

Working with Continuous Integration



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Working with Continuous Integration

Learning Objectives

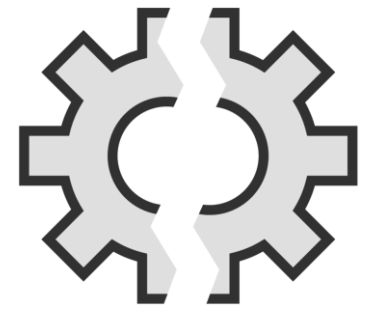


Deploy to GitHub and configure CI



**Use CI to automatically approve
deployments based on tests**

Why Implement Continuous Integration?



**Prevent unexpected
(and costly!) regressions**



Reduces burden on QA

**Using CI can result in massive
time savings, especially when a
large team is involved.**



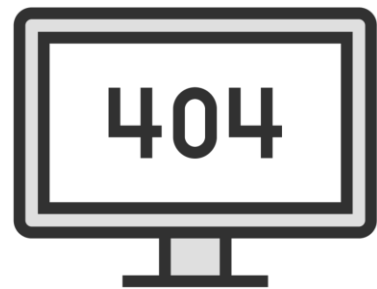
CI is objective

Understanding Continuous Integration

What Is Continuous Integration (CI)?



Testing *outside* of development environment



Final step before deployment



CI can revert to working version, notify developers

Common Continuous Integration Tools



Travis CI



Jeeves

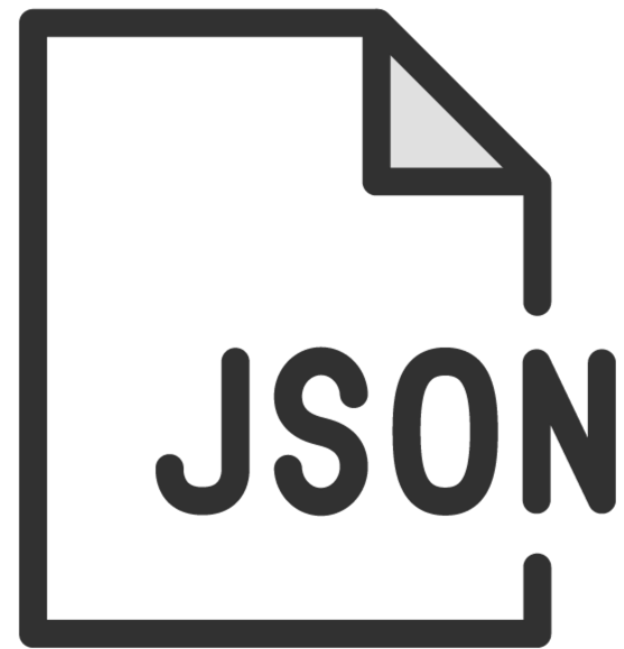


Chef CI

Continuous Integration Workflow



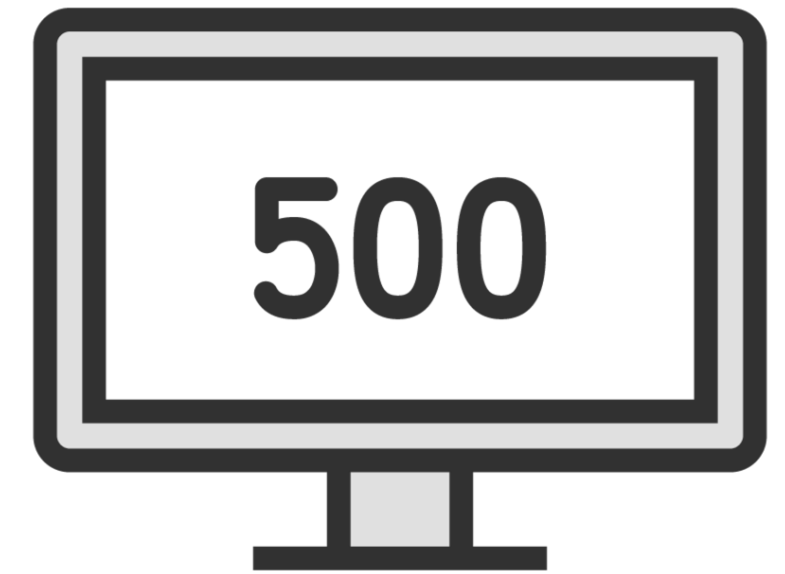
**Create project
on PAAS**



**CLI script for
running all tests**



**Install CI on
production
server**



**Specify behavior
on failing tests**

Adding Continuous Integration to a Vue Application

Demo



Create project on GitHub

Add CircleCI to project

Configure CircleCI to run tests

**Note inability to publish app
with failing tests**

Executive Summary

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Jest is a test framework and test runner

- **Helper functions:** describe and expect (test framework)
- **Invoked from CLI** (test runner)

Installed via NPM

Tests are defined by a .spec extension or a /spec folder

beforeAll, afterEach, etc., are used to set up tests

Executive Summary



Exception tests...

- **Contain assertions**
- **Cause the test runner to fail if they produce an error**
- **Focus on one small area**
- **Many tests together cover more code**

Tests execute instantly by default

- **Assertions that occur after timeouts are ignored**
- **Async tests slower, but able to run assertions later in time**

Executive Summary



External dependencies create more avenue for bugs to appear

- **Mocking dependency by creating service with identical API but no logic**
- **Reduce need for mocking by not importing or injecting services**

Continuous Integration (CI) keeps versions of the application with failing tests off production

- **An objective basis for evaluating app**

Thank You!