

Continuous Integration with Drone CI



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What is Continuous Integration?

- automate build, setup and test phase
- each changeset is checked against this process
- unit, integration, acceptance, UI tests
- automated code reviews (e.g. syntax and code style checks)
- performance tests, security checks

Benefits

- control over the build and install process by the developers
- testing against different and fresh environments
- reduce the boring tasks
- confidence!

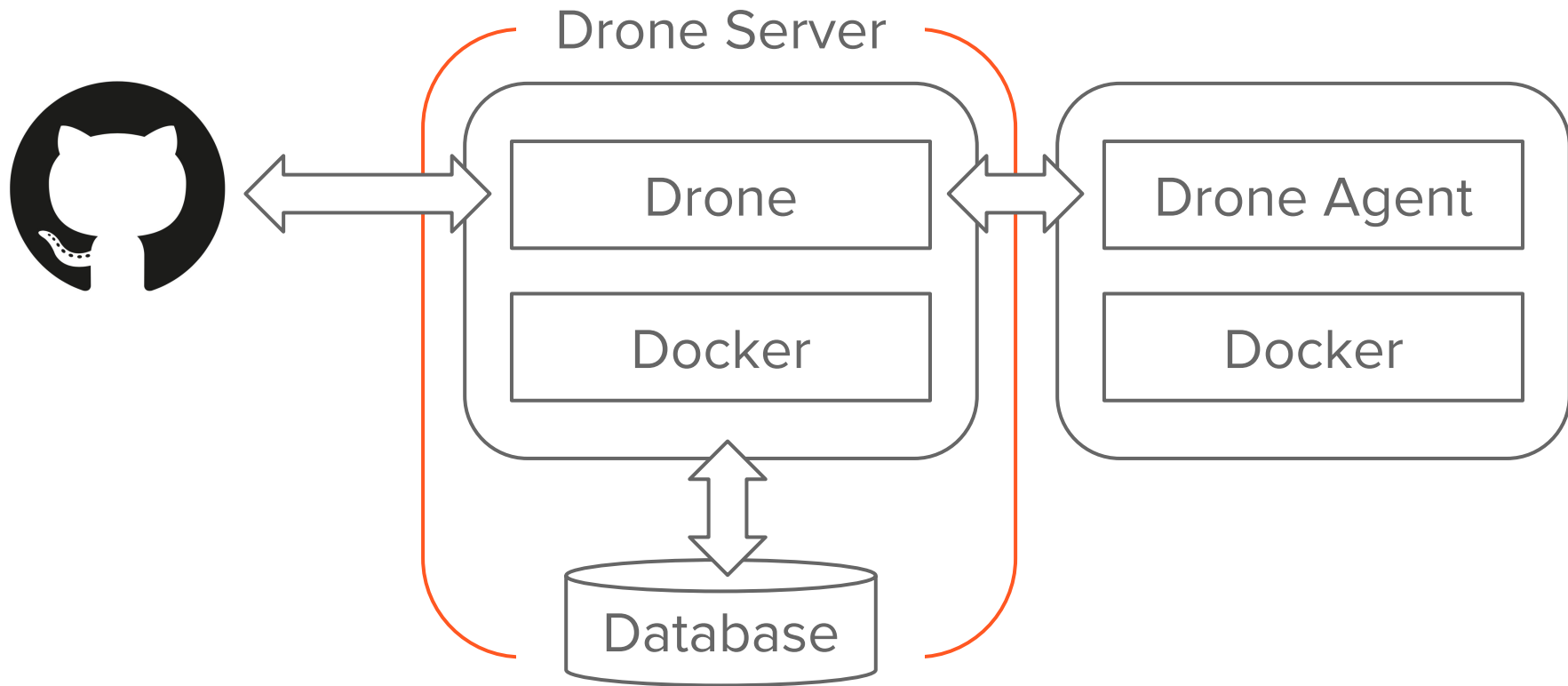
Learnings from my past

- keeping state in the workers is bad
- complete fresh workers are key
- configuration close to the source code

