Cider-CI

Multi-service integration tests

Traditional CI:

Continous *builds*

- single shell script
- hooks *around* that script ("before", "after", …)

Problems

- hard to make faster/parallelize
- hard to set up manage complex setups

Cider-CI approach

- complex, but explicit configuration
- very little assumptions about your workflow
- pro: hackability
- con: simples cases are relatively verbose

Cider-CI overview

- **Projects** have a **git repo**
- **repo** contains configuration for 1 or more **Jobs**
- each **Job** has 1 or more **Tasks** that *run in parallel*
- each **Task** has 1 or more (shell) **Scripts** that *run in order*
- *Jobs* can be **triggered** from branches and **depend** on each other
- *Tasks* can be re-tried
- *Scripts* can **depend** on each other

Details, quick walkthrough

(Excerpt from much longer Talk about Cider-CI)

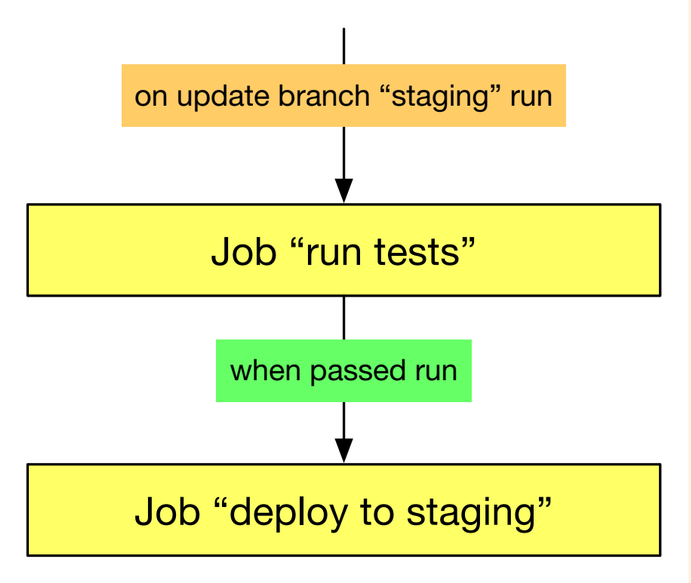
- HTML: **http://drtom.ch/talks/2015/CL/**
- PDF: **http://drtom.ch/talks/2015/CL/slides.pdf**

JOBS

EXAMPLES

- run test-suite
- perform static code checks
- build
- deploy

jobs can be **triggered** and can **depend on each other**



PROJECT CONFIGURATION

`cider-ci.yml` file in the project

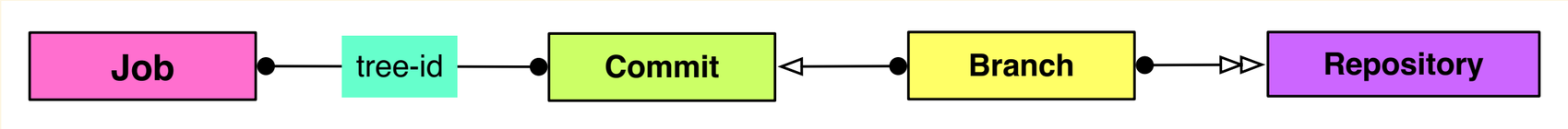
```
jobs:
  deploy_test:
    name: Deploy to test

    depends-on:
    - type: job
      job: integration-tests
      states: [passed]

    run-on:
    - type: branch
      include-match: ^master$

    # specify tasks etc
```

The source is the truth.

configuration: reproducible, reviews, audits ???

