



KubeCon



CloudNativeCon

Europe 2019

SIG Release - Deep Dive

Stephen Augustus (VMware)
Tim Pepper (VMware)

Agenda



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- SIG Release
- Subprojects & Working Groups
 - Release Team
 - Licensing
 - Long Term Support (WG LTS)
 - Release Engineering subproject
- How to Get Involved
- Q/A



- Generate Kubernetes releases on a **reliable schedule**
- Ensure there is a **consistent group** of community members in place to support the release process across time
- Provide guidance and **tooling** to facilitate the generation of **automated** releases
- **Partner with other SIGs** to empower SIGs to **integrate** their work in the release

Release Team



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Quarterly focus, eg: 1.15 release

- Release Team Lead
 - Enhancements
 - CI Signal
 - Test Infra
 - Bug Triage
 - Branch Manager
 - Docs
 - Release Notes
 - Communication
 - Patch Release Manager

Learn More @ bit.ly/kubernetes-release-role



Licensing



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- Kubernetes is Apache licensed

kubernetes / kubernetes

Watch 2,978

★ Star 52,942

Fork 18,283

Code

Issues 2,111

Pull requests 1,011

Actions

Projects 9

Insights

Settings

Production-Grade Container Scheduling and Management <https://kubernetes.io>

Edit

kubernetes

go

cncf

containers

Manage topics

78,689 commits

44 branches

513 releases

1 environment

2,140 contributors

Apache-2.0

- *Or is it?*



- License files:

```
$ find . -name LICENSE | wc -l  
226
```

- License headers:

```
$ git grep "Apache License" | wc -l  
11633
```

- `kubernetes/kubernetes/Godeps/LICENSES`: ~2k !?!?!!!!!

- Requires tools, automation
- Plus ongoing human review

WG - Long Term Support (LTS)



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- <https://git.k8s.io/community/wg-lts>

Release Lifecycle



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K8s Releases

Release Lifecycle



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K8s Releases

Release Lifecycle



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3mo's

~9mo's



3mo's

~9mo's



3mo's

~9mo's



K8s Releases

Release Lifecycle



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3mo's

~9mo's



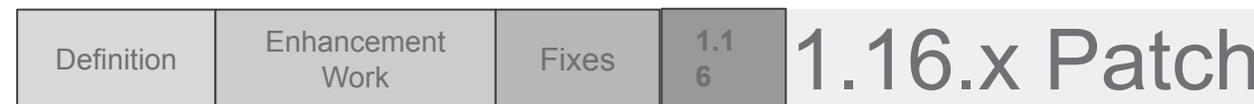
3mo's

~9mo's



3mo's

~9mo's



3mo's



K8s Releases

WG - Long Term Support (LTS)



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- <https://git.k8s.io/community/wg-lts>
- Answer the question: **Does Kubernetes need a longer support term?**
 - If **yes**, figure out what that looks like for Kubernetes and propose this to the rest of the project.
 - If **no**, figure out how to help end users cope with this and propose that to the rest of the project.

Deep Dive session tomorrow: <https://sched.co/MkJq>



- **Release Team**
 - timespan: *quarterly*
 - deliverable: the next *Kubernetes minor release*
- **Release Engineering**
 - timespan: *ongoing*
 - deliverable: *improved tools/processes*
- ...Improve what? Why?