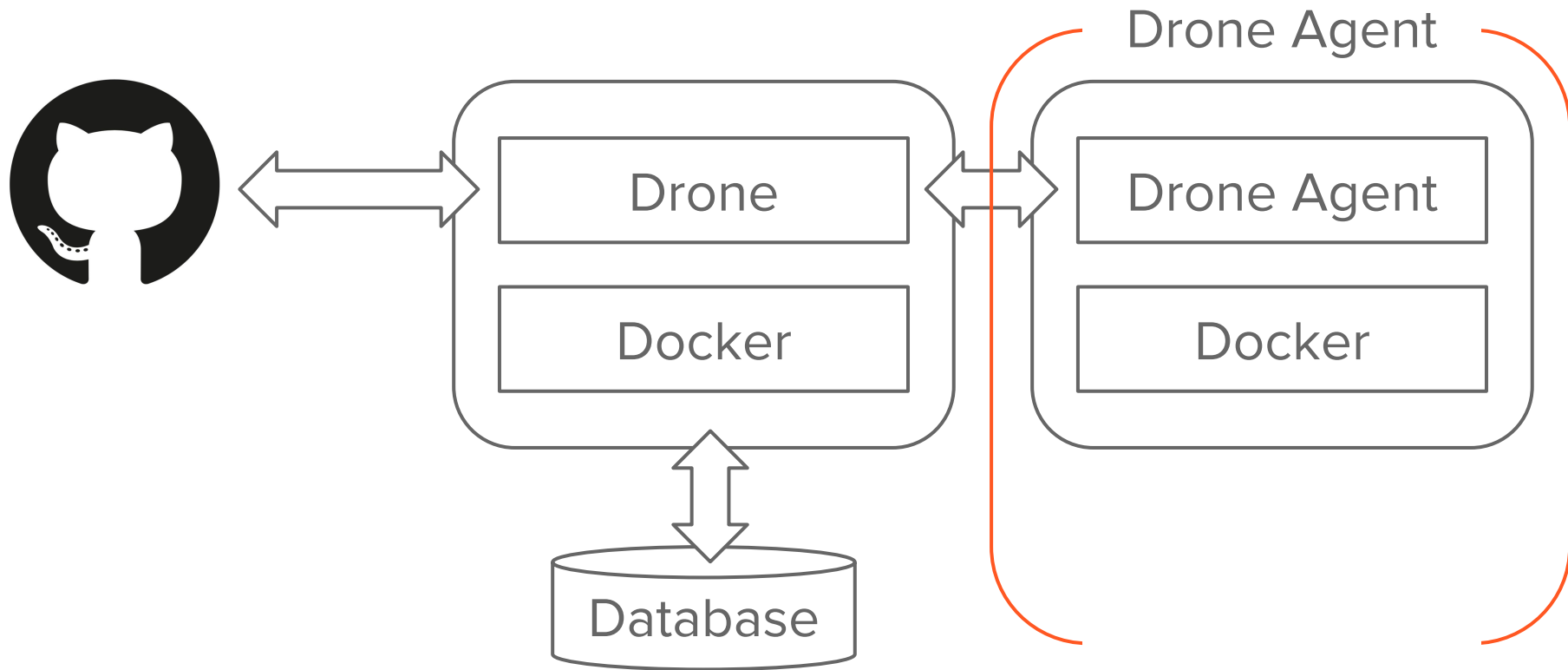
Why Drone CI?

- cost effective
- community accessible
- self hosted
- easy to setup new workers (docker + network)
- configuration in source code

Architecture of Drone CI



Architecture of Drone CI



How to get it running?

- 1 . Install docker

How to get it running?

2 . Register GitHub OAuth app

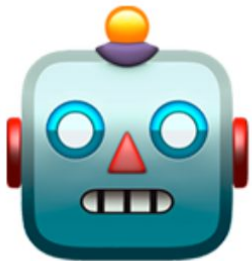
How to get it running?



