

Agile JavaScript

Frameworks, Tools, Services

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Agile Software Development

Scrum

Kanban

Agile Manifesto

Respond to change

Customer collaboration

Deliver frequently

Ensure quality

Working software



Agile Practices

BDD

Continuous Integration

Static Code Analysis

DDD

TDD

Continuous Delivery

Code Reviews



Frameworks, Tools and Services

Cucumber mocha Robot Grunt **Puppet GitHub** Travis-CI karma Mercurial Maven **Jenkins JBehave** Jira

Everything together

BDD

Puppet

Cucumber Kanban

Robot Scrum

mocha

Agile Manifesto

Grunt

Continuous Integration

Respond to change

Static Code Analysis

Customer collaboration

GitHub

Travis-CI

karma

Continuous Delivery

Ensure quality DDD

Deliver frequently

Maven

JBehave

Mercurial

Jenkins

TDD

Working software

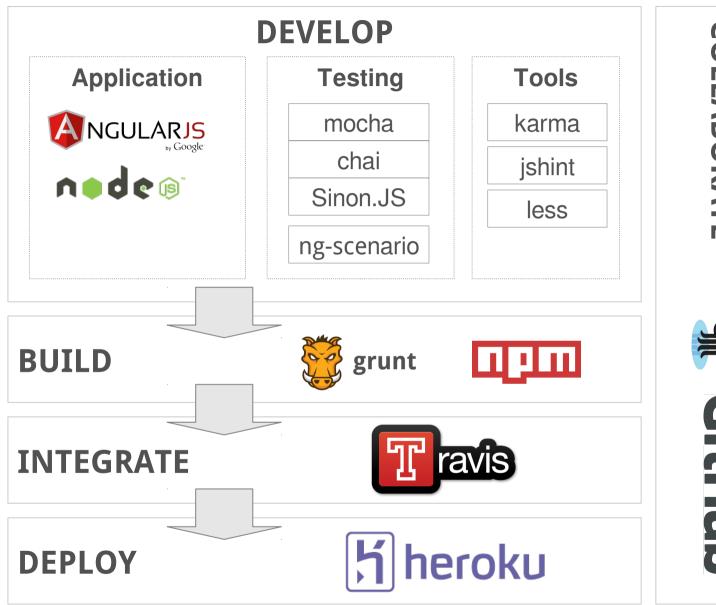
Code Reviews

Jira



More structure please ...











One step at a time...



DEVELOP

Application





AngularJS

"Superheroic JavaScript MVW framework"

Node.JS

Server-Side JavaScript implementation with strictly asynchronous I/O

Express.JS

HTTP-Server framework

Neo4J

"The world's leading graph database"



... we can start developing the application.

But...

- ... what about collaboration in the team?
 - Work on the same code simultanuously?
- Keep track of open bugs?
- Discuss and review code?



DEVELOP







GitHub is more than just a VCS

- Bugtracker
- Code Review Tool
- Wiki
- Documentation

COLLABORATE



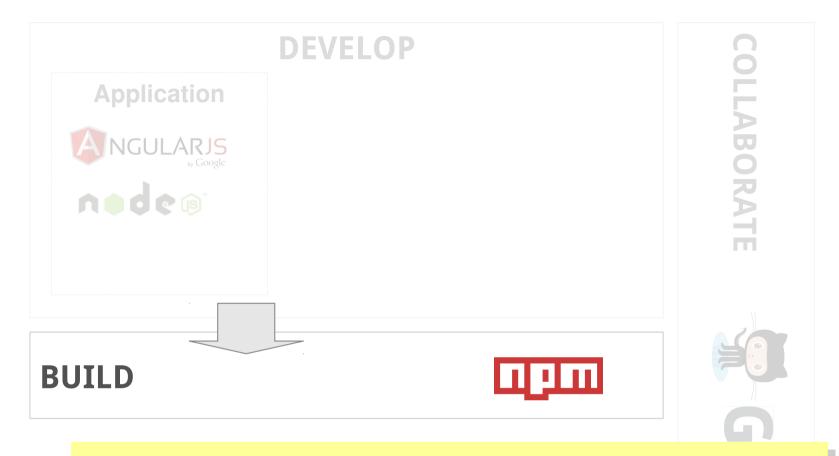


... we can work together on our project.

