

7 Continuous Integration Tools for PHP Laravel Developers

- these tools increase code quality, reduce development time, easily reveal errors and will generally make your life easier.
- the game plan is to set up various tests for our code, without having to provision or maintain any servers. And we'll be able to catch errors early and fix them before they grow.

Code analysis tests:

- Code analysis consists of scanning the source for certain structures that may point to deeper problems, such as design flaws and bad coding practices, usually called code smells. While others check for style: indentation rules, name conventions, etc.

There are several types of code analysis tests, including:

Static Code Analysis: This type of testing involves analyzing the source code of the application without executing it.

Dynamic Code Analysis: This type of testing involves analyzing the application's code while it is running

Code Review: This type of testing involves having other developers review the code to identify potential issues or areas for improvement.

Code Coverage Analysis: This type of testing involves analyzing the amount of code that has been tested

PHP Mess Detector:

- PHP Mess Detector is a code analysis tool for PHP applications that helps identify potential issues, coding standards violations, and other problems in the source code.

phpmd src text cleancode, codesize, controversial, design, naming, unusedcode

cleancode: enforce clean code base rules.

codesize: complexity rules, excessively long classes, etc.

controversial: camelcase rules, globals, etc.

design: forbid eval, goto, exit. Also coupling and depth rules.

naming: long and short identifier names, method name rules.

unusedcode: dead code and unused variables rules.

PHP Code Sniffer:

- PHP Code Sniffer is a popular code analysis tool for PHP applications that helps enforce coding standards and identify coding issues in the source code
- PHP Code Sniffer can be integrated into various development environments and continuous integration tools

phpcs FILE_OR_DIR --standard=STANDARD_NAME

phpcs is the command to run PHP Code Sniffer.

FILE_OR_DIR is the path to the PHP file or directory that you want to analyze. You can specify a single file, multiple files separated by spaces, or a directory.

--standard=STANDARD_NAME is an optional parameter that specifies the coding standard to use.

PHP Copy Paste Detector:

- PHP Copy Paste Detector (PHPCPD) is a code analysis tool for PHP applications that helps identify duplicated code across a codebase
- PHPCPD uses a variety of algorithms to compare code, including text-based and token-based comparison

- PHPCPD generates a report It includes information such as the file name, line numbers, and percentage of code that has been duplicated.

`phpcpd FILE_OR_DIR`

Unit testing: PHPUnit:

- By using PHPUnit to write automated tests, developers can ensure that their code works as intended and is less likely to contain bugs or errors. This can lead to more efficient development, easier maintenance, and higher quality code.

`Phpunit`

Browser tests: Laravel Dusk:

- In addition to basic browser testing, Dusk also provides advanced features such as parallel testing, screenshot comparisons, and the ability to interact with JavaScript applications

`php artisan dusk`

Security tests: Sensiolabs:

- The SensioLabs Security Checker is a free online tool that scans a PHP project's composer.lock file to detect vulnerabilities and security issues in the dependencies used by the project
- SensioLabs provides vulnerability management, penetration testing, code reviews, and security consulting,

`php security-checker security:check ../composer.lock`