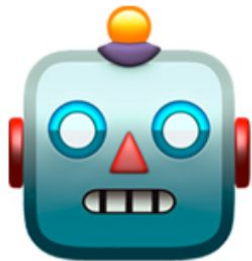
```
docker run \  
  --volume=/var/run/docker.sock:/var/run/docker.sock \  
  --volume=/var/lib/drone:/data \  
  --env=DRONE_GITHUB_SERVER=https://github.com \  
  --env=DRONE_GITHUB_CLIENT_ID={% your-github-client-id %} \  
  --env=DRONE_GITHUB_CLIENT_SECRET={% your-github-client-secret %} \  
  --env=DRONE_AGENTS_ENABLED=true \  
  --env=DRONE_RPC_SECRET={% your-shared-secret %} \  
  --env=DRONE_SERVER_HOST={% your-drone-server-host %} \  
  --env=DRONE_SERVER_PROTO={% your-drone-server-protocol %} \  
  --env=DRONE_TLS_AUTOCERT=true \  
  --publish=80:80 \  
  --publish=443:443 \  
  --restart=always \  
  --detach=true \  
  --name=drone \  
  drone/drone:1
```



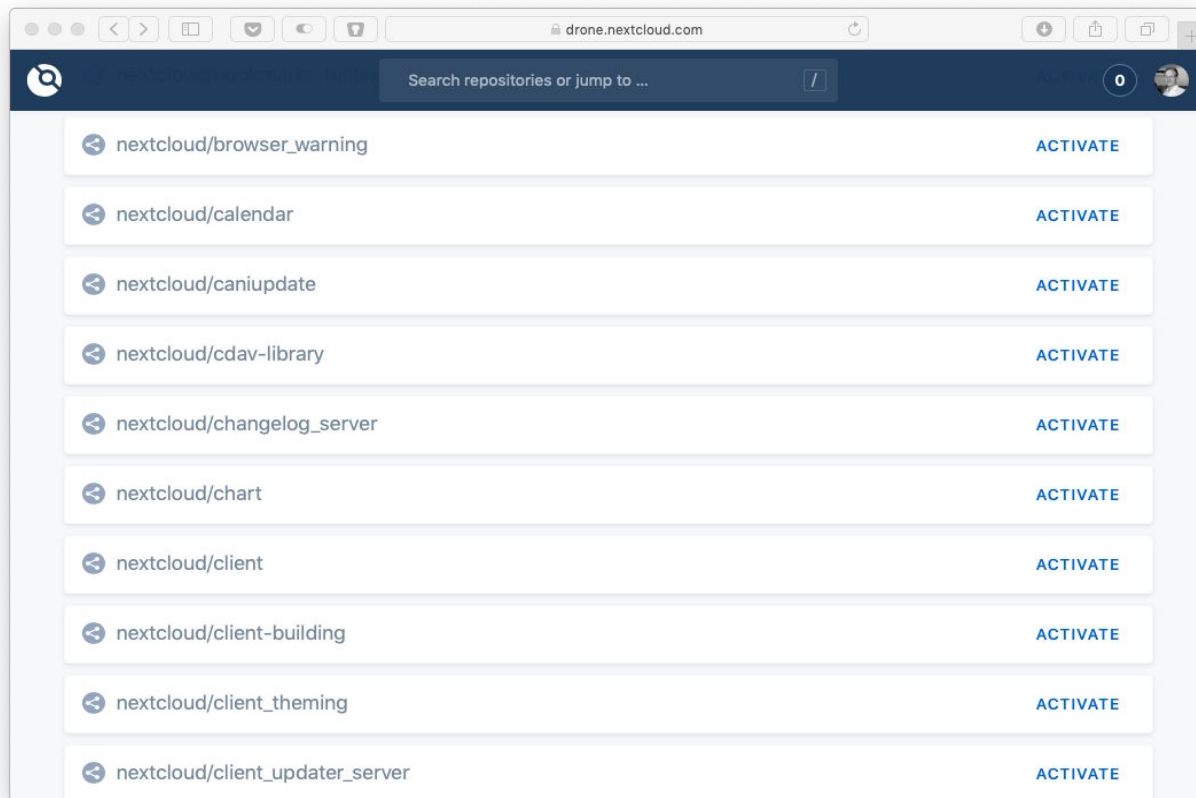
How to get it running?



