Running JavaScript tests with Karma

This tutorial describes how to use the Karma test runner in the WebStorm IDE.

Karma integration in WebStorm

Starting with WebStorm 7.0, you can use the Karma test runner to run JavaScript tests for your project.
Karma integration in WebStorm:

- Uses local server to run the tests in the selected browsers installed on your computer;
- Allows you to run tests written with the use of Jasmine, QUnit, or Mocha, or to write a simple adapter to use any other framework you like;
- Presents test results and code coverage report by the istanbul code coverage engine right in the IDE.

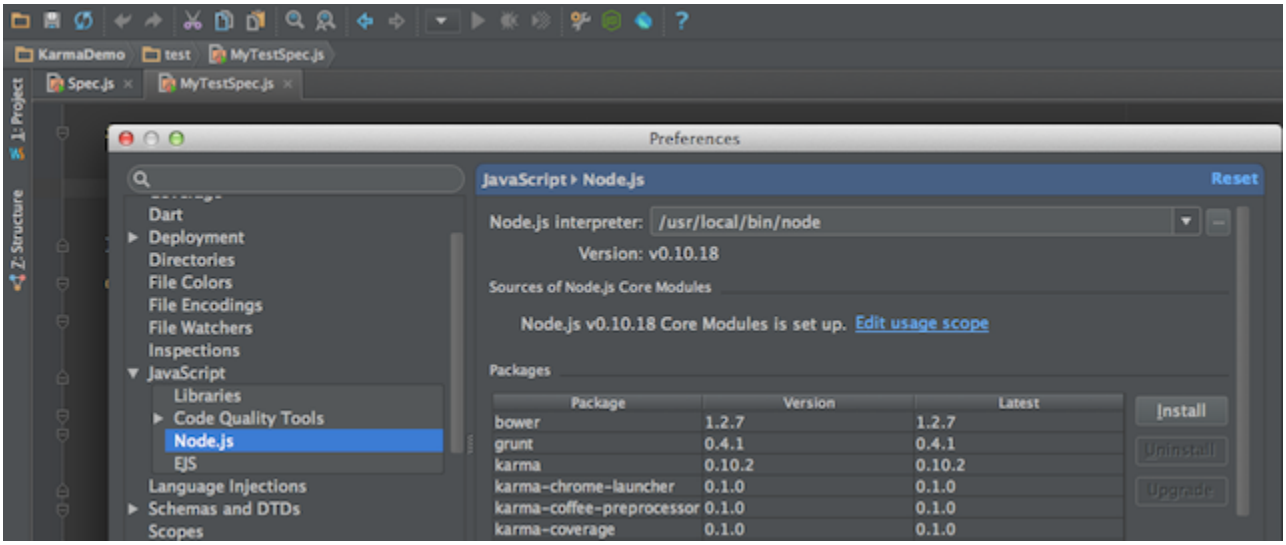
Installing Karma

First, make sure that Node.js is installed on your computer.

Install Karma using npm:

The recommended approach is to install Karma (and all the plugins your project needs) locally in the project's directory.

Use WebStorm' built-in npm (Settings | JavaScript | Node.js and NPM) search and install Karma for your project.



Or install it in the current directory using Terminal:

```
npm install karma
```

Install karma-cli globally:

Use WebStorm' built-in npm and search for karma-cli, add -g option before hitting Install for global installation.
Or use built-in Terminal to install karma-cli with:

```
npm install -g karma-cli
```