The Problem



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DEV

The Problem



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k/release



k/release build

k/k



k/k build



CI Feedback

DEV

The Problem



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PROD



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The Problem



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PROD



committing

PERIODIC & PER COMMIT



DEV

The Problem



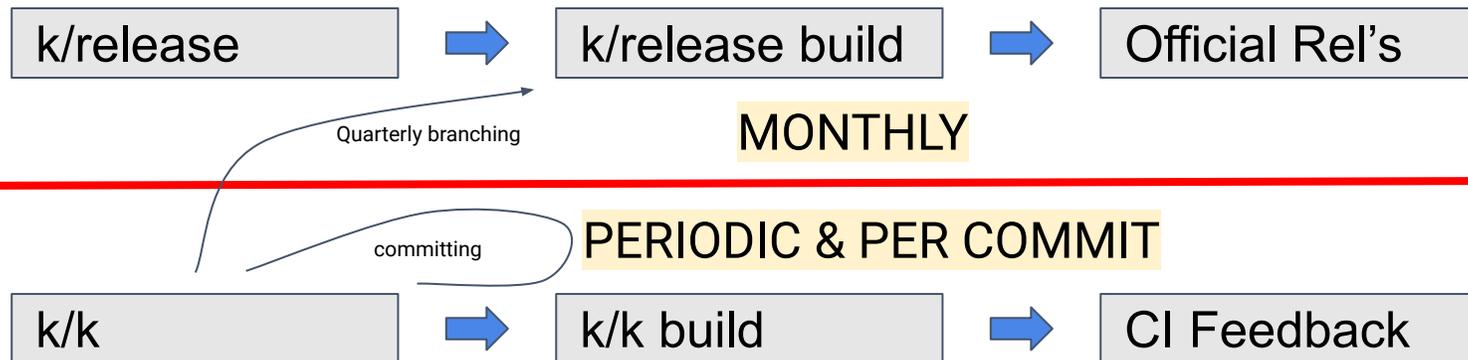
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The Problem



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Quarterly branching

MONTHLY

Consumed
By
Users

- Creation: ...manual
- Testing: ...~0

committing

PERIODIC & PER COMMIT



Consumed
By
Automation

- Creation: automated
- Testing is...the point

DEV

The Problem



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Quarterly branching

MONTHLY

committing

PERIODIC & PER COMMIT



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Quality feedback loop

The Problem



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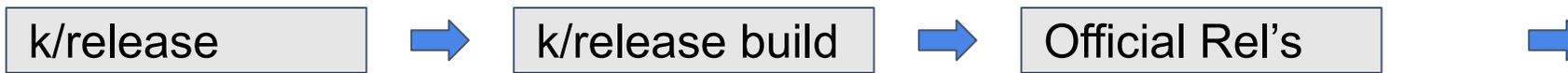