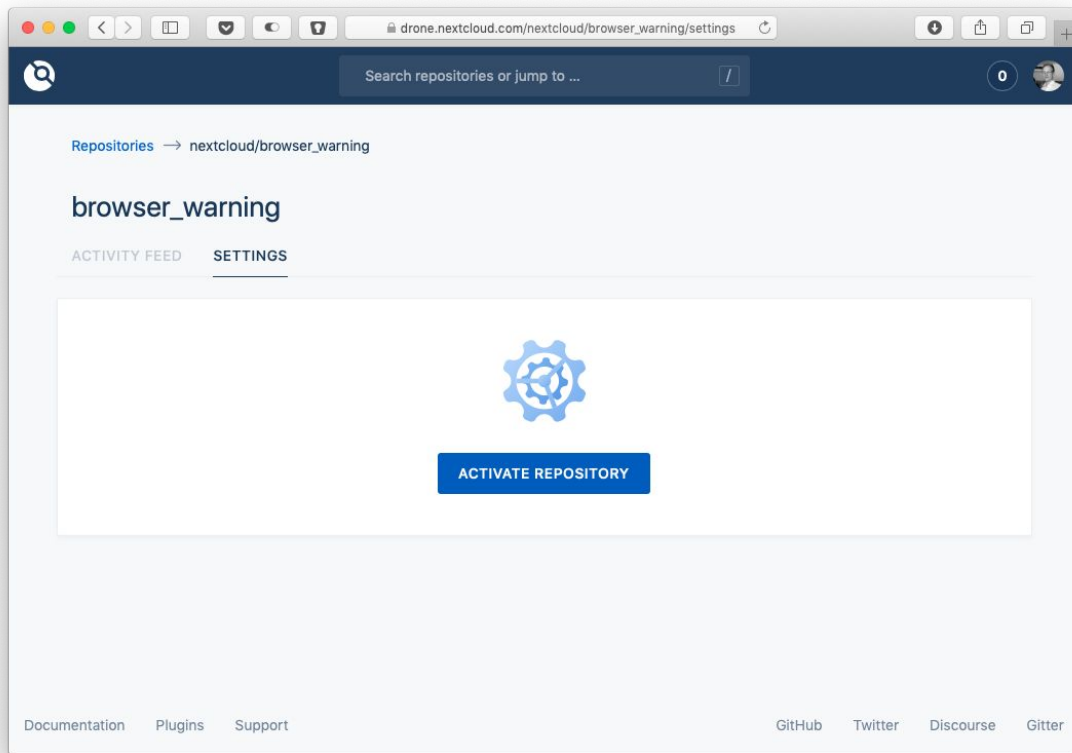
```
docker run \  
  --volume=/var/run/docker.sock:/var/run/docker.sock \  
  --env=DRONE_RPC_SERVER={% your-drone-server-host %} \  
  --env=DRONE_RPC_SECRET={% your-shared-secret %} \  
  --env=DRONE_RUNNER_CAPACITY=2 \  
  --env=DRONE_RUNNER_NAME={% hostname %} \  
  --restart=always \  
  --detach=true \  
  --name=agent \  
  drone/agent:1
```



