

Global Collaboration and Maintenance of Top Cloud Computing Open Source Projects

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Goals & Non-Goals

Part 1



Goals & Non-Goals

We will talk :

- Cloud Computing Projects

- Managed on github.com (this is important)

- > 10000 stars (e.g. Docker, Kubernetes)

We will not talk:

- Linux

- Apache Foundation projects

- OpenStack

Why?



Github + Community = Modern Software

Traditional open source

Open the **source** code of something

Don't believe the contributor

Sell tools, distros, & service

The "Open Source Revolution"

Create the **community** of something

Encourage contributor

Fans Economy & **Selling yourself**

Why cloud?

Cloud computing projects

- No UI
- System level programming
 - Network, storage, OS, hardware ...
- Complex project
- Multiple components

Other top projects

- Web, APP
- Programming
 - data structure, algorithm
- Simple project
- Few components

At First Glance

Part 2

Docker

Core Idea: Replace VMs with Linux containers
cgroup + ns + rootfs image

The **most** successful open source project in
cloud/system area on Github

stars: **33000+**

contributors: 1444+

commits: 25787+

LOC: 58000+

Docker, Inc. D round 95M



Kubernetes

Container Scheduling and Management Framework by Google

Stats

stars: **15500+**

contributors: 824+

commits: 32099+

LOC: 390893+

Google, Inc. Now Linux Foundation



Part 3

Collaboration

The Key Concept Of These Software?

The screenshot displays the Docker repository on GitHub. At the top, the repository name 'docker / docker' is shown alongside interaction buttons: 'Watch' (2,770), 'Star' (33,094), and 'Fork' (9,580). Below this, navigation links for 'Code', 'Issues' (1,853), 'Pull requests' (143), 'Wiki', 'Pulse', and 'Graphs' are visible. The repository description states 'Docker - the open-source application container engine' with a link to 'http://www.docker.com'. Statistics show 25,789 commits, 6 branches, 150 releases, and 1,443 contributors. A bar chart indicates the commit frequency over time. Action buttons include 'Branch: master', 'New pull request', 'Create new file', 'Upload files', 'Find file', and 'Clone or download'. The commit history table lists recent changes, including pull request merges and specific fixes.


| Commit | Description | Time |
|------------|--|-----------------------------------|
| vdemeester | committed on GitHub Merge pull request #24729 from yongtang/24058-api-docs-resource-settings | Latest commit 4ced001 4 hours ago |
| .github | pull-request template: ask for changelog description | 3 months ago |
| api | fix typo creates into creates in comments | 2 days ago |
| builder | Merge pull request #22868 from Microsoft/jjh/dockerfilecmd | 11 days ago |
| cli | fix typos | 13 days ago |
| cliconfig | Use docker-credential-helpers client to talk with native creds stores. | a month ago |
| cmd | Add --oom-score-adjust to daemon | 6 days ago |
| container | fix typos | 13 days ago |
| contrib | Merge pull request #24599 from vdemeester/small-zsh-completion-fix | 3 days ago |
| daemon | Fix daemon panic use wrong graphdriver with --live-restore flag | 3 days ago |



Issue

Issue can be:
feature
bug
question
proposal
...
anything!



Issue is labeled



A container with an IPv6 address occupies that address forever, therefore the container can't even be restarted.
#24269

 **moqmar** opened this issue 16 days ago · 4 comments



 **thajeztah** commented 2 days ago Docker member 

@aboch is this being looked into?

  **thajeztah** added the **kind/bug** label 2 days ago

 **justincormack** commented 2 days ago Docker member 

There is specific link local address support in 1.12 I think, to address this.

 **aboch** commented a day ago Docker member 

@moqmar @thajeztah The issue is there only for link-local IPv6 addresses, not any IPv6 address. Before moving forward, I would like to understand the use-case of using IPAM for link-local addresses.

By the nature of link-local addresses, we do not think they should be managed by the IPAM driver, and, as @justincormack pointed out, in docker 1.12 user will be able to specify a (IPv4 or IPv6) link-local address for the container's interface, without IPAM driver knowing about it (`--link-local-ip`).