But...

... how can we ensure everybody uses the same versions of the necessary frameworks?





Node Package Manager

- Dependency management for JavaScript projects
- Is part of NodeJS
- Available Packages on npmjs.org



... we can deal with dependencies (even transitive ones).

But...

- ... what about testing?
 - Unit-Tests?
 - Integration-Tests?
- End-to-End Tests?





COLLABORATE



AngularJS Scenario Runner for end-to-end-tests

Mocha for unit-tests (client- and server-side)

Utility-libraries:

- Sinon.JS for stubbing/mocking
- Chai for readable assertions

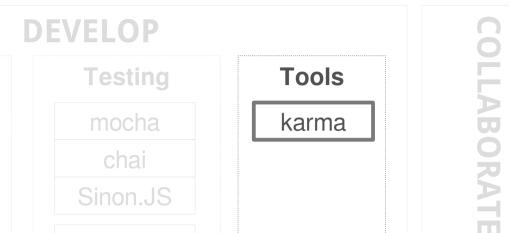


... we have tests to ensure high functional quality and prevent regression.

But...

- ... how can we automate test execution?
- Run client-side tests from command-line (without having to refresh the browser)?
- Automatically run tests whenever code changes?
- Get instant feedback when a test fails?





Karma

Application

node

- Test-Runner
 - Execute in-browser-tests in background

ng-scenario

- Supports various browsers (Chrome, Firefox, PhantomJS)
- Execute test continuously in background



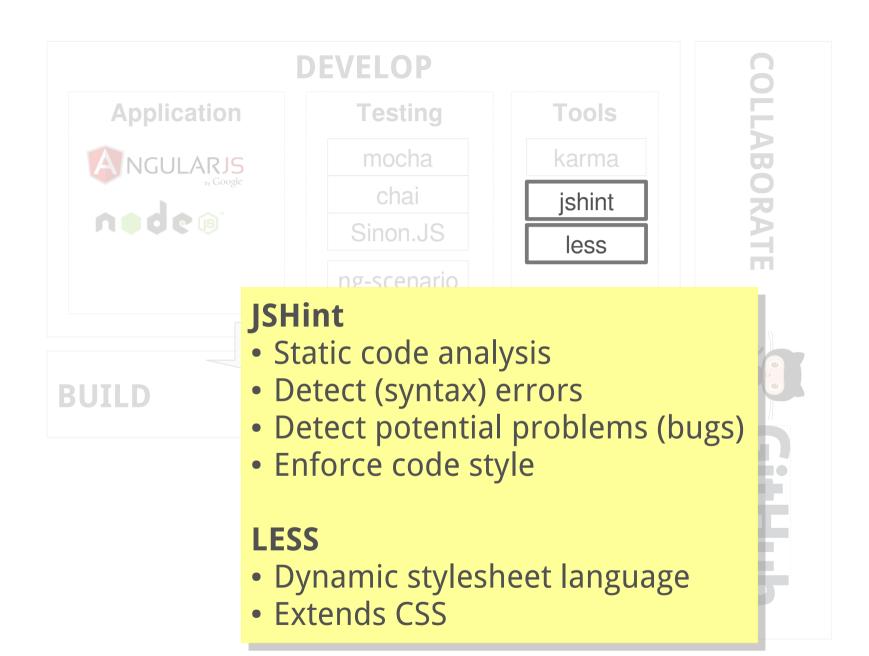
... test execution is easy.

But...

... are there other tools to support developers?

- Static code analysis?
- Enforce code style?
- Compile JS/CSS?