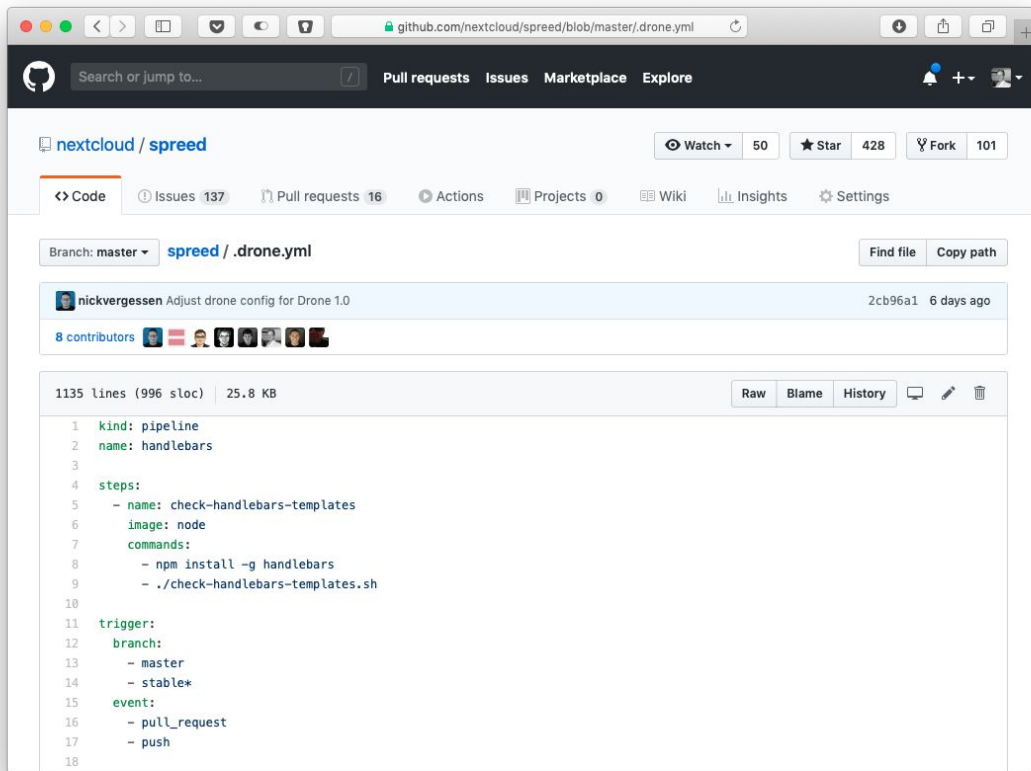
How does it look like?



How does it look like?



How does it look like?



The screenshot shows a web browser displaying the GitHub repository page for `nextcloud/speed`. The URL in the address bar is `github.com/nextcloud/speed/blob/master/drone.yml`. The repository page includes a search bar, navigation links for Pull requests, Issues, Marketplace, and Explore, and a header for the repository with 50 Watchers, 428 Stars, and 101 Forks. Below the repository header, there are tabs for Code, Issues (137), Pull requests (16), Actions, Projects (0), Wiki, Insights, and Settings. The main content area shows the file `speed / .drone.yml` selected, with a commit by `nickvergessen` (2cb96a1, 6 days ago) and 8 contributors listed. The file content is displayed in a code editor with line numbers 1 through 18. The code is a Drone CI pipeline configuration for handlebars.

```
1 kind: pipeline
2 name: handlebars
3
4 steps:
5   - name: check-handlebars-templates
6     image: node
7     commands:
8       - npm install -g handlebars
9       - ./check-handlebars-templates.sh
10
11 trigger:
12   branch:
13     - master
14     - stable*
15   event:
16     - pull_request
17     - push
18
```

How does it look like?

The screenshot shows a web browser window at `drone.nextcloud.com/nextcloud/speed/2032/1/2`. The interface is for a repository named `speed` under the path `Repositories → nextcloud/speed → #2032`. It features a search bar, a 'VIEW SOURCE' button, and a 'RESTART' button. Below the repository name is an 'ACTIVITY FEED' section. The first entry in the feed is a pull request from `dependabot[bot]` titled '#2032. Bumps [vue-fragment](https://github.com/y-nk/vue-fragment) from 1.5.0 to 1.5.1. <details> <summa...>', opened on `master` at `#1724` 18 hours ago. Below the activity feed is a list of tasks, each with a green checkmark, a name, and a duration. The tasks are: `handlebars` (00:16), `clone` (00:07), `check-handlebars-tem...` (00:06), `eslint` (00:26), `stylelint` (00:17), `compatibility` (04:17), and `unit-sqlite-php7.1` (01:37). A detailed view of the `handlebars` task is shown in a dark blue box, displaying the command `check-handlebars-templates` and its output, which includes installing `handlebars` globally and running a script to check templates.