Labels

- group/networking
- kind/bug
- version/1.11

Milestone

No milestone

Assignees

No one assigned

Labels

- exp/expert
- kind/docs

Github Issue VS Old Ways

Old ways

- Mailing List

 - Linux, Apache Foundation*

- Bug tracker

 - OpenStack*

It's like wechat VS e-mail

- Quick response

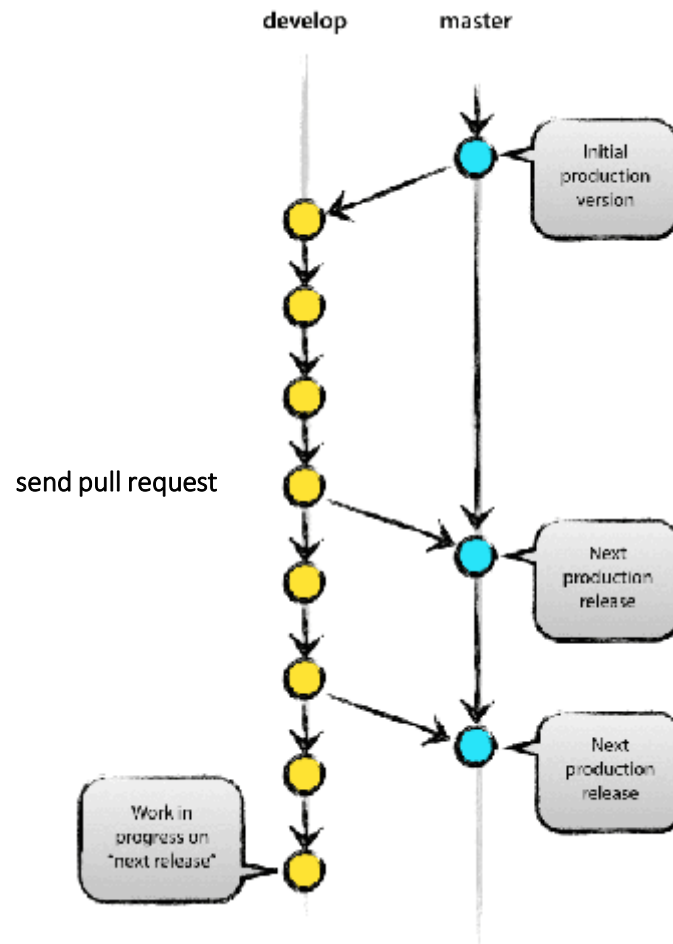
- Real interaction

- Brain storm

- Better community

To Fix Issue: Pull Request

git workflow



To Fix Issue: Pull Request

PR

a patch of commits
also labeled

Labels

process/cherry-pick

status/2-code-review

Milestone

1.12.0

status/1-design-review

status/needs-attention


Create zfs directory if it doesn't exist at startup. #24741

[Open](#) dsau wants to merge 1 commit into docker:master from dsau:24704-create-zfs-directory

Conversation 7 Commits 1 Files changed 1

Showing changes from all commits ▾ 1 changed file ▾

+4 -0  Options ▾

4  daemon/graphdriver/zfs/zfs.go

View



```
@@ -99,6 +99,10 @@ func Init(base string, opt []string, uidMaps, gidMaps []idtools.IDMap) (graphdri
99      return nil, fmt.Errorf("BUG: zfs get all -t filesystem -rHp '%s' should contain '%s'", options.fsName, o
100  }
101
102  +     if err := os.MkdirAll(base, 0700); err != nil {
103  +         return nil, fmt.Errorf("Failed to create '%s': %v", base, err)
104  +     }
105  +
```

Encourage

A friendly workflow

darrenstahlsft commented 21 days ago

#dibs



thaJeztah commented 14 hours ago

Thanks! LGTM

(but better suggestions are welcome 😊)



vdemeester commented 5 hours ago

LGTM 🐱



vdemeester merged commit `4ced001` into `docker:master` 5 hours ago
2 checks passed

 MAINTAINERS

Add new maintainers

Maintenance

Part 4

Kubernetes VS Docker?