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Quality (?) feedback loop



Quarterly branching

MONTHLY

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PERIODIC & PER COMMIT

committing



Quality feedback loop

Consumed By Automation

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DEV

The Problem



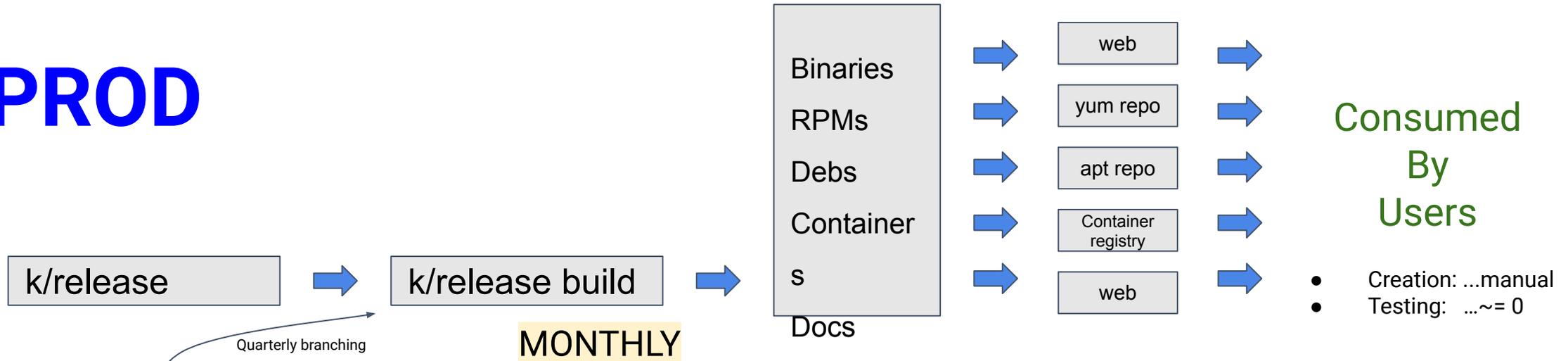
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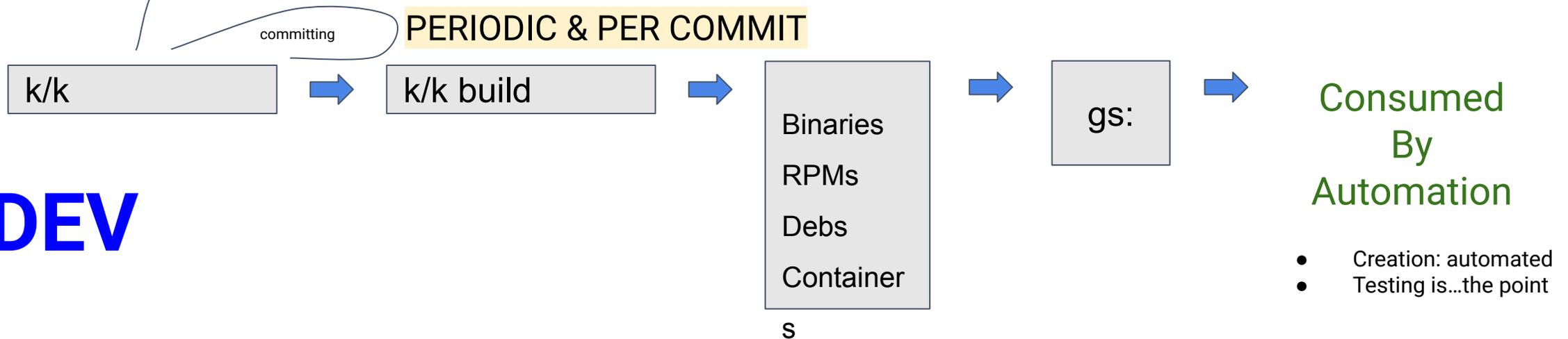
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The Problem



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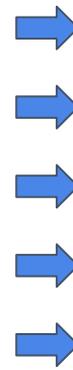
k/release



k/release build



Binaries
RPMs
Debs
Containers
Docs



web

yum repo

apt repo

Container registry

web



Consumed
By
Users

- Creation: ...manual
- Testing: ...~0

MONTHLY

"publication"

Quarterly branching

committing

PERIODIC & PER COMMIT

DEV

k/k



k/k build



Binaries
RPMs
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gs:



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A Future



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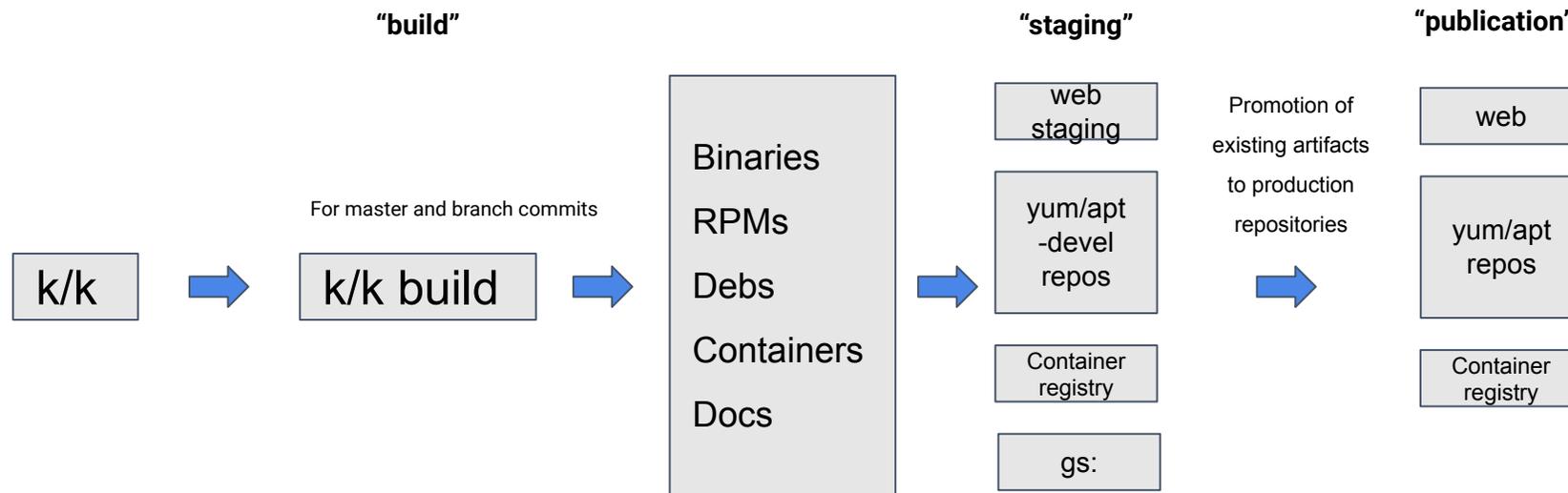