Repositories → nextcloud/speed → #2032

speed VIEW SOURCE </> RESTART ↻

← ACTIVITY FEED

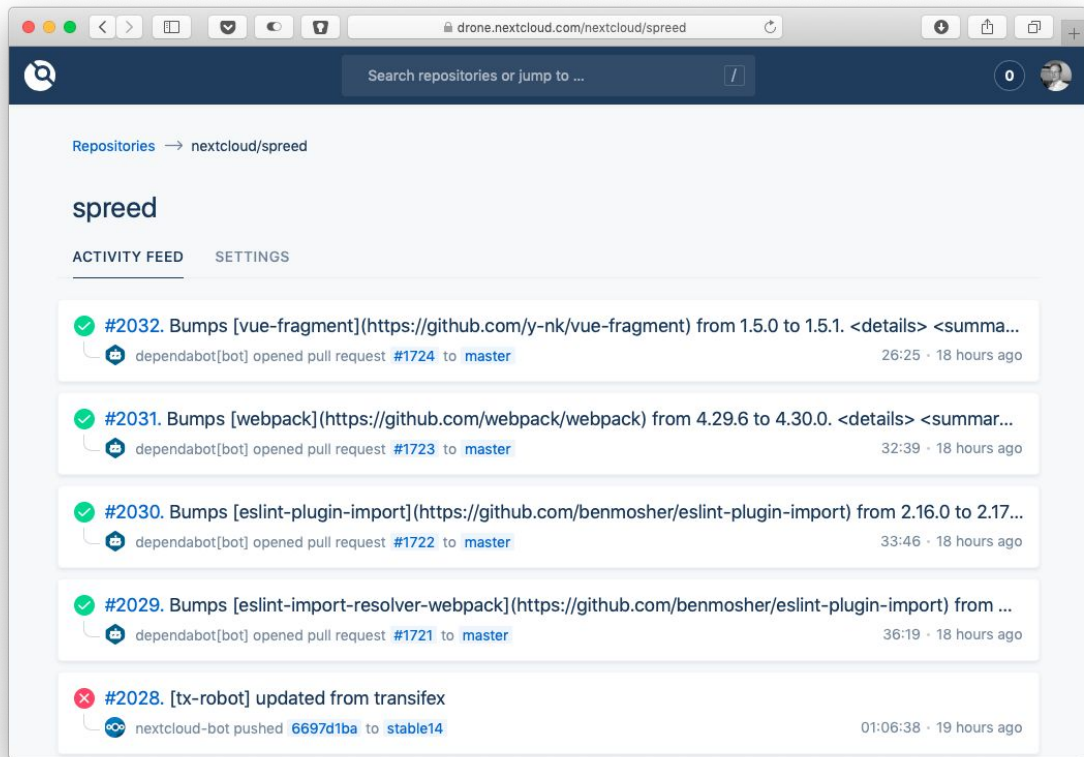
✓ #2032. Bumps [vue-fragment](https://github.com/y-nk/vue-fragment) from 1.5.0 to 1.5.1. <details> <summa...
dependabot[bot] opened pull request #1724 to master 26:25 · 18 hours ago

| | |
|---------------------------|-------|
| ✓ handlebars | 00:16 |
| ✓ clone | 00:07 |
| ✓ check-handlebars-tem... | 00:06 |
| ✓ eslint | 00:26 |
| ✓ stylelint | 00:17 |
| ✓ compatibility | 04:17 |
| ✓ unit-sqlite-php7.1 | 01:37 |

handlebars - check-handlebars-templates 00:06

```
1 + npm install -g handlebars
2 /usr/local/bin/handlebars -> /usr/local/lib/node_modules/handlebars/bin/handlebars
3 + handlebars@4.1.2
4 added 8 packages from 40 contributors in 1.429s
5 + ./check-handlebars-templates.sh
6 All up to date! Carry on :D
```

How does it look like?

