they can be

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CentOS
Stream

Hyperscale
SIG

Artwork
SIG

Alternative
Images
SIG

Cloud
SIG

Automotiv
e
SIG

Kmods
SIG

CentOS Project

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https://sigs.centos.org/hyperscale/



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About



Community



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CentOS Hyperscale

CentOS stability built for massively large-scale deployments

[Documentation](#)

Why CentOS Hyperscale

The CentOS Hyperscale SIG focuses on enabling CentOS Stream deployment on large-scale infrastructures and facilitating collaboration on packages and tooling.

CentOS
Stream

Hyperscale
SIG

Artwork
SIG

Alternative
Images
SIG

Cloud
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e
SIG

Kmods
SIG

CentOS Project



https://www.centos.org/altimages/



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About



Community



Documentation

[Home](#) › CentOS Alternative Images

CentOS Alternative Images

Live ISO images, WSL images, and images that include different software.

 [Documentation](#)

The Alternative Images SIG builds and provides alternate ISO images for CentOS Stream. These images are hosted in the CentOS infrastructure, and are regularly updated at least once every three months.

Please report any issues with these images on our [bug tracker](#).

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CentOS Project

Innovation on top of the OS - SIGs!

OS maintained by RHEL engineers - CentOS Stream

3 / 5 -ish year lifecycle

Thank you!



CentOS Stream

- preview of RHEL
- solid base for CentOS SIGs

<https://docs.centos.org/en-US/stream-contrib/quickstart/>

<https://issues.redhat.com> ('RHEL' project)

<https://gitlab.com/redhat/centos-stream/rpms>

<https://kojihub.stream.centos.org>

<https://composes.stream.centos.org>

<https://testing.stream.centos.org>

<https://mirrors.stream.centos.org>

<https://asamalik.fedorapeople.org/2024-flock/>