

# How to set up JavaScript Test Coverage

JULY 20, 2019 BY ROBIN WIERUCH - [EDIT THIS POST](#)

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This tutorial is part 2 of 2 in the series.

[Part 1: How to set up Continuous Integration for JavaScript](#)

This tutorial is part 3 of 3 in the series.

[Part 1: How to set up React with Webpack and Babel](#)

[Part 2: How to test React components with Jest](#)

Coveralls is used to show you the test coverage of your JavaScript application. Let's see how it can be used for your JavaScript project which is already on GitHub and connected to your Travis CI due to the previous CI setup tutorial. First, sign up at [Coveralls.io](#) with your GitHub account. Second, synchronize your GitHub repositories and toggle a specific repository to be used for code coverage.

## ADD REPO

To add repositories that are private on GitHub or Bitbucket you will need a Coveralls Pro subscription. Click the 'Add Subscription' button next to the user or organization name to add a private repository.

components

ON

RWIERUCH / *react-components-test-setup*

DETAILS

 GITHUB

OFF

THE-ROAD-TO-LEARN-REACT / *react-controlled-components-examples*

 GITHUB

OFF

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 GITHUB



Afterward, hit the "Details" button to copy your `coveralls_repo_token` to your clipboard. Since you don't want to add this private token directly to your public project, you can add it on your Travis CI dashboard to your repository's environment variables. You will find it via the settings option of your Travis repository.

[rwieruch / react-components-test-setup](#)  build passing

Current Branches Build History Pull Requests

More options   
**Settings**  
 Requests  
 Caches  
 Trigger build

✓ master last changes

~o Commit 762f5d2   
 ⚡ Compare 55dc72b..762f5d2   
 ⚡ Branch master   
 ⚡ Robin Wieruch authored and committed

~o #3 passed

⌚ Ran for 52 sec  
 27 a day ago

Then, create a new environment variable for your project. You can name it `coveralls_repo_token`:

### Environment Variables

Notice that the values are not escaped when your builds are executed. Special characters (for hash) should be escaped accordingly.

The screenshot shows a configuration interface with a search bar at the top containing the text "coveralls\_repo\_token". Below the search bar is a table with two columns: "Name" and "Value". The "Value" column contains a redacted password. To the right of the table are buttons for "OFF", "Display value in build log", and "Add".

Last but not least, modify your project the following way. First, install the coveralls library on the command line to your dev dependencies:

```
npm install --save-dev coveralls
```

Second, add a new script to your `package.json` file to introduce Coveralls to it:

```
"scripts": {
  "start": "webpack serve --config ./webpack.config.js --mode development",
  "test": "jest --config ./jest.config.json",
  "coveralls": "cat ./coverage/lcov.info | node node_modules/.bin/coveralls"
},
```

And third, extend your Travis CI configuration for reporting the coveralls information to your coveralls.io dashboard.



```
language: node_js
```



```
node_js:
  - stable
```

```
install:
  - npm install
```

```
script:
  - npm run test -- --coverage
```

```
after_script:
  - COVERALLS_REPO_TOKEN=$coveralls_repo_token npm run coveralls
```

That's it. By adding, committing and pushing your changes to GitHub now, you can see how a report shows up on your Coveralls.io dashboard.

The screenshot shows the Coveralls.io dashboard for the repository "RWIERUCH/react-components-test-setup". The dashboard displays a coverage badge of 73%, which is highlighted in red. Other metrics shown include "REPO ADDED" (20 MAR 2018), "TOTAL FILES" (1), "# BUILDS" (1), and a "TOKEN" section. At the bottom, there is a link to the repository's page: <https://www.robinwieruch.de/javascript-test-coverage>.

The screenshot shows the Coveralls dashboard. At the top, it says "LAST BUILD ON BRANCH MASTER". Below that, it says "COMMITTED 20 MAR 2018 - 4:31". On the right, it says "FIRST BUILD ON MASTER AT 73.33%" with a "BRANCH: MASTER" dropdown. The main table has columns: BUILD # (4), BUILD TYPE (push), COMMITTED BY (rwieruch, travis-ci), COMMIT MESSAGE (add coveralls), and RUN DETAILS (11 of 15 relevant lines covered (73.33%), 0.8 hits per line).

Perhaps you can see that the coverage isn't too high. Then it's up to you the add tests to increase the percentage for your project.

Last but not least, you can add the fancy Coveralls badge to your GitHub's *README.md* file. You find the badge on the Coveralls dashboard for embedding it as markdown:

# My JavaScript Project  
[! [Coverage Status] (<https://coveralls.io/repos/github/rwieruch/my-javascript-project>) ]



Make sure to change the URL to your repository's URL.

**i**n If you are using Jest as a test runner, you can enforce a certain coverage for your JavaScript project. Also you can include and exclude specific folders/files from your source code to be added/removed from your testing coverage report:

```
module.exports = {
  ...
  coverageThreshold: {
    global: {
      functions: 95,
      lines: 95
    }
  },
  collectCoverageFrom: [
    '<rootDir>/src/**/*.{js,jsx}',
    '!<rootDir>/src/pages/**/*.{js,jsx}'
  ]
};
```

That's everythin in a nutshell about testing coverage in JavaScript projects.

Continue Reading: [How to test React components with Jest](#)

Continue Reading: [How to end-to-end test React components with Cypress](#)

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