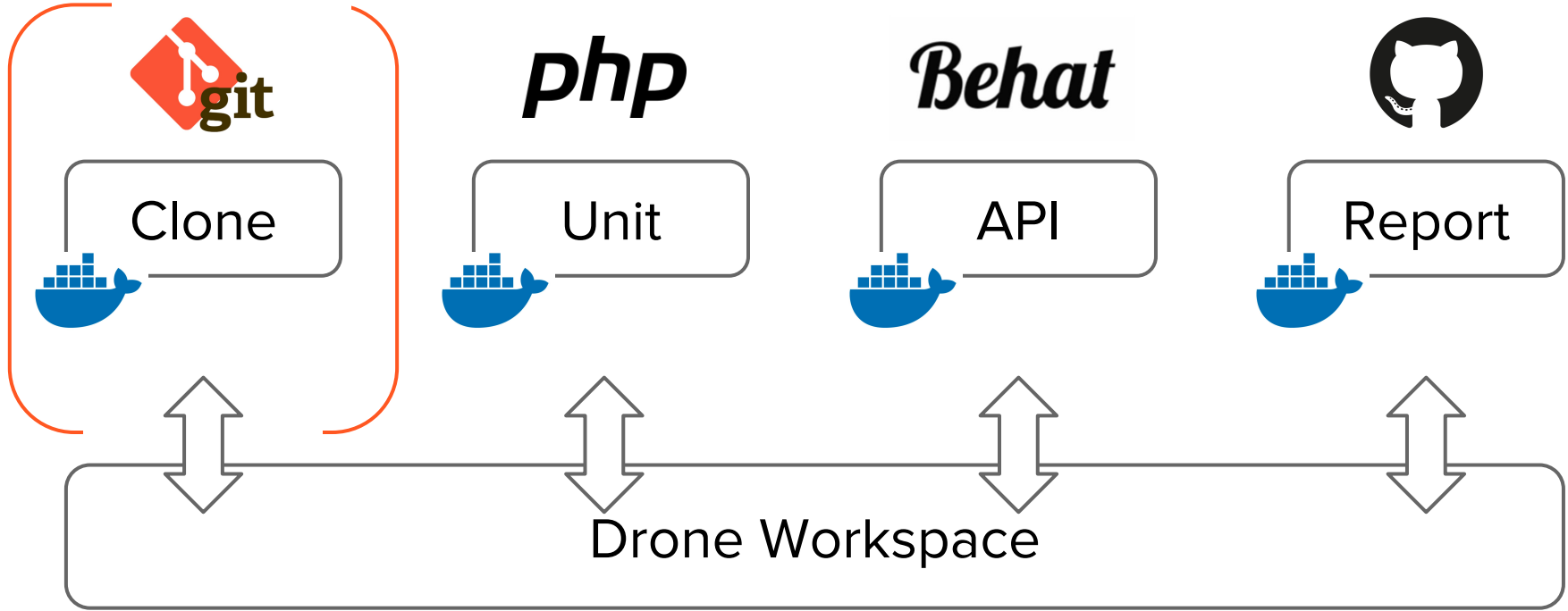


Concepts

Flow



Flow



drone.yml - Steps



```
kind: pipeline
name: default
```

```
steps:
- name: frontend
  image: node
  commands:
  - npm install
  - npm test

- name: backend
  image: phpunit
  commands:
  - phpunit
```

drone.yml - Services



```
kind: pipeline
name: default

steps:
- name: api-test
  image: behat
  commands:
  - behat tests/acceptance

services:
- name: cache
  image: redis
```

