Faster specs

Speeding up a slow test suite

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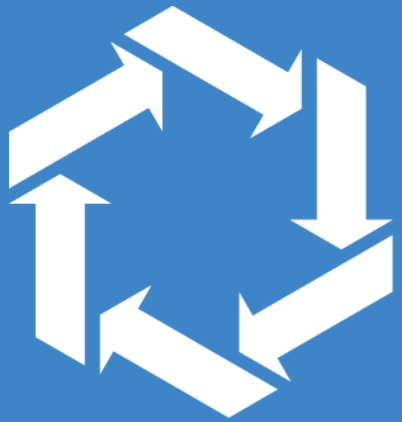


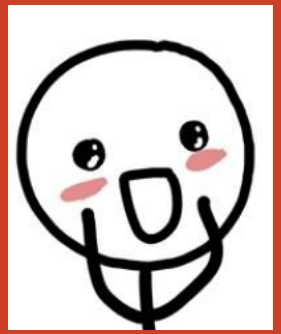
Degica

A long time ago...

Many pull-requests ago...

Tests were fast

Developers were happy



```
Run options: include {:focus=>true}

All examples were filtered out; ignoring {:focus=>true}

Randomized with seed 49955
.....................................................................
.....................................................

Finished in 20.94 seconds (files took 0.56839 seconds to load)
173 examples, 0 failures
```

2 years later...

After a few feature requests...

What makes a test suite slow?

The Rails Testing Pyramid

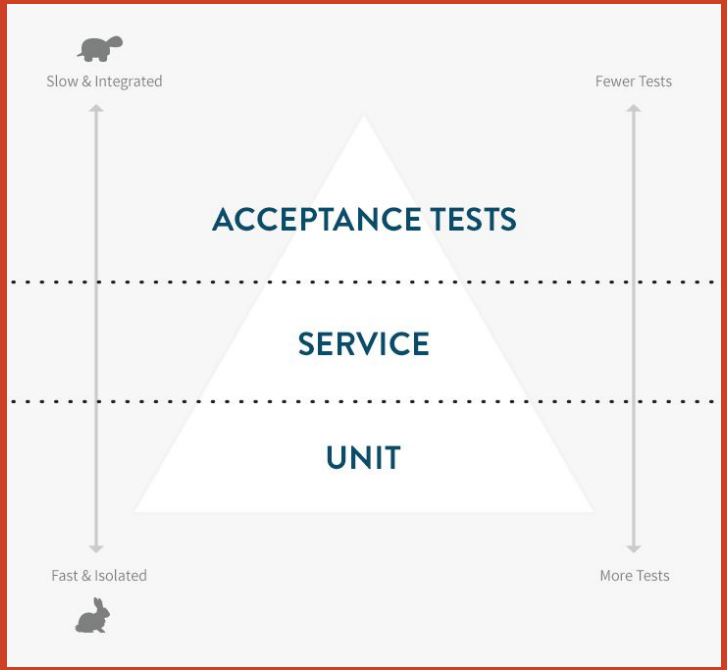


Image Credit: Code Climate Blog

The Rails Ice Cream Cone

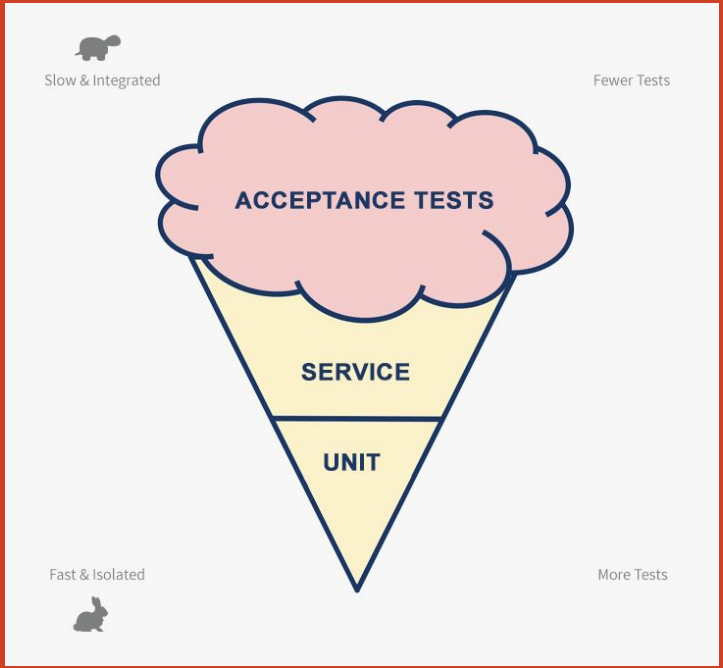


Image Credit: Code Climate Blog

How do I speed up my test suite?

Don’t run all your tests “locally”

the fastest tests are no tests (no really?)