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Consistent Consumption

- Creation: automated
- Creation: consistent
- Testing: everywhere

A Future



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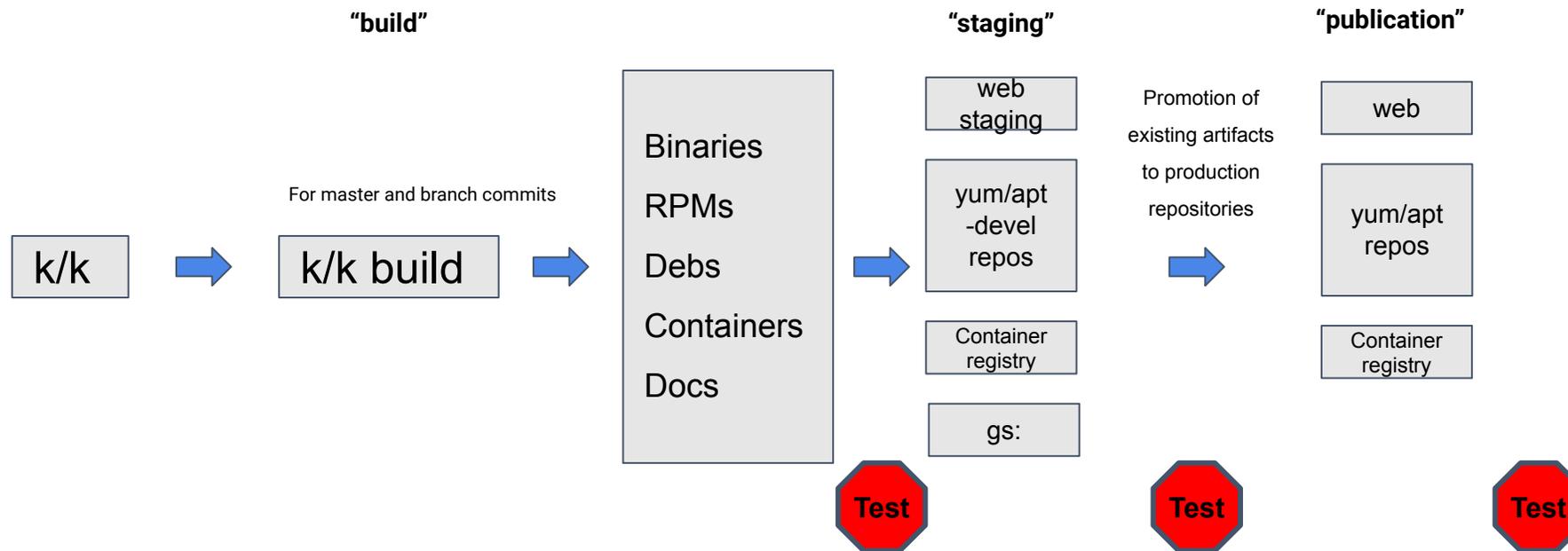


