

LearnFWD: Testing CASH Music

Jonathan "Duke" Leto



What does CASH Music use to test stuff?

- PHP SimpleTest - <http://simpletest.org>
- Test::WWW::Mechanize - <http://cpan.org>
- Test::Most - <http://cpan.org>
- Test::JSON - <http://cpan.org>
- Jitterbug - <http://jitterbug.pl>

What is Continuous Integration (CI) ?

- Continually and automatically testing code, usually with relevant notifications.
- <http://dev.cashmusic.org:3000>

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

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

Current Jitterbug Features

- Extremely Memory Efficient
- Integrates seamlessly 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

What does Jitterbug look like?

MailchimpSeed and tests passing happy happy



Jesse von Doom

2011-11-18T21:39:39-08:00

integration **PASS** php-5.3.2-1ubuntu4.9 **PASS**

commit dd0fcd5e8afa424d8623de43e632cbf
on refs/heads/mailchimp_sync
built in 15 seconds

Attempt to get Mailchimp tests passing again. For some reason, \$this->getCASHSettings() is returning false



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2011-11-18T15:44:07-08:00

integration **PASS** php-5.3.2-1ubuntu4.9 **FAIL**

commit 62a0b8f780292be849cd4c89ffa2cc
on refs/heads/mailchimp_sync
built in 14 seconds

What do our PHP tests look like?

```
<?php

require_once('tests/php/base.php');

class CASHSystemTests extends UnitTestCase {

    function test_formatTimeAgo() {
        $return_date = CASHSystem::formatTimeAgo(time() - 90000);
        $return_hours = CASHSystem::formatTimeAgo(time() - 25000);
        $return_lhour = CASHSystem::formatTimeAgo(time() - 5000);
        $return_minutes = CASHSystem::formatTimeAgo(time() - 2500);
        $return_lminute = CASHSystem::formatTimeAgo(time() - 90);
        $return_seconds = CASHSystem::formatTimeAgo(time() - 45);
        $give_string_return = CASHSystem::formatTimeAgo(date('d M Y h:i:s A', (time() - 5000)));

        $this->assertPattern('/^[0-9]{2} [A-Za-z]{3}/', $return_date); // > 1 day returns a 'd M' format
        $this->assertPattern('/hours/', $return_hours); // between 2 and 24 hours
        $this->assertEqual('1 hour ago', $return_lhour); // 1 hour ago (fuzzy)
        $this->assertPattern('/minutes/', $return_minutes); // between 2 and 59 minutes
        $this->assertEqual('1 minute ago', $return_lminute); // 1 minute ago (fuzzy)
        $this->assertPattern('/seconds/', $return_seconds); // between 1 and 59 seconds ago
        $this->assertEqual('1 hour ago', $give_string_return); // give a string, parse, get a string
    }
}
```


What do our Perl tests look like?

```
sub test_getlistinfo {  
    my (@methods) = @_;  
    for my $method (@methods) {  
        my $key = "42";  
        my $url = "$base/interfaces/php/api/verbose/people/getlistinfo/api_key/$key/id/100";  
        my $json = json_ok($url, $method);  
  
        my $response = $j->from_json($json);  
        cmp_ok($response->{status_code}, '==', 200, "$method 200 status_code from getlistinfo");  
        cmp_ok($response->{contextual_message}, 'ne', 'unknown action', 'contextual_message != unknown action');  
        cmp_ok($response->{request_type}, 'eq', 'people', 'request_type = people');  
        cmp_ok($response->{action}, 'eq', 'getlistinfo', 'action = getlistinfo');  
    }  
}
```

What does passing test output look like?

[illegible]

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

What does failing test output look like?

Jitterbug Web Interface : <http://dev.cashmusic.org:3000>
DIY : <http://dev.cashmusic.org:3000/project/DIY>
Commit Diff: <https://github.com/cashmusic/DIY/commit/62a0b8f780292be849cd4c89ff1a2cdc666cf601>

Commit Message:

Attempt to get Mailchimp tests passing again. For some reason, \$this->getCASHSettings() is returning false

TAP Output:

CASH MUSIC PLATFORM TEST INSTALLER

You are in an open field west of a big white house with a boarded front door.

TEST DATABASE DEPLOYED! Fear of testing is the mind-killer.

All tests

could not get cash settings!

1) Expected true, got [NULL] at [/tmp/build/DIY/tests/php/007_Mailchimp.php line 18]
 in testMailchimpSeed
 in MailchimpTests
 in tests/php/007_Mailchimp.php

PHP Fatal error: Call to a member function lists() on a non-object in /tmp/build/DIY/framework/php/classes/seeds/MailchimpSeed.php on line 52

Sorry, but your Princess is in another castle!!!

Future Goals: CASH Music Testing

- Javascript Unit Tests
- Testing the Dev Installer
- Javascript Integration Tests
- Multi-Browser Integration Testing

Thanks!

- Jesse + Maggie
- Pascal + Diane
- WebFWD Fellows + Scouts!
- Franck Cuny

Stalk Me

- <http://dukeleto.pl>
- @dukeleto / !leto on twitter/identi.ca
- <http://linkedin.letto.net>
- Slides available at
<http://github.com/leto/presentations>