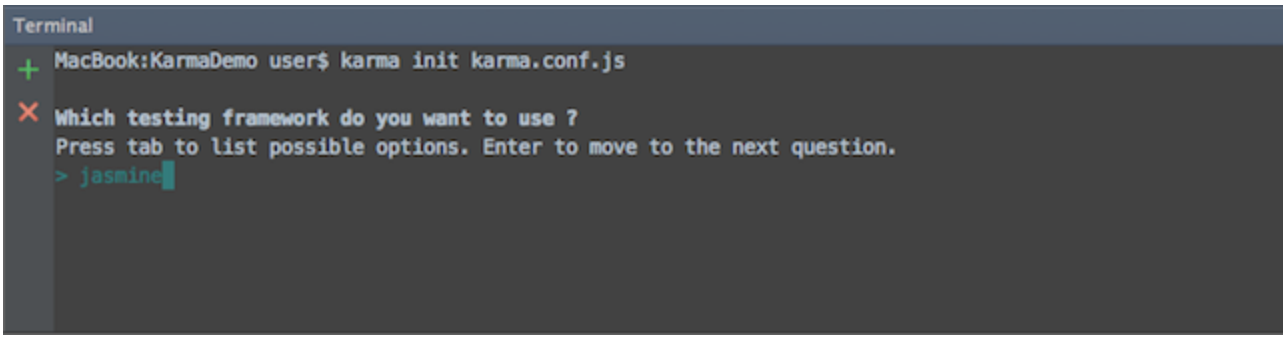
Karma configuration

To run new tests with Karma, you need to have a Karma configuration file (learn more about it).

To generate new configuration file, for example, karma.conf.js in the project directory run in built-in Terminal:

```
karma init karma.conf.js
```

Follow the suggested steps in the configuration dialog.



Note: Most of the framework adapters, reporters, preprocessors and launchers need to be loaded as plugins.

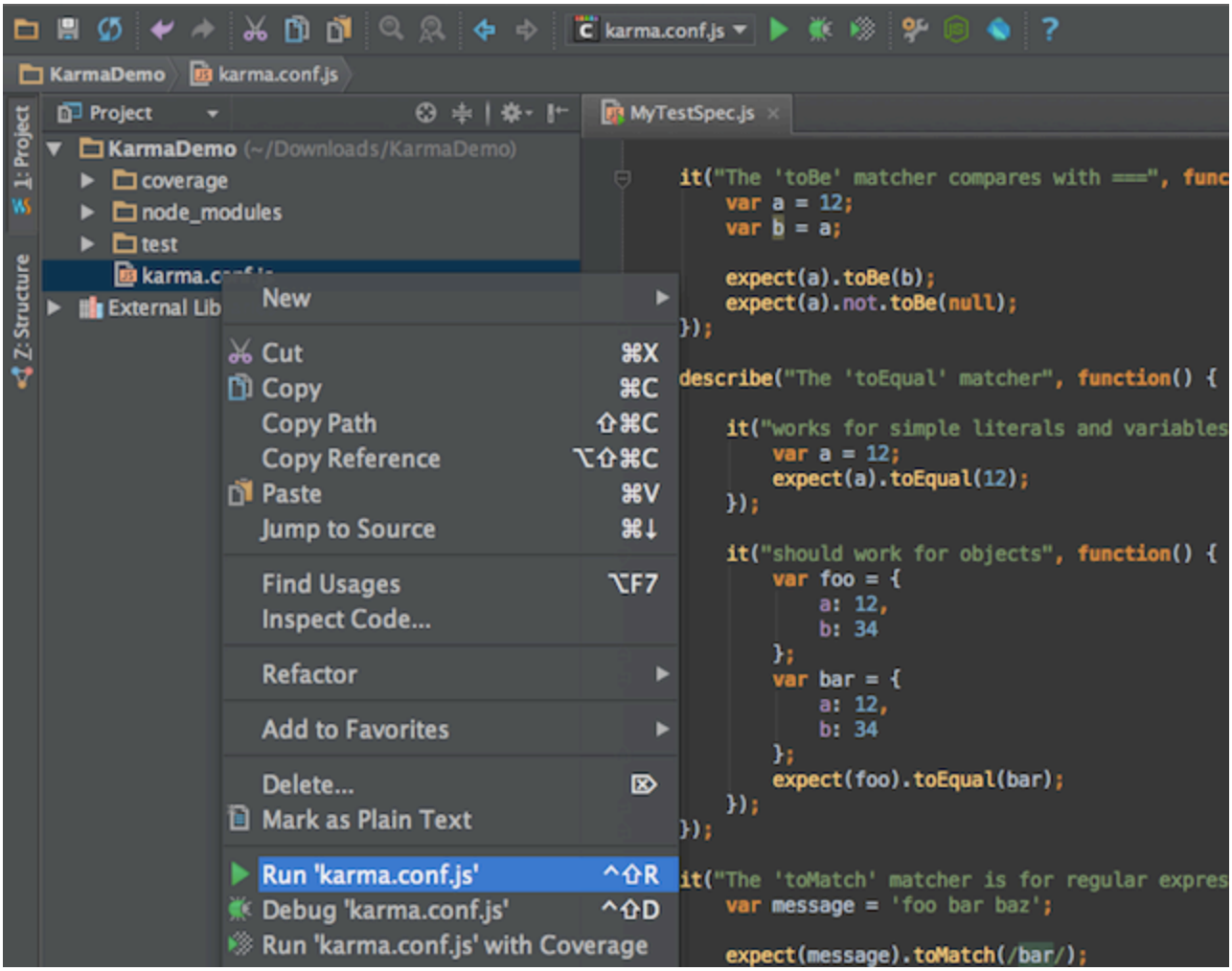
Create a WebStorm Karma Run Configuration:

