

PHPUnit 10

Sebastian Bergmann





- **Sebastian** since 1978
- **Computers** since 1990
- **PHP** since 1998
- **Open Source** since 1998
- **PHPUnit** since 2000
- **thePHP.cc** since 2009



PHPUnit 10

Sebastian Bergmann


<https://thephp.cc/presentations/phpunit-10-why-it-is-delayed-and-what-it-brings>

TL;DR

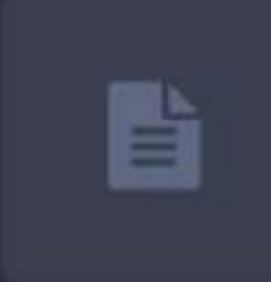
- 2 years late
- COVID-19
- PHP 8
- Life Support for PHPUnit 8
- After cleaning up one thing, you can clean up another thing, and then another thing ...

PHPUnit 10.0


Released on February 3, 2023

 **PHPUnit** @phpunit@phpc.social Feb 3

#PHPUnit 10 has been released: [phpunit.de/announcements/phpun...](https://phpunit.de/announcements/phpunit-10)

 **Release Announcement for Version 10 of PHPUnit – The PHP Testing Framework**
phpunit.de



1+ ↻ ★ 📌 ⋮

 **Marco "Ocranius" Pivetta** @ocranius@mastodon.social

@phpunit Nice! Starting to hunt down all the upgrades :D

Feb 03, 2023, 10:10 · 🌐 · ↻ 0 · ★ 0

↻ ↻ ★ 📌 ⋮

 **Sebastian Bergmann**  @sebastian@phpc.social Feb 3

@ocranius Please read the paragraph under "OMGWTFBBQ? I must upgrade to PHPUnit 10 immediately! No, you do not." in the release announcement before you do ;-)

1+ ↻ ★ 📌 ⋮

<https://phpc.social/@phpunit/109799811325768054>



Filippo Tassarotto

@slam@phpc.social

ParaTest v7 has been released with PHPUnit 10 support:
[github.com/paratestphp/parates...](https://github.com/paratestphp/paratest)

Thank you @sebastian and @theseer for you cooperation



Release v7.0.0 · paratestphp/paratest


Release for PHPUnit 10 BC Breaks \ParaTest\Runners\PHPUnit\RunnerInterface...

GitHub

Feb 04, 2023, 15:03 · 🌐 · ↻ 3 · ★ 0

<https://phpc.social/@slam/109806841382098662>



Sebastian Bergmann 

@sebastian@phpc.social

At least for @slam, #PHPUnit 10.0.7 is 2-3 times faster compared to PHPUnit 10.0.6.

And noticeably faster compared to PHPUnit 9.6.


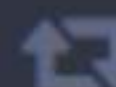

phpc.social/@phpunit/109829785...



PHPUnit (@phpunit@phpc.social)

#PHPUnit 10.0.7 has been released: <https://github.com/sebastianbergmann/phpunit/blob/10.0.7/ChangeLog-10.0.md#1007---2023-02-08>

PHP Community on Mastodon

Feb 08, 2023, 17:07 ·  ·  1 ·  0

<https://phpc.social/@sebastian/109829978027742561>


```
$ git for-each-ref --sort=creatordate --format '%(refname) %(creatordate)' refs/tags | grep '10\.0' | cut -c 11-  
10.0.0 Fri Feb 3 08:17:01 2023 +0100  
10.0.1 Fri Feb 3 14:36:19 2023 +0100  
10.0.2 Sat Feb 4 08:03:08 2023 +0100  
10.0.3 Sat Feb 4 14:39:11 2023 +0100  
10.0.4 Sun Feb 5 17:23:44 2023 +0100  
10.0.5 Tue Feb 7 07:06:05 2023 +0100  
10.0.6 Wed Feb 8 08:00:58 2023 +0100  
10.0.7 Wed Feb 8 16:16:36 2023 +0100  
10.0.8 Sat Feb 18 17:32:32 2023 +0100  
10.0.9 Sun Feb 19 08:11:57 2023 +0100  
10.0.10 Mon Feb 20 12:50:48 2023 +0100  
10.0.11 Mon Feb 20 17:39:39 2023 +0100  
10.0.12 Sat Feb 25 07:05:18 2023 +0100  
10.0.13 Mon Feb 27 14:08:03 2023 +0100  
10.0.14 Wed Mar 1 06:37:55 2023 +0100  
10.0.15 Thu Mar 9 07:43:23 2023 +0100  
10.0.16 Mon Mar 13 10:02:44 2023 +0100  
10.0.17 Mon Mar 20 15:42:38 2023 +0100  
10.0.18 Wed Mar 22 07:15:36 2023 +0100  
10.0.19 Mon Mar 27 13:46:38 2023 +0200
```