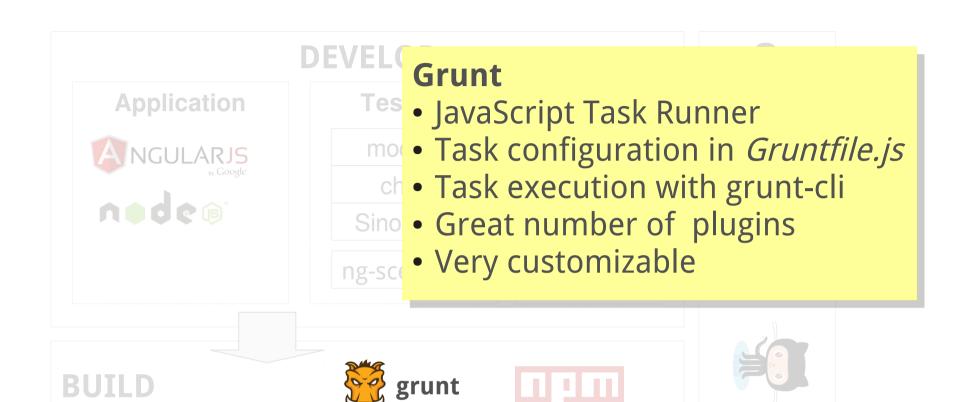
... we have plenty of tools.

But...

... all these tools have their own command line interface and configuration options.

We want one tool to rule them all!





grunt



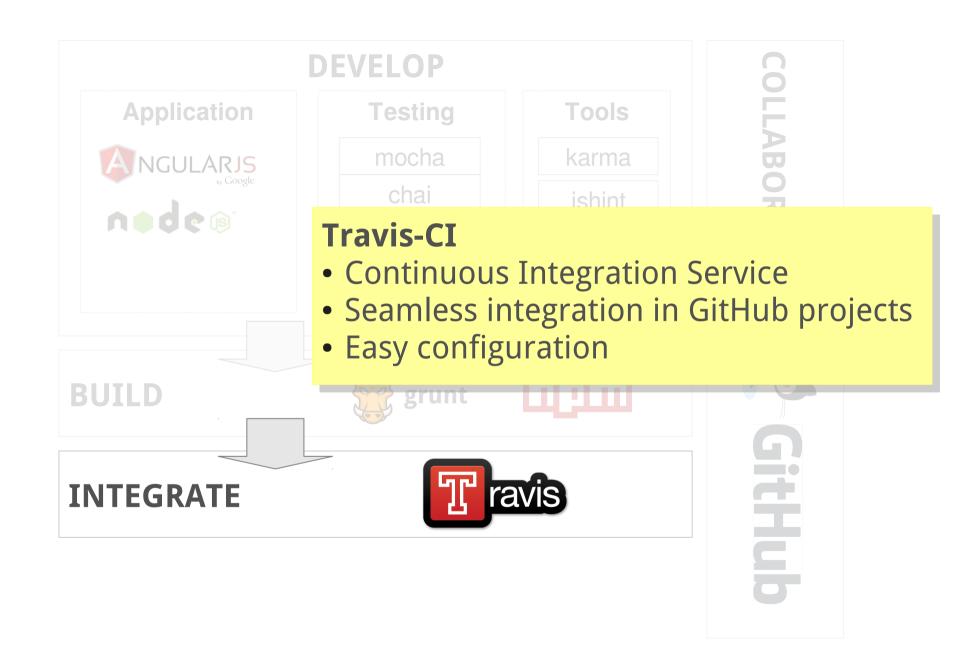
BUILD

... the build chain is complete.

But...

- ... the build is only executed locally.
- Trigger build on each commit?
- Warn developers when build fails?
- Avoid works-on-my-machine problem?