- Click Create 'karma.conf.js' in the context menu for karma.conf.js file
- Check the paths in the Create Run/Debug Configuration window
- Click OK.

Running tests

Run

A new Karma Configuration will be added to the list of Run/Debug Configurations.
To start running your tests, click Run in the toolbar or in the context menu of Karma configuration file.



Note: WebStorm disables autoWatch in Karma configuration.
You can rerun your tests with the shortcut Alt+Shift+R on Win/Linux or ctrl-cmd-R on Mac.

Click auto-test in the WebStorm Test Run window to enable automatic test rerun: The test will be run 10 seconds after your code was changed, if there are no syntax errors.

Run with coverage

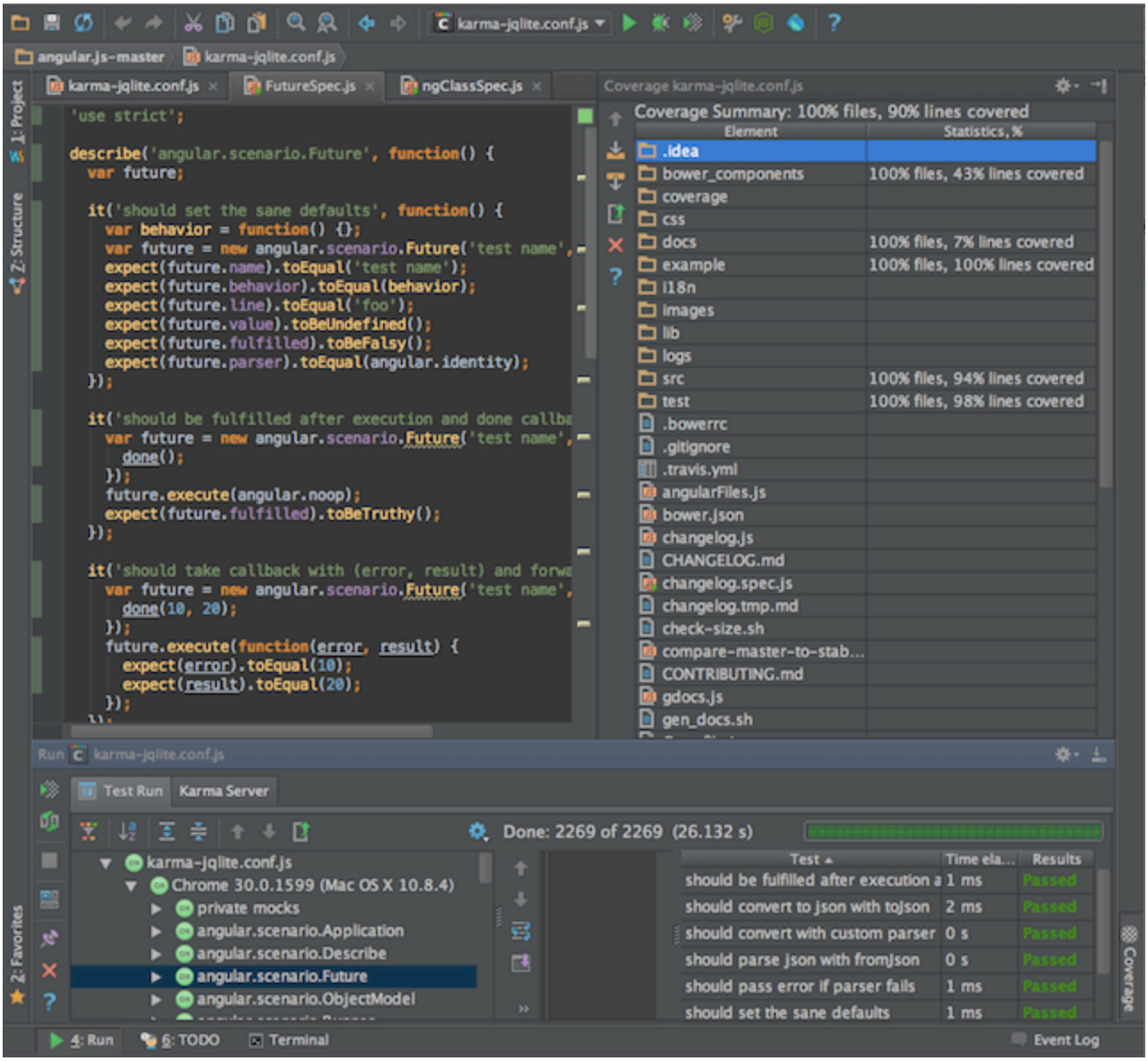
WebStorm Karma integration allows you to run tests with code coverage provided by the istanbul code coverage engine.