CIDER-CI AND THE SOURCE CODE

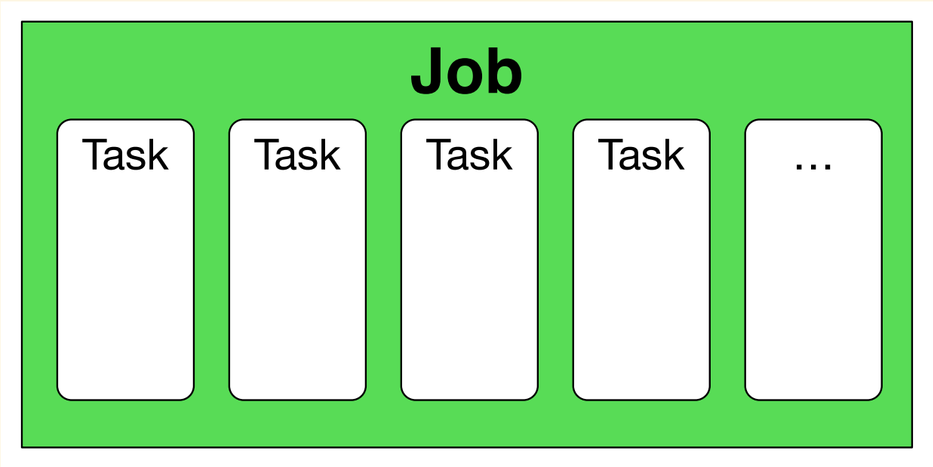
Cider-CI "knows" about commits, branches, submodules,…



`tree-id`: fingerprint of your source code

- **reproducibility**
- jobs can be **run at any time** (later)
- **binary search** for "bad" commits
- commit amends, squashing: **existing job remains valid**