More complex

- OpenStack VS VM

More components

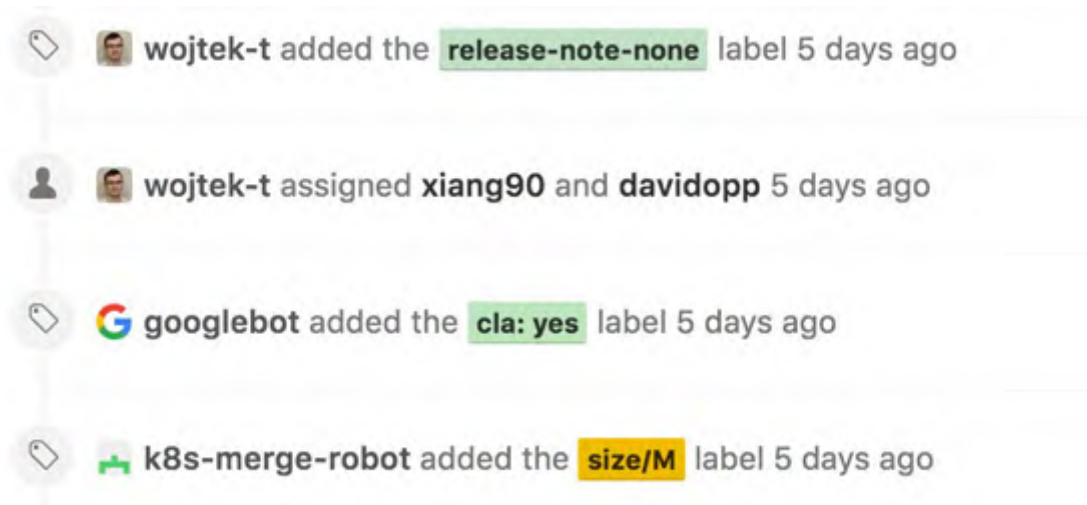
More code

Google style

automation

Robots in Workflow

robots



Automatic CI

\$ git push origin my-fix

Open a new Pull Request

CI will be triggered

6 of 7 checks passed

| | |
|---|-------------------------|
| ● Submit Queue Github CI tests are not green. | Details |
| ✓ Jenkins GCE Node e2e Build finished. 124 tests run, 12 skipped, 0 f... | Details |
| ✓ Jenkins GCE e2e Build finished. 332 tests run, 148 skipped, 0 failed. | Details |
| ✓ Jenkins GKE smoke e2e Build finished. 332 tests run, 330 skipped, ... | Details |
| ✓ Jenkins unit/integration Build finished. 3377 tests run, 15 skipped, ... | Details |
| ✓ Jenkins verification Build finished. | Details |
| ✓ cla/google All necessary CLAs are signed | |

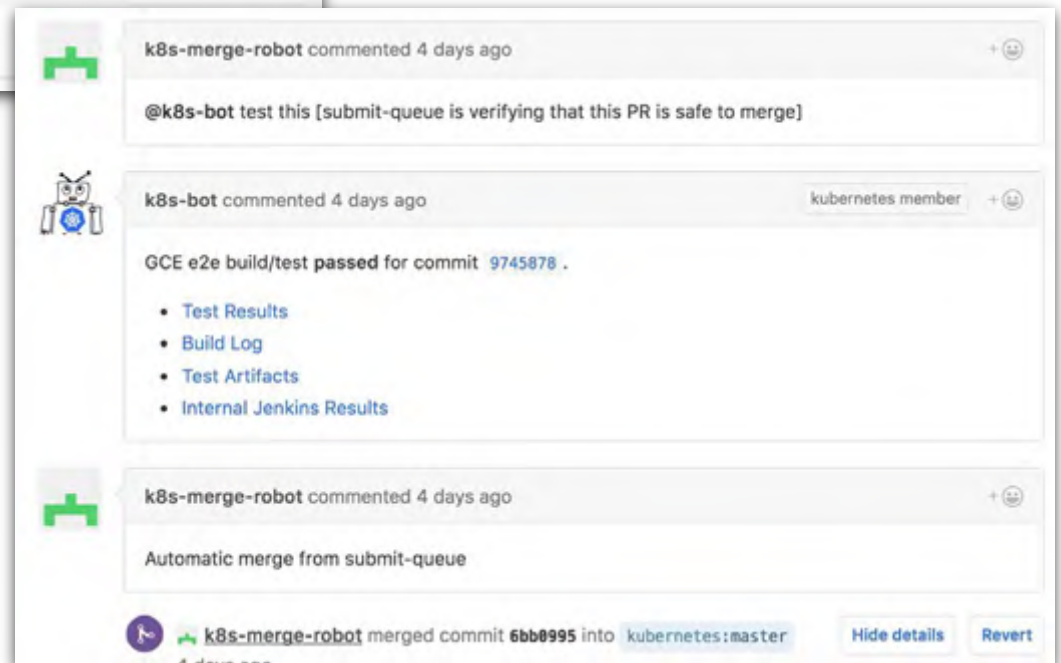
Generated Code

*_generated.go

- Deep copy
- Conversion
- Protobuf protocols
- Docs
- ...
- Anything Googlers don't want to write

