Doing The
Jitterbug

Cross

Language

Continu-

ous

Integra-

tion for

Git

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Doing The Jitterbug
Cross Language Continuous Integration for Git

Jonathan "Duke" Leto

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What is Continuous Integration (CI) ?

Continually and automatically testing code, usually with relevant notifications.

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Why is CI Useful?

- Know the exact commit that broke something
- Automate testing many different combinations of different versions of libraries, languages, OS's, browsers, etc...
- Quickly identifies tests that only pass on the authors machine due to implicit assumptions

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What problems does Jitterbug solve?

- People forgetting to run the test suite
- People forgetting to notify others when they see breakage
- Not having a visual interface to which commits passed and which failed a test suite

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Current Jitterbug Features

- Extremely Memory Efficient
- Integrates seamlessy with Github post-receive hooks
- Can autodetect test suites in many languages
- Highly customizable YAML configuration file
- Email+RSS notifiers
- Supports custom build/test scripts
- Pretty web interface

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What does Jitterbug look like?

What does Jitterbug look like? (2)

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What does Jitterbug look like? (3)

Create a document | Expand all | Collapse all | Forward all | Turn on highlighting | Turn off highlighting | Translate co

[Cxgn-devel] [jitterbug] FAIL sgn @ 5768ba81 make broken-image tests work with relative links too cxgn | X

jitterbug@sgn.cornell.edu to rmb32, cxgn-devel   show details 11:29 AM (11 hours ago)   Reply t

Jitterbug Web Interace : http://jitterbug.sgn.cornell.edu:8090
sgn : http://jitterbug.sgn.cornell.edu:8090/project/sgn
Failing Commit Diff: https://github.com/solgenomics/sgn/commit/5768ba8129e627cb365a011ee81f84
4f57cacc11

Test Summary Report
----
t/SGN/Controller/Organism.t   (Wstat: 65280 Tests: 5 Failed: 0)
  Non-zero exit status: 255
  Parse errors: No plan found in TAP output
t/cview/map.t   (Wstat: 512 Tests: 90 Failed: 2)
  Failed tests: 89-90
  Non-zero exit status: 2
t/image/add_image.t   (Wstat: 65280 Tests: 0 Failed: 0)
  Non-zero exit status: 255
  Parse errors: No plan found in TAP output

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What does Jitterbug look like? (4)

```
                          WELCOME TO R'LYEH
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MMMMMMMNo:c,oko:,:..1;c':';'.,cxkodxKd,;,o,xMcxNOKOXd:cKMMMMMMMMMMMMMMMMMMMM
MMMMMWO:.;'roo',okkc,'odOkde,'odo,xkcdk'xNlck;,.,dcklk1XMMMMMMMMMMMMMMMMMMMM
MMMMNkc:'l:l,;,c.;c..'dxldKkxx:'..dl:oo:dlxkl..:d0XKOxocxXMMMMMMMMMMMMMMMMMM
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MMMMXd0kc.:dc,'';;:..x 1l; c''lOWe'0X' ,o.;KW.X'.kd,NMMMMMoMo.;o:NMMMMMMMMMM
MMMMdoXx.kMMMNOlc:xd:d..dl..l;oKMx.OX..1l.cK0.,X1 .c.xWMMMN':d KMMMMMMMMMMMM
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MMMMMMMx:o.KMMMMMMMX1,c.kN:rcNMWdl. ,l.kMMk.c..: dMMMMMX;o,NMMMMMMMMMMMMM
MMMMMMxo'.'KMMMMMO;:od'kNO.cccxMMMlc' k1.xMMMMM,l1':o'NMMMMMMMMMMM
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                    C A S H   M U S I C
                 PLATFORM TEST INSTALLER

Ph'nglui mglw'nafh Cthulhu R'lyeh wgah'nagl fhtagn!


TEST DATABASE DEPLOYED! Fear of testing is the mind-killer.
All tests
OK
Test cases run: 14/15, Passes: 233, Failures: 0, Exceptions: 0

Result: PASS
```

Current Features

- Integrates seamlessy with Github post-receive hooks
- Can run tests for Perl 5/6, Parrot, Ruby and Makefile-based projects
- Highly customizable YAML configuration file
- Email notifier
- Supports custom build/test scripts
- Pretty web interface

Getting Jitterbug

- git clone git://github.com/franckcuny/jitterbug.git
- cd jitterbug
- perl Build.PL
- cpanm –installdeps . # cpanminus to install deps
- OR
- ./Build installdeps # install deps
- ./Build test # run tests

Will release to CPAN Real Soon Now

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Doing the Jitterbug

- vi config.yml # Customize YAML config
- perl jitterbug.pl -p 8080 # Web interface
- perl scripts/jitterbug_db --config config.yml --deploy
- perl scripts/builder.pl -c config.yml
- Add http://example.com:8080/hook/ as a Github post-receive URL

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Customizing Jitterbug

Interesting config file options...

- reuse_repo - Reuse git repos instead of recloning
- stack_tasks - Test every commit, not just current HEAD
- perlbrew - use perlbrew to test under many versions/builds of Perl
- email_on_pass - whether to send emails for PASSing test suites

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Customizing Jitterbug (2)

SQLite by default, but any database can be used

```
foo:
    bar
```

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Customizing Jitterbug (3)

Per-repo config

```
stuff:
    things
```

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Future Goals

- Jitterbug wants to support running tests in many more languages, including
  - Python
  - Javascript
  - PHP
- Code coverage
- Graphic visualization

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Get involved!

- Install Jitterbug and test your projects
- Join #dancer on irc.perl.org for help
- Submit a pull request for an issue!
  https://github.com/franckcuny/jitterbug
- http://lumberjaph.net/jitterbug

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Thanks!

- Franck Cuny
- Dancer team

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