

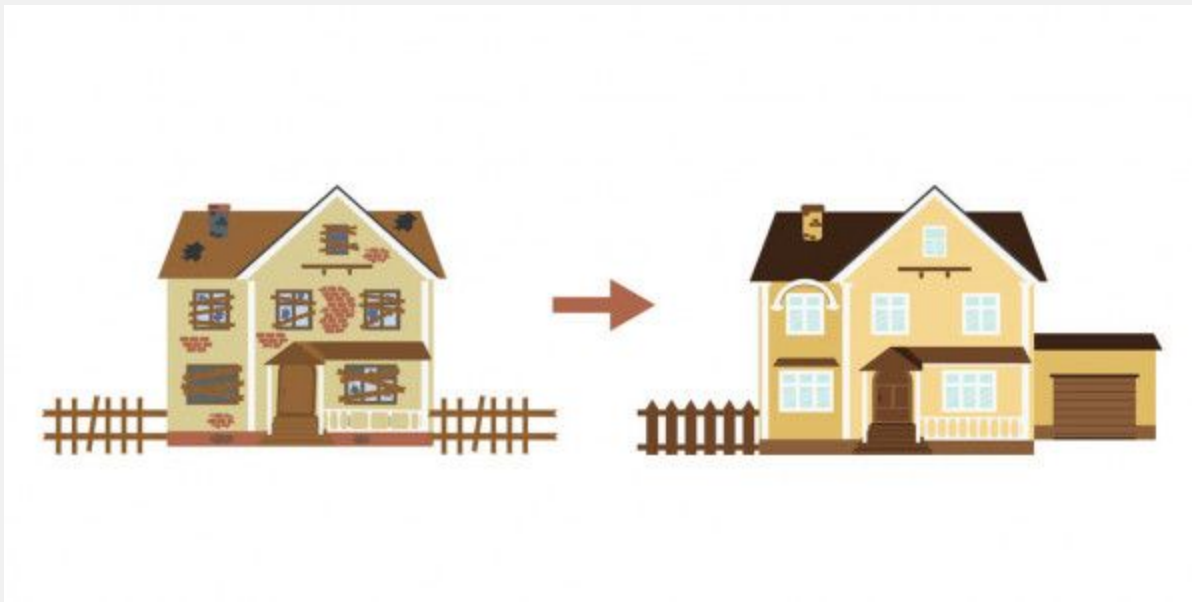
# GitLab Kernel Workflow (KWF)

DevConf.cz 2021

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# Modernize a RHEL kernel workflow



# Workflow Requirements

Upstream first

Technical Review

Business Review (Bugzilla)

Testing / Verification

Audit Trail

# Previous Workflow

Email patches

Patchwork Server

Manual side scripts (triaging, bugzilla)

Test feedback was an email

# The Struggles

Scripts run manually

Triage every email

Testing not integrated

High volume

Not cool for young developers

# New Requirements

CentOS-Stream

Public RHEL development

Make contribution easier

# Time to Modernize

Merge based workflow

CLI and WebUI

Builtin CI

Open Source friendly

Easy to contribute to

**AUTOMATION!**

# Hello GitLab

Git based merge request workflow

Extensive API and WebUI

CI and Webhooks

Popular and easy to contribute

Maintainer monitors process

Structured Rules



# Transition

Change is hard

Mapping old processes to new is hard

Education

# GitLab Developer Kernel Workflow (KWF)

**It all starts somewhere**

<https://bugzilla.redhat.com>

**We get paid for this part ...**

# Debugging & Analysis

(Nothing has changed)

# Red Hat Specific Tools

## CommitRules

### kernel tool's git-backport

(Future plans: This info is available outside of RH firewall)

# GitLab Merge Requests

```
git push <your_fork> <contributions>
```

```
lab mr create # https://github.com/zaquestion/lab
```