Metadata

Support for PHP 8 Attributes

Annotations

(Metadata for code units in comments)

```
1 namespace SebastianBergmann\Raytracer;
2
3 use PHPUnit\Framework\TestCase;
4
5 /**
6  * @covers \SebastianBergmann\Raytracer\Color
7  * @small
8  */
9 final class ColorTest extends TestCase
10 {
11     // ...
12 }
```


Attributes

(Metadata for code units in code)

```
1 namespace SebastianBergmann\Raytracer;
2
3 use PHPUnit\Framework\Attributes\CoversClass;
4 use PHPUnit\Framework\Attributes\Small;
5 use PHPUnit\Framework\TestCase;
6
7 #[CoversClass(Color::class)]
8 #[Small]
9 final class ColorTest extends TestCase
10 {
11     // ...
12 }
```

<https://docs.phpunit.de/en/10.3/attributes.html>

<https://docs.phpunit.de/>

Almost a complete documentation rewrite

Error Handling

„[Some systems] are configured to treat all deprecations as errors. These systems are Doing It Wrong(tm). Period. They are inventing problems that do not exist, and the fault lies not with the PHP team but with the people who configure their systems wrong.”

<https://peakd.com/hive-168588/@crell/upgrading-php-upgrades>

Changes in PHPUnit 8.5

All notable changes of the PHPUnit 8.5 release series are documented in this file using the [Keep a CHANGELOG](#) principles.

8.5.21 - 2021-09-25

Changed

- PHPUnit no longer converts PHP deprecations to exceptions by default (configure `convertDeprecationsToExceptions="true"` to enable this)
- The PHPUnit XML configuration file generator now configures `convertDeprecationsToExceptions="true"`

Fixed

- [#4772](#): TestDox HTML report not displayed correctly when browser has custom colour settings

<https://github.com/sebastianbergmann/phpunit/blob/8.5.21/ChangeLog-8.5.md>

Changes in PHPUnit 9.5

All notable changes of the PHPUnit 9.5 release series are documented in this file using the [Keep a CHANGELOG](#) principles.

9.5.10 - 2021-09-25

Changed

- PHPUnit no longer converts PHP deprecations to exceptions by default (configure `convertDeprecationsToExceptions="true"` to enable this)
- The PHPUnit XML configuration file generator now configures `convertDeprecationsToExceptions="true"`

Fixed

- [#4772](#): TestDox HTML report not displayed correctly when browser has custom colour settings

<https://github.com/sebastianbergmann/phpunit/blob/9.5.10/ChangeLog-9.5.md>

„PHPUnit used to also treat deprecations as test fails by default. It no longer does. It never should have, but it doesn't anymore, so that's no longer an excuse.”

<https://peakd.com/hive-168588/@crell/upgrading-php-upgrades>

PHPUnit 9

Outcome

Passed

Errored

Failed

Warning

Considered Risky

Incomplete

Skipped

PHPUnit 10

Outcome	Issues
Passed	Triggered PHPUnit Error
Errored	Triggered PHPUnit Warning
Failed	Triggered PHPUnit Deprecation
Incomplete	Triggered Error (E_USER_ERROR)
Skipped	Triggered Warning (E_USER_WARNING)
	Triggered Deprecation (E_USER_DEPRECATED)
	Triggered Notice (E_USER_NOTICE)
	Triggered PHP Warning (E_WARNING)
	Triggered PHP Deprecation (E_DEPRECATED)
	Triggered PHP Notice (E_STRICT, E_NOTICE)
	Considered Risky

Error Handling

As of PHPUnit 10.0, E(_USER)* are no longer treated as errors.


```
$ tree
```

```
.  
├── phpunit.xml  
├── src  
│   └── SourceClass.php  
├── tests  
│   └── SourceClassTest.php  
├── tools  
│   └── phpunit  
└── vendor  
    ├── autoload.php  
    └── VendorClass.php
```

```
5 directories, 6 files
```



```
4 use PHPUnit\Framework\TestCase;
5
6 final class SourceClassTest extends TestCase
7 {
8     public function testSomething(): void
9     {
10         (new SourceClass)->doSomething();
11         (new SourceClass)->doSomething();
12         (new SourceClass)->doSomethingElse();
13
14         $this->assertTrue(true);
15     }
16
17     public function testSomethingElse(): void
18     {
19         (new SourceClass)->doSomething();
20     }
21 }
```