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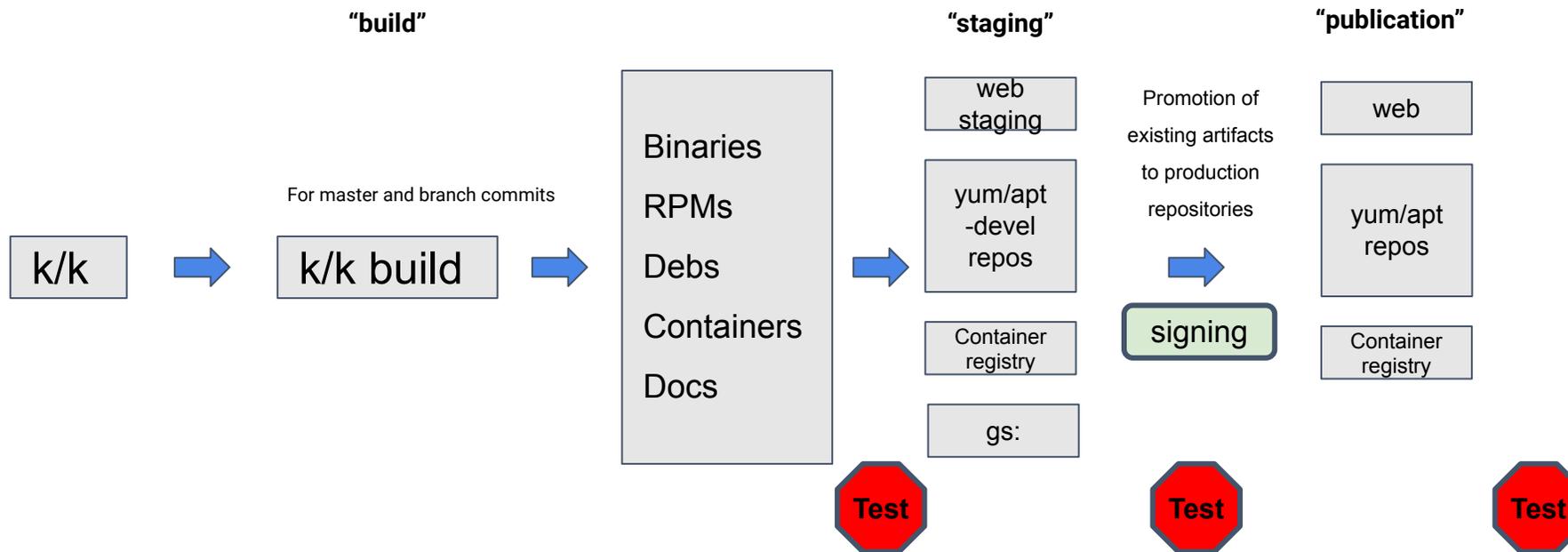


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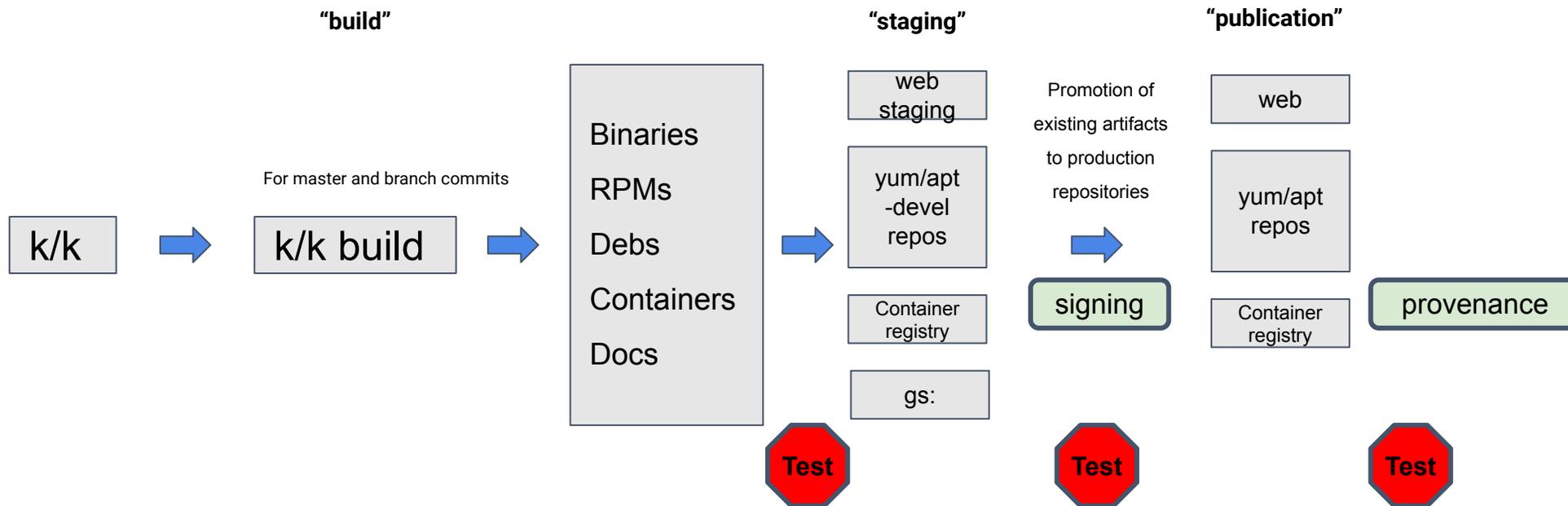