To use Run with coverage feature, a karma-coverage module should be installed via npm.

Make the required changes in the Karma configuration file, for example:

```
reporters: ["coverage"],
   preprocessors: {
      "**/*.js": "coverage"
   }
```

You can navigate through test results in the Run window, check statistics for the tests execution, and make HTML reports from it. Code coverage report will be also available.


karma-jqlite.conf.js
angular.js-master
karma-jqlite.conf.js
karma-jqlite.conf.js
FutureSpec.js
ngClassSpec.js
'use strict';
describe('angular.scenario.Future', function() {
var future;
it('should set the sane defaults', function() {
var behavior = function() {};
var future = new angular.scenario.Future('test name',
expect(future.name).toEqual('test name');
expect(future.behavior).toEqual(behavior);
expect(future.line).toEqual('foo');
expect(future.value).toBeUndefined();
expect(future.fulfilled).toBeFalsy();
expect(future.parser).toEqual(angular.identity);
});
it('should be fulfilled after execution and done callba
var future = new angular.scenario.Future('test name',
done();
});
future.execute(angular.noop);
expect(future.fulfilled).toBeTruthy();
});
it('should take callback with (error, result) and forwa
var future = new angular.scenario.Future('test name',
done(10, 20);
});
future.execute(function(error, result) {
expect(error).toEqual(10);
expect(result).toEqual(20);
});
Coverage karma-jqlite.conf.js
Coverage Summary: 100% files, 90% lines covered
Element
Statistics, %
.idea
bower_components
100% files, 43% lines covered
coverage
css
docs
100% files, 7% lines covered
example
100% files, 100% lines covered
i18n
images
lib
logs
src
100% files, 94% lines covered
test
100% files, 98% lines covered
.bowerrc
.gitignore
.travis.yml
angularFiles.js
bower.json
changelog.js
CHANGELOG.md
changelog.spec.js
changelog.tmp.md
check-size.sh
compare-master-to-stab...
CONTRIBUTING.md
gdocs.js
gen_docs.sh
Run
karma-jqlite.conf.js
Test Run
Karma Server
Done: 2269 of 2269 (26.132 s)
karma-jqlite.conf.js
Chrome 30.0.1599 (Mac OS X 10.8.4)
private mocks
angular.scenario.Application
angular.scenario.Describe
angular.scenario.Future
angular.scenario.ObjectModel
Test
Time ela...
Results
should be fulfilled after execution a
1 ms
Passed
should convert to json with toJson
2 ms
Passed
should convert with custom parser
0 s
Passed
should parse json with fromJson
0 s
Passed
should pass error if parser fails
1 ms
Passed
should set the sane defaults
1 ms
Passed
4: Run
6: TODO
Terminal
Event Log
1: Project
Z: Structure
2: Favorites
Coverage