tests/SourceClassTest.php


```
5
6 final class SourceClass
7 {
8     public function doSomething(): void
9     {
10         trigger_error('deprecation', E_USER_DEPRECATED);
11         trigger_error('notice', E_USER_NOTICE);
12         trigger_error('warning', E_USER_WARNING);
13
14         (new VendorClass)->doSomething();
15     }
16
17     public function doSomethingElse(): void
18     {
19         trigger_error('deprecation', E_USER_DEPRECATED);
```

src/SourceClass.php

```
1 <?php declare(strict_types=1);
2 namespace vendor;
3
4 final class VendorClass
5 {
6     public function doSomething(): void
7     {
8         trigger_error('deprecation', E_USER_DEPRECATED);
9         trigger_error('notice', E_USER_NOTICE);
10        trigger_error('warning', E_USER_WARNING);
11    }
12 }
```

vendor/VendorClass.php


```
$ ./tools/phpunit
```

```
PHPUnit 9.6.10 by Sebastian Bergmann and contributors.
```

```
Runtime:          PHP 8.2.8
```

```
Configuration:   /home/sb/example/phpunit.xml
```

```
EE
```

```
1 / 1 (100%)
```

```
Time: 00:00.002, Memory: 12.41 MB
```

```
There were 2 errors:
```

```
1) example\SourceClassTest::testSomething  
deprecation
```

```
/home/sb/example/src/SourceClass.php:10  
/home/sb/example/tests/SourceClassTest.php:10
```

```
2) example\SourceClassTest::testSomethingElse  
deprecation
```

```
/home/sb/example/src/SourceClass.php:10  
/home/sb/example/tests/SourceClassTest.php:19
```

```
ERRORS!
```

```
Tests: 2, Assertions: 0, Errors: 2.
```

```
$ ./tools/phpunit
```

```
PHPUnit 10.0.19 by Sebastian Bergmann and contributors.
```

```
Runtime:          PHP 8.2.8
```

```
Configuration: /home/sb/example/phpunit.xml
```

```
WW
```

```
1 / 1 (100%)
```

```
Time: 00:00.002, Memory: 14.39 MB
```

```
OK, but some tests have issues!
```

```
Tests: 2, Assertions: 2, Warnings: 2, Deprecations: 2, Notices: 2.
```



```
$ ./tools/phpunit --display-deprecations
PHPUnit 10.0.19 by Sebastian Bergmann and contributors.
```

```
Runtime:          PHP 8.2.8
Configuration:   /home/sb/example/phpunit.xml
```

```
WW 1 / 1 (100%)
```

```
Time: 00:00.002, Memory: 14.39 MB
```

```
There were 2 deprecations:
```

- 1) example\SourceClassTest::testSomething
 - * deprecation
 /home/sb/example/src/SourceClass.php:10
 - * deprecation
 /home/sb/example/vendor/VendorClass.php:8
 - * deprecation
 /home/sb/example/src/SourceClass.php:10
 - * deprecation
 /home/sb/example/vendor/VendorClass.php:8
 - * deprecation
 /home/sb/example/src/SourceClass.php:19

There were 2 deprecations:

1) example\SourceClassTest::testSomething

* deprecation

/home/sb/example/src/SourceClass.php:10

* deprecation

/home/sb/example/vendor/VendorClass.php:8

* deprecation

/home/sb/example/src/SourceClass.php:10

* deprecation

/home/sb/example/vendor/VendorClass.php:8

* deprecation

/home/sb/example/src/SourceClass.php:19

/home/sb/example/tests/SourceClassTest.php:8

2) example\SourceClassTest::testSomethingElse

* deprecation

/home/sb/example/src/SourceClass.php:10

* deprecation

/home/sb/example/vendor/VendorClass.php:8

* deprecation


```
2) example\SourceClassTest::testSomethingElse
* deprecation
  /home/sb/example/src/SourceClass.php:10

* deprecation
  /home/sb/example/vendor/VendorClass.php:8

* deprecation
  /home/sb/example/src/SourceClass.php:10

* deprecation
  /home/sb/example/vendor/VendorClass.php:8

* deprecation
  /home/sb/example/src/SourceClass.php:19

/home/sb/example/tests/SourceClassTest.php:17
```

OK, but some tests have issues!