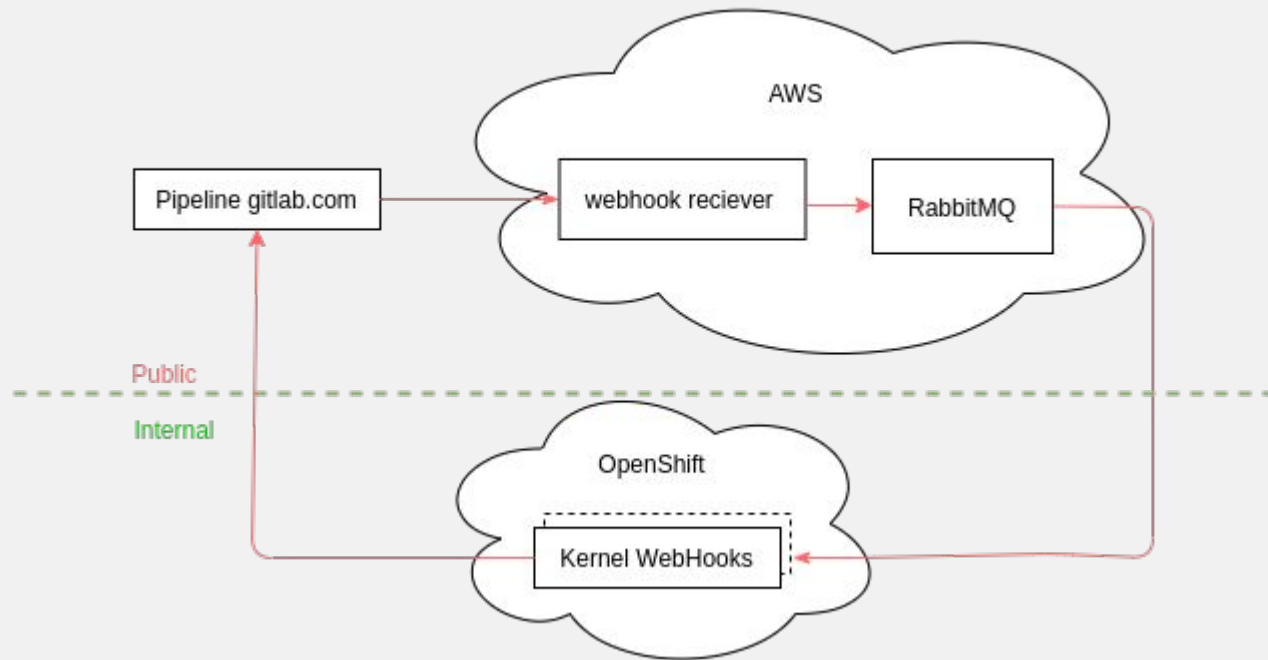
**Stuff happens**

**GitLab Webhooks**

**CI run (aka CKI)**

**Email Bridge**

# GitLab Kernel Webhooks





# Kernel Webhooks

- Bugzilla
- Commit Comparison
- DCO
  - <https://developercertificate.org>
- Subsystems
- Kernel-watch (New Feature)

Continuous Integration?