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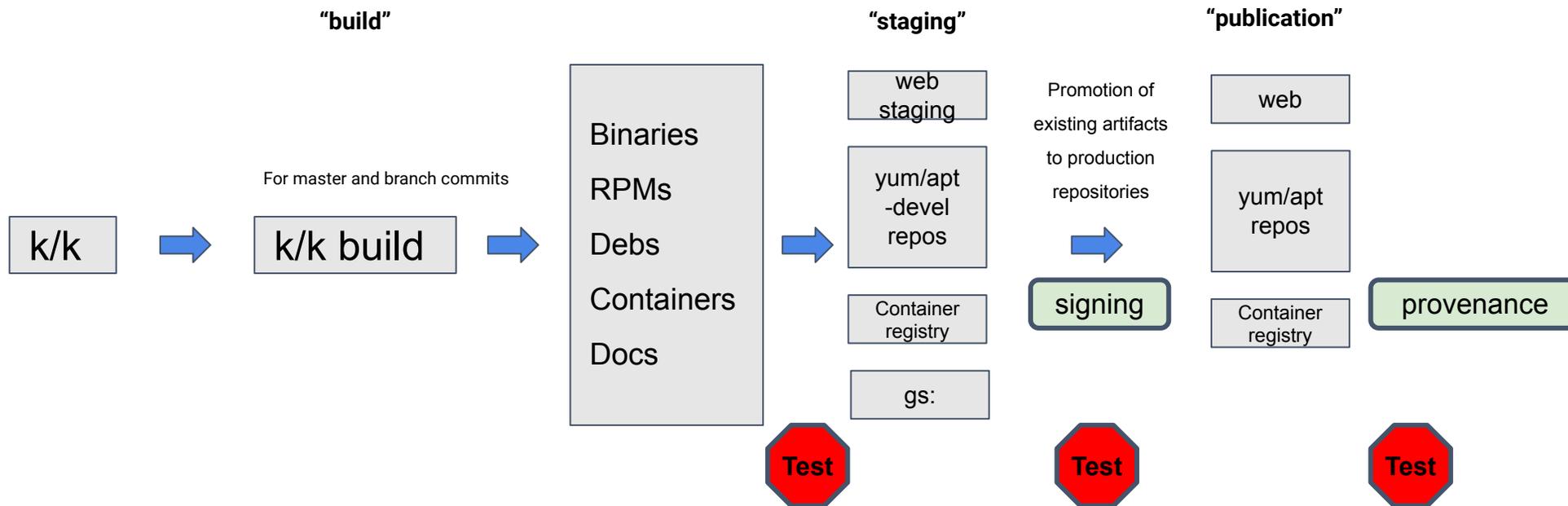


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How To Get Involved



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- issue backlog
- subproject meetings
- RelEng mixed up a bit with WG K8s Infra: effort now to decouple

- all coming...right after KubeCon