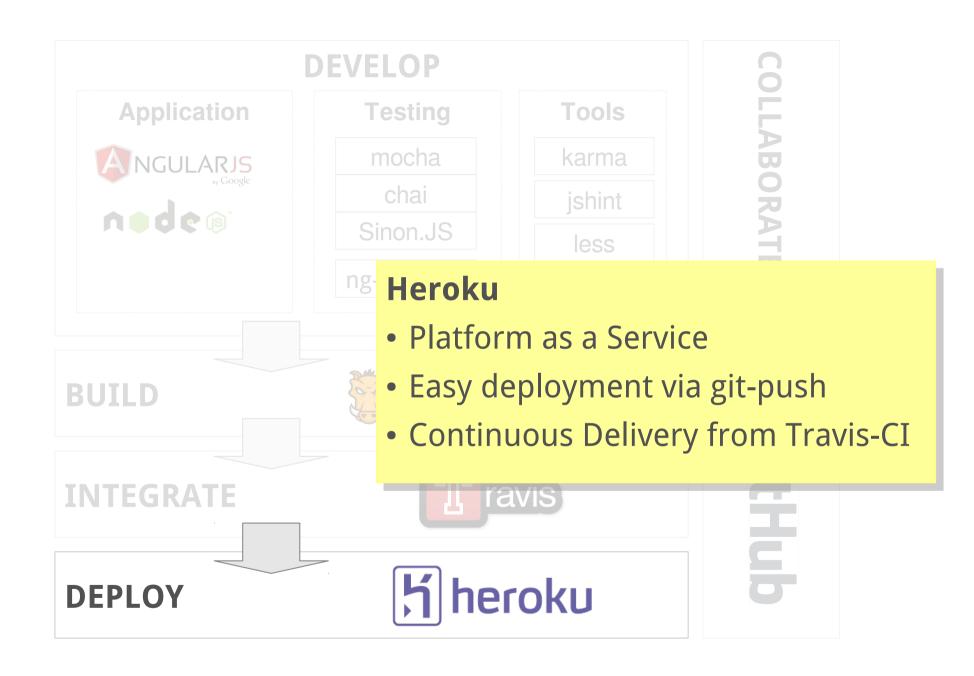
Is something still missing?

Yes, ...

... we want to go live!

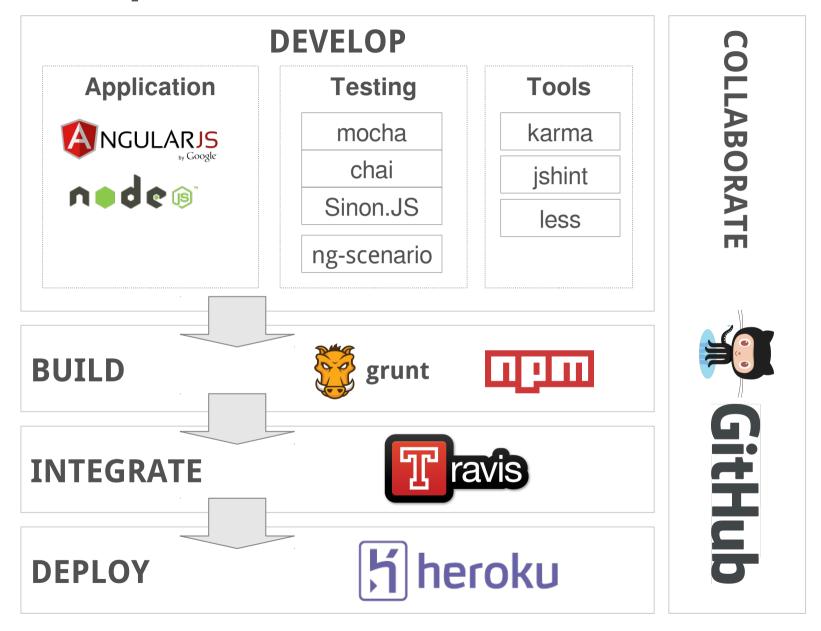
- Automated deployment after successfull build?
- Deployment to different environments (production, staging, etc)?







The final picture





Anything else?

- cucumber
- nodejs-webdriver

- watchservice
- test-coverage

LLABORATE





- artifact archive
- reporting

DEVELOP

Twitter Bootstrap **Application**

NGULARJS

by Google





Testing

mocha

chai

Sinon.JS

ng-scenario

Tools

karma

jshint

less

BUILD





INTEGRATE



5 heroku

DEPLOY

- rollback
- schema-migration



• D3.js

• ...

(Java) Alternative