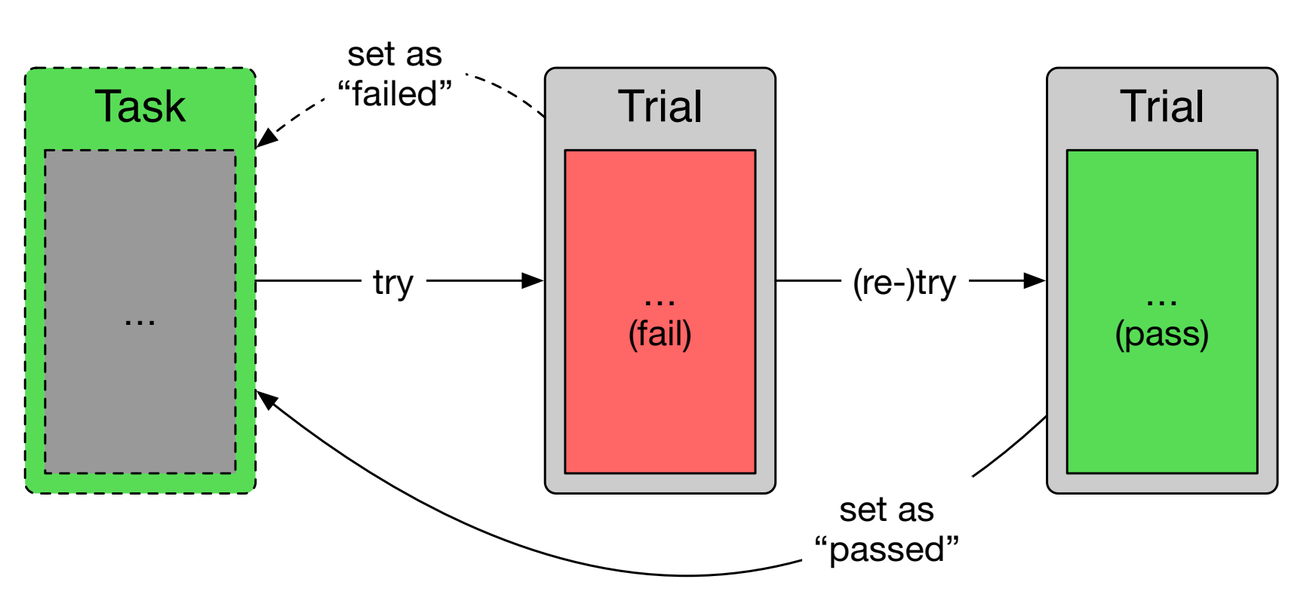
JOBS & TASKS



job: container and state aggregate for tasks

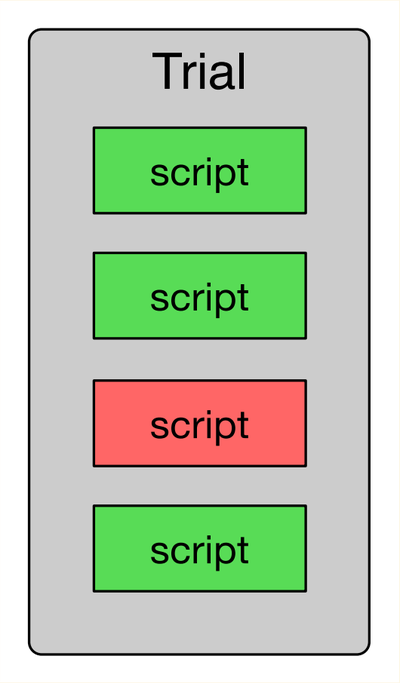
→ **parallelization**

TASKS & TRIALS



- **blueprint**
- container and state aggregate for trials

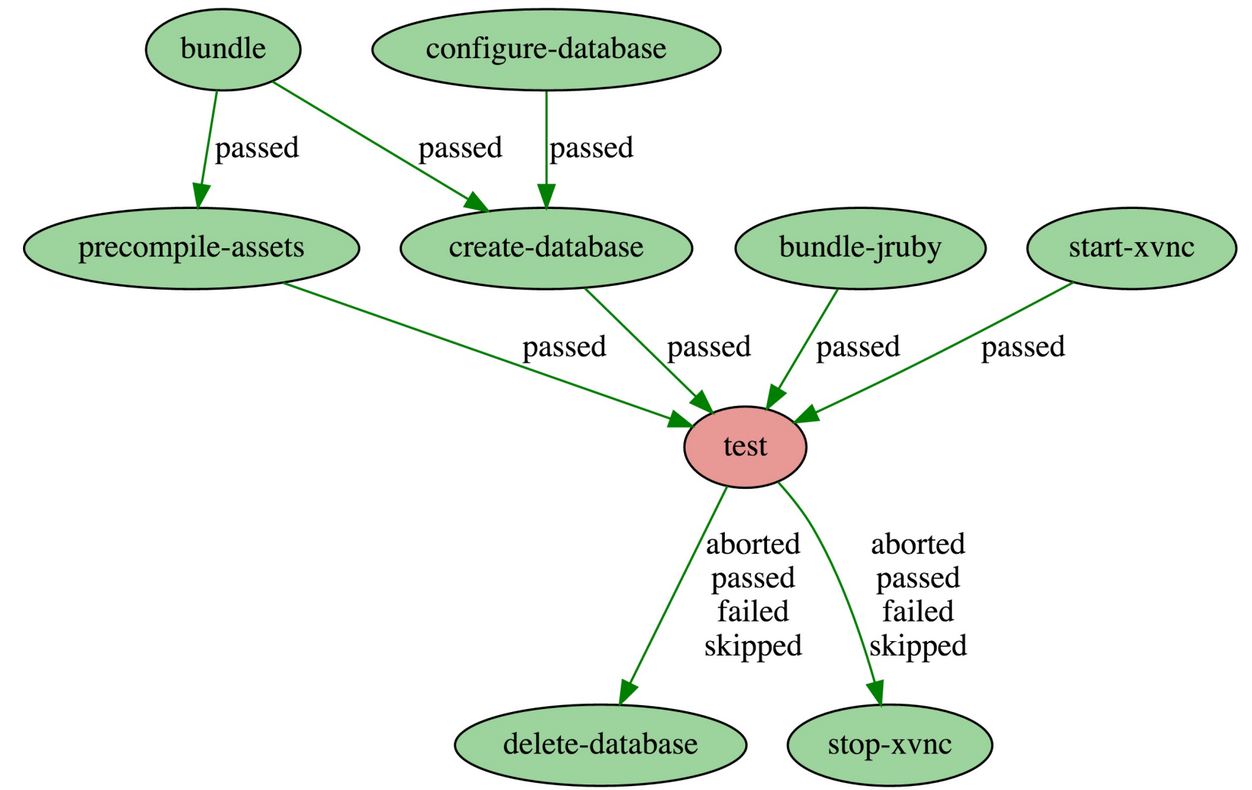
→ resilience



TRIAL & SCRIPTS

- actual unit of execution
- executed in the **same context**
- **depend** on each other