drone.yml - Pipelines



```
kind: pipeline
name: default

steps:
- name: frontend
  image: node
  commands:
  - npm install
  - npm test

- name: backend
  image: phpunit
  commands:
  - phpunit
```

drone.yml - Pipelines



```
kind: pipeline
name: frontend

steps:
- name: frontend
  image: node
  commands:
  - npm install
  - npm test
```



```
kind: pipeline
name: backend


steps:
- name: backend
  image: phpunit
  commands:
  - phpunit
```

drone.yml

- secrets
- conditions (branches, events, status, ...)
- platform (OS & architecture)

Gems

Drone exec



```
drone exec --help
```

NAME:

```
drone exec - execute a local build
```

USAGE:

```
drone exec [command options] [path/to/.drone.yml]
```

OPTIONS:

| | |
|---------------------|---------------------------------|
| --pipeline value | name of the pipeline to execute |
| --include value | name of steps to include |
| --exclude value | name of steps to exclude |
| --resume-at value | name of start to resume at |
| --trusted | build is trusted |
| --secret-file value | secret variable file |
| --env-file value | environment variable file |

Extensibility

- HTTP API
- plugins
- multiple platforms

Autoscaler

```
docker run -d \  
  -e DRONE_POOL_MIN={% DRONE_POOL_MIN %} \  
  -e DRONE_POOL_MAX={% DRONE_POOL_MAX %} \  
  -e DRONE_SERVER_PROTO={% DRONE_SERVER_PROTO %} \  
  -e DRONE_SERVER_HOST={% DRONE_SERVER_HOST %} \  
  -e DRONE_SERVER_TOKEN={% DRONE_SERVER_TOKEN %} \  
  -e DRONE_AGENT_TOKEN={% DRONE_AGENT_TOKEN %} \  
  -e DRONE_DIGITALOCEAN_TOKEN={% DIGITAL_OCEAN_TOKEN %} \  
  -e DRONE_DIGITALOCEAN_SIZE=s-2vcpu-4gb \  
  -p 8080:8080 \  
  --restart=always \  
  --name=autoscaler \  
  drone/autoscaler
```

Bad things & Alternatives

Bad things

- you need to run it yourself
- 1.0 quite new and is a bit bumpy

twitter.com/droneio/status/1118529165261586432

Startseite Mitteilungen Nachrichten Twitter durchsuchen

drone.io
@droneio

Folge ich

we finally shipped Drone 1.0 🎉 check out our release summary to learn more blog.drone.io/drone-1/

Tweet übersetzen

Search repositories or jump to ...

Repositories → alpinelinux/aports → #1530

aports VIEW SOURCE <> RESTART

← ACTIVITY FEED

#1492. Update to latest stable version of gcc.
octocat opened pull request #7016 to master 02:39 · 18 hours ago

| | |
|---------|-------|
| default | 00:56 |
| clone | 00:12 |
| build | 00:56 |
| test | 01:47 |
| deploy | 00:31 |
| notify | 00:56 |

```
edge-x86 - build 00:56
Show 258 lines more
1400 >>> git-gui: Scanning shared objects
1400 >>> git-p4: Scanning shared objects
1407 >>> git-perl: Scanning shared objects
1408 >>> git-subtree-doc: Scanning shared objects
1409 >>> git-subtree: Scanning shared objects
1410 >>> git-ewm: Scanning shared objects
1411 >>> git: Scanning shared objects
1412 >>> perl-git-ewm: Scanning shared objects
1413 >>> perl-git: Scanning shared objects
```

16:58 - 17. Apr. 2019

15 Retweets 43 „Gefällt mir“-Angaben

2 15 43

Alternatives

- hosted:
 - Circle CI
 - Travis CI
 - Codeship
 - Gitlab CI
 - Github Actions
 - ...
- self-hosted:
 - Jenkins Blue Ocean
 - ...

Questions?



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