Continuous

**KERNEL**

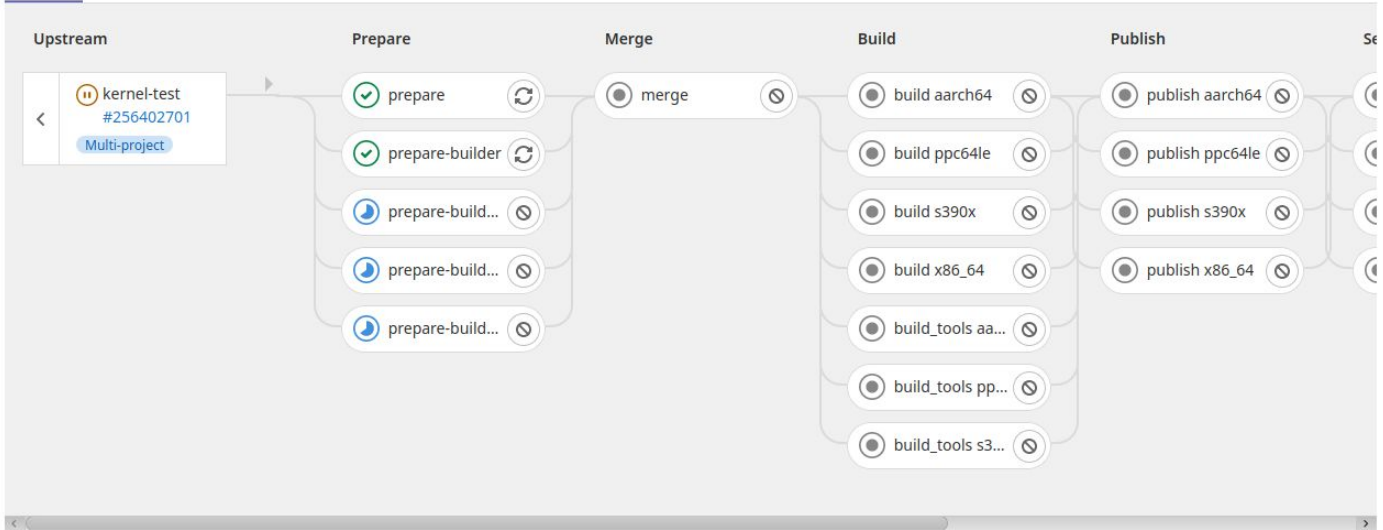
Integration

- cki-internal-contributors
- Project overview
- Repository
- Issues 0
- Merge Requests 0
- CI / CD
  - Pipelines
  - Editor
  - Jobs
  - Schedules
- Security & Compliance
- Operations
- Packages & Registries
- Analytics
- Wiki
- Collapse sidebar

90706039

No related merge requests found.

Pipeline Needs Jobs 25 Tests 0



# Email Bridge

## Converts MR's commits to emails

STOP USING EMAIL FOR REVIEWS.

# One more webhook

# ACK/NACK

# Reviewer Changes

- Drop Email Reviews
- ACKs -> GitLab Approve
  - Lab mr approve
- NACKs -> GitLab Blocking Threads
  - Lab mr block
- bichon review tool
  - <https://gitlab.com/berrange/bichon>

```

Mate Terminal
File Edit View Search Terminal Help
q:Quit r:Refresh p:Projects s:Sort f:Filter m:Filter string
#248 ...nel/8.y/kernel-test 4 days Prarit Bhargava v2 0/1 Hello ...
0 #247 ...nel/8.y/kernel-test 4 days Jarod Wilson v1 0/1 tg3: F...
#245 ...nel/8.y/kernel-test 4 days Jarod Wilson v3 0/1255 Iwlwif...
0 #244 ...nel/8.y/kernel-test 4 days Jarod Wilson v7 0/1137 Wirele...
0 #243 ...nel/8.y/kernel-test 5 days Brian Masney v1 0/1 [x86] ...
0 #242 ...nel/8.y/kernel-test 5 days Brian Masney v1 0/1 [x86] ...
0 #240 ...nel/8.y/kernel-test 5 days Jarod Wilson v2 0/1 tg3: F...
0 #189 ...nel/8.y/kernel-test 5 days Jarod Wilson v1 0/1255 Wirele...
0 #187 ...nel/8.y/kernel-test 5 days Bruno Meneguele v2 0/9 tls: r...
#98 ...nel/8.y/kernel-test 3 weeks Prarit Bhargava v1 0/4 SPR op...
#97 ...nel/8.y/kernel-test 4 weeks Patrick v3 0/1 intern...
0 #96 ...nel/8.y/kernel-test 4 weeks Patrick v1 0/1 rhmain...
0 #95 ...nel/8.y/kernel-test 1 mon Prarit Bhargava v1 0/1 Makefi...
0 #94 ...nel/8.y/kernel-test 1 mon Prarit Bhargava v2 0/60 Draft:...
#93 ...nel/8.y/kernel-test 1 mon email bridge v2 0/59 Update...
#90 ...nel/8.y/kernel-test 1 mon Bruno Meneguele v2 0/8 testin...
0 #89 ...nel/8.y/kernel-test 2 mons Prarit Bhargava v2 0/51 Makefi...
0 #86 ...nel/8.y/kernel-test 2 mons Bruno Meneguele v1 0/1 Merge ...
0 #82 ...nel/8.y/kernel-test 2 mons Patrick v6 0/108 Noblue...
0 #77 ...nel/8.y/kernel-test 2 mons Prarit Bhargava v2 0/40 Makefi...
0 #73 ...nel/8.y/kernel-test 2 mons Bruno Meneguele v3 0/6 bla
--- Bichon

```

# CentOS Stream

- **kernel will use new process**
- Contributions limited at first
- Watch for announcements on centos.org
- Sneak peek at Fedora/kernel-ark
  - <https://gitlab.com/cki-project/kernel-ark>



# Future Changes

- Rolling Development model
- Fixing Problem with dependencies in MRs
- Preventing editing and deleting of comments
- GitLab changes
  - Restrict deleting and editing of comments
  - Restrict who can close blocking threads
  - etc.

# Closing Comments



# Links

- RHEL URLs COMING SOON!
- <https://gitlab.com/redhat/centos-stream> (next week)
- <https://cki-project.org>
- <https://gitlab.com/cki-project/kernel-webhooks>

# Q&A

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