Automatic Merge

Apply lgtn will trigger merge robot



Automated Cherry Pick

Pick commits from master branch into release branch

The screenshot shows the GitHub release page for Kubernetes v1.3.2. On the left sidebar, it indicates the release was made '21 hours ago' and is the 'Latest release'. The main content area shows the release tag 'v1.3.2' in large blue text, followed by the release name 'v1.3.3-beta.0' and commit hash 'b983cc0'. It states that 'david-mcmahon' released this version 21 hours ago, with 3 commits since the previous release. A link to 'kubernetes-announce@' and 'CHANGELOG' is provided for details. Below this is a 'Downloads' section with a table of available assets.

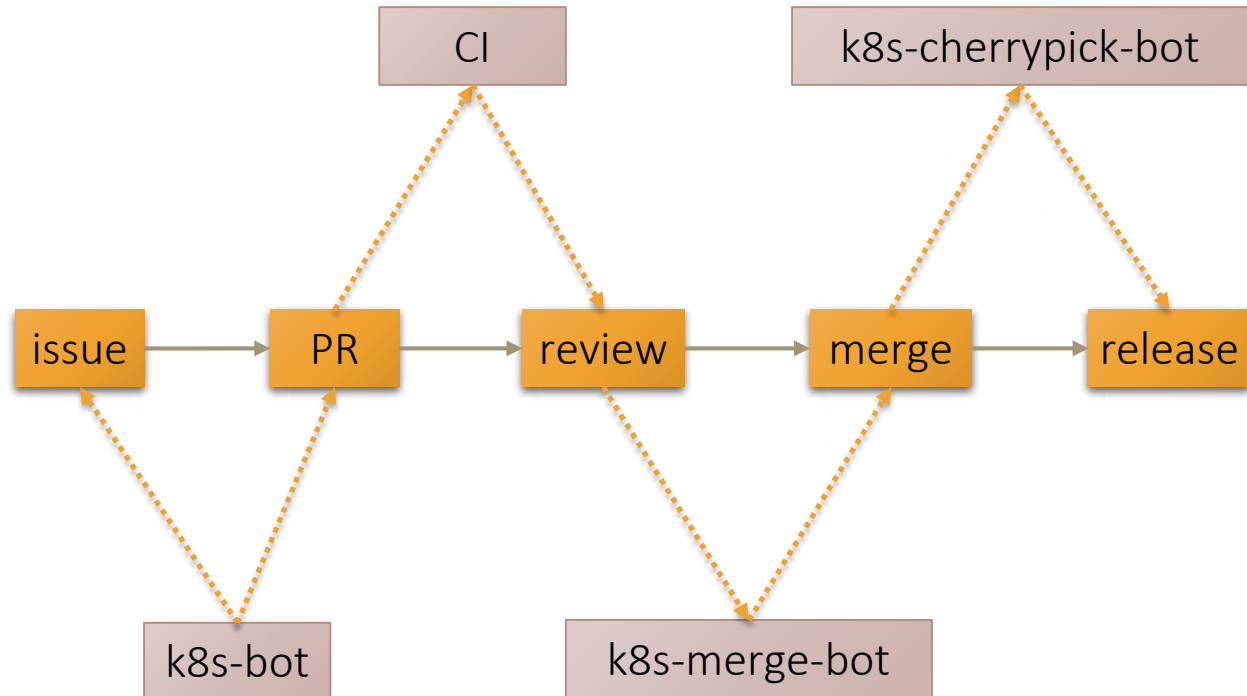
| Asset | Size |
|--------------------------------------|---------|
| kubernetes.tar.gz | 1.38 GB |
| Source code (zip) | |
| Source code (tar.gz) | |

Summary

Comment driven

Event driven

Robot



END

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