Be selective

- Use an editor that can run tests
- Disable slow tests locally

Start slow 

```
$ rspec --profile
$ ruby test/minitest_spec.rb --profile
```

Prune slow tests ✂

(Usually the feature specs)

- Acceptance tests should be small and targeted
- Try to convert a slow tests to unit test
- Don’t be afraid to delete tests

CODE

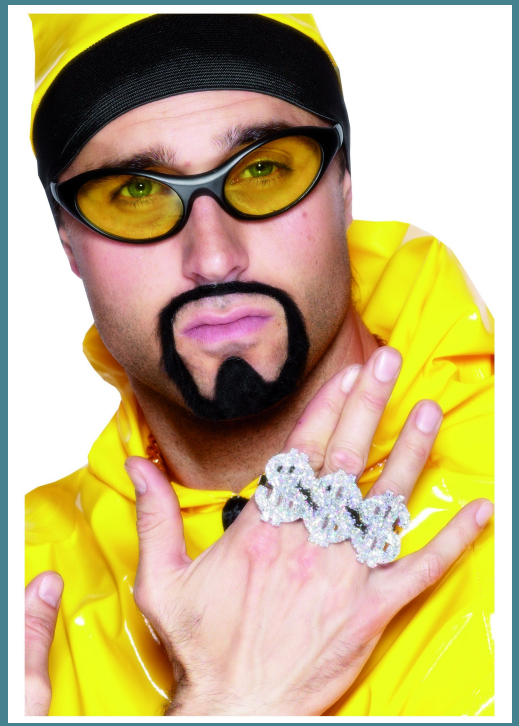
Isolate unit tests

(Extract lots and lots of new classes)

- Rails makes your tests slow
  - Try and reduce Rails dependencies
- Use test doubles to mock out collaborators
- Follow Single Responsibility Principle
  - Extract new classes

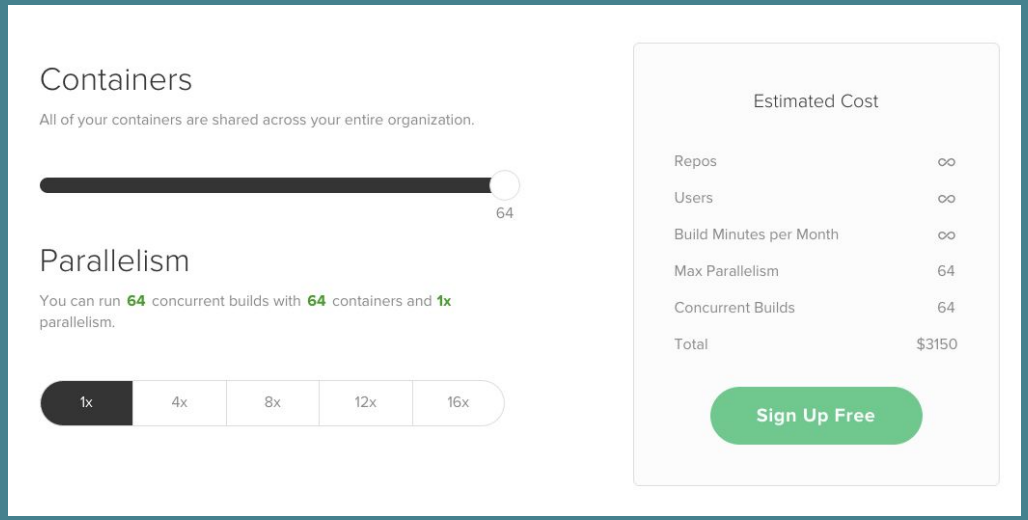
CODE

Buy faster tests 💰



Parallel Builds

should be your last step



Knapsack

♡	$ bundle exec rake knapsack:rspec (0)	*config*	02:13
♡	$ bundle exec rake knapsack:rspec (1)	*config*	02:28
♡	$ bundle exec rake knapsack:rspec (2)	*config*	02:30
♡	$ bundle exec rake knapsack:rspec (3)	*config*	02:30

Other Tips

- Fail fast in CI
  - Faster feedback for your team
- Don’t tune the Ruby garbage collector
  - You’re going to have a bad time
- Try to avoid writing to database in unit tests
  - Use an instance instead of persisting a record
  - Too much I/O causes slow tests
- Use Spring

My progress (~2-3 weeks) 52% faster

Before

```
Finished in 4 minutes 58.2 seconds
2085 examples, 0 failures
```

After

```
Finished in 2 minutes 42 seconds
2156 examples, 0 failures
```

Quick Summary

- Your fastest tests are no tests
  - Don’t be afraid to delete slow tests
  - Use selective testing don’t run everything
- Reduce class dependencies
  - Extract classes away from Rails
  - Follow Single Responsibility Principle
- Parallel tests can provide extra speed up to a limit
  - Should be your last step

Questions?

Thanks!

https://github.com/rramsden/faster-specs