SCRIPT DEPENDENCIES



- traditional CI: one "build" ⇔ one script
- more modern: one main script + before and after "hooks"
- Cider-CI: **scripts with dependencies**

Complex example (CI-ception)

Trial for the task *spec/features/attachments_spec.rb* in job *Integration-Tests* of *Cider-CI*

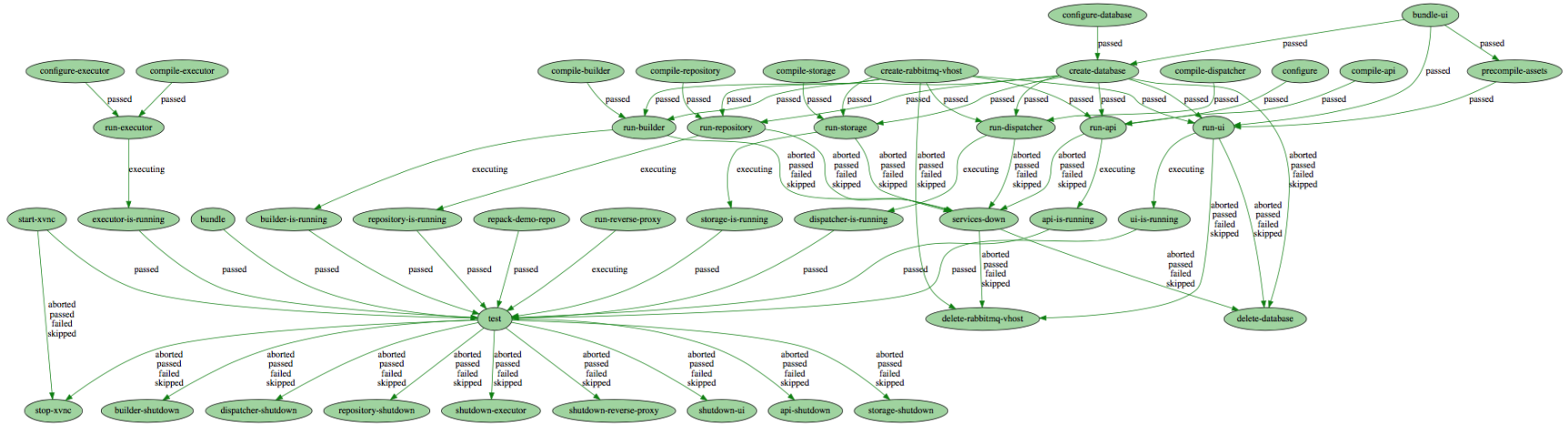
Retry

passed created **14 days ago on Sunday, 29th November** started **14 days ago on Sunday, 29th November** executed in **3 minutes** (167.83 seconds) on **cislave5**

Scripts Overview

configure run-reverse-proxy configure-database start-xvnc create-rabbitmq-vhost configure-executor repack-demo-repo compile-storage compile-builder compile-api
compile-dispatcher compile-executor compile-repository run-executor executor-is-running bundle bundle-ui create-database precompile-assets run-ui run-api
run-storage ui-is-running api-is-running run-repository run-dispatcher run-builder storage-is-running builder-is-running repository-is-running dispatcher-is-running
test shutdown-ui builder-shutdown shutdown-reverse-proxy dispatcher-shutdown stop-xvnc storage-shutdown shutdown-executor api-shutdown repository-shutdown
services-down delete-database delete-rabbitmq-vhost

Start-Dependencies



Terminate-Dependencies

Cider-CI is itself a multi-service application and runs its own

API

REST-ful API to implement any workflow you want

- nightly builds/deploys

Try it out

Try Cider-CI, open source, installs with two commands:

- **http://docs.cider-ci.info/introduction/quick-start/**
- or read the sources: **https://github.com/cider-ci/cider-ci**

Or come talk to me on Day 2 and 3. See the wiki, but most likely I will be at the freifunk assembly

THX!