# How to measure code coverage for Angular JS unit test

## Test Runner

[Karma](https://karma-runner.github.io/1.0/index.html) is a test runner that recommended by the AngularJS team which aims to bring developers a productive testing environment.

[**Note: The recommended approach is to install Karma (and all the plugins your project needs) locally in the project's directory.**](http://karma-runner.github.io/1.0/intro/installation.html)

The NPM dependencies for Karma are listed below:

|  |  |
| --- | --- |
| Name | Descriptions |
| Karma | Karma NPM package |
| Karma-jasmine | Adapter between Jasmine-Core & Karma |
| Karma-coverage | Measures the code coverage information about the executed JavaScript files |
| Karma-chrome-launcher | Adapter between Chrome browser & Karma |

## Test Framework

[Jasmine](http://jasmine.github.io/2.4/introduction.html) is a behavior-driven development framework for testing JavaScript code. It is recommended in the AngularJS official site and does not depend on any other JavaScript frameworks.

The NPM dependencies for Jasmine are listed below:

|  |  |
| --- | --- |
| Name | Descriptions |
| jasmine-core | Jasmine NPM package |
| @types/jasmine | Typescript type definition for Jasmine |

## Environment Setup

Install NPM dependencies

|  |
| --- |
| {  "name": "angular2-testing",  "version": "1.0.0",  "description": "",  "main": "index.js",  "scripts": {  "start": "tsc && concurrently \"tsc -w\" \"lite-server\" ",  "test": "tsc && concurrently \"tsc -w\" \"karma start karma.conf.js\"",  "test-once": "tsc && karma start karma.conf.js --single-run",  "tsc": "tsc"  },  "devDependencies": {  "@types/jasmine": "^2.5.38",  "concurrently": "^3.1.0",  "jasmine-core": "^2.5.2",  "karma": "^1.3.0",  "karma-chrome-launcher": "^2.0.0",  "karma-coverage": "^1.1.1",  "karma-jasmine": "^1.1.0",  "karma-jasmine-html-reporter": "^0.2.2",  "lite-server": "^2.2.2",  "typescript": "^2.1.4"  },  "dependencies": {  "@angular/common": "^2.3.1",  "@angular/compiler": "^2.3.1",  "@angular/core": "^2.3.1",  "@angular/platform-browser": "^2.3.1",  "@angular/platform-browser-dynamic": "^2.3.1",  "core-js": "^2.4.1",  "reflect-metadata": "^0.1.8",  "rxjs": "^5.0.1",  "systemjs": "^0.19.41",  "zone.js": "^0.7.2"  }  } |