Tests: 2, Assertions: 2, Warnings: 2, Deprecations: 2, Notices: 2.

```
$ ./tools/phpunit --display-notices
PHPUnit 10.0.19 by Sebastian Bergmann and contributors.
```

```
Runtime:          PHP 8.2.8
Configuration:   /home/sb/example/phpunit.xml
```

```
WW 1 / 1 (100%)
```

```
Time: 00:00.002, Memory: 14.39 MB
```

```
There were 2 notices:
```

```
1) example\SourceClassTest::testSomething
* notice
  /home/sb/example/src/SourceClass.php:11
```

```
·
·
·
* notice
  /home/sb/example/vendor/VendorClass.php:9
```

```
/home/sb/example/tests/SourceClassTest.php:8
```

```
·
·
·
```



```
$ ./tools/phpunit --display-warnings
PHPUnit 10.0.19 by Sebastian Bergmann and contributors.
```

```
Runtime:          PHP 8.2.8
Configuration:   /home/sb/example/phpunit.xml
```

```
WW 1 / 1 (100%)
```

```
Time: 00:00.002, Memory: 14.39 MB
```

```
There were 2 warnings:
```

```
1) example\SourceClassTest::testSomething
* warning
  /home/sb/example/src/SourceClass.php:12

* warning
  /home/sb/example/vendor/VendorClass.php:10

* warning
  /home/sb/example/src/SourceClass.php:12

* warning
  /home/sb/example/vendor/VendorClass.php:10

/home/sb/example/tests/SourceClassTest.php:8
```

PHPUnit 10.1

Released on April 14, 2023

Error Handling

As of **PHPUnit 10.1**, the reporting of `E (_USER) _*` can be restricted to "your code".

```
3     xsi:noNamespaceSchemaLocation="https://schema.phpunit.de/10.1/phpunit.xsd"
4     bootstrap="vendor/autoload.php"
5     colors="true">
6     <testsuites>
7         <testsuite name="default">
8             <directory>tests</directory>
9         </testsuite>
10    </testsuites>
11
12    <source restrictDeprecations="true">
13        <include>
14            <directory>src</directory>
15        </include>
16    </source>
17 </phpunit>
```

phpunit.xml


```
$ ./tools/phpunit --display-deprecations
PHPUnit 10.1.3 by Sebastian Bergmann and contributors.
```

```
Runtime:      PHP 8.2.8
Configuration: /home/sb/example/phpunit.xml
```

```
WW 1 / 1 (100%)
```

```
Time: 00:00.002, Memory: 14.39 MB
```

```
2 tests triggered 6 deprecations:
```

```
1) example\SourceClassTest::testSomething
* deprecation
  /home/sb/example/src/SourceClass.php:10
```

```
* deprecation
  /home/sb/example/src/SourceClass.php:10
```

```
* deprecation
  /home/sb/example/src/SourceClass.php:19
```

```
/home/sb/example/tests/SourceClassTest.php:8
```

```
2) example\SourceClassTest::testSomethingElse
* deprecation
  /home/sb/example/src/SourceClass.php:10
```



```
1) example\SourceClassTest::testSomething
* deprecation
  /home/sb/example/src/SourceClass.php:10

* deprecation
  /home/sb/example/src/SourceClass.php:10

* deprecation
  /home/sb/example/src/SourceClass.php:19

/home/sb/example/tests/SourceClassTest.php:8

2) example\SourceClassTest::testSomethingElse
* deprecation
  /home/sb/example/src/SourceClass.php:10

* deprecation
  /home/sb/example/src/SourceClass.php:10

* deprecation
  /home/sb/example/src/SourceClass.php:19

/home/sb/example/tests/SourceClassTest.php:17
```

OK, but there are issues!

Tests: 2, Assertions: 2, Warnings: 2, Deprecations: 2, Notices: 2.


```
3     xsi:noNamespaceSchemaLocation="https://schema.phpunit.de/10.1/phpunit.xsd"
4     bootstrap="vendor/autoload.php"
5     colors="true">
6     <testsuites>
7         <testsuite name="default">
8             <directory>tests</directory>
9         </testsuite>
10    </testsuites>
11
12    <source restrictNotices="true">
13        <include>
14            <directory>src</directory>
15        </include>
16    </source>
17 </phpunit>
```

phpunit.xml

```
$ ./tools/phpunit --display-notices
PHPUnit 10.1.3 by Sebastian Bergmann and contributors.
```

```
Runtime:      PHP 8.2.8
Configuration: /home/sb/example/phpunit.xml
```

```
WW                                                    1 / 1 (100%)
```

```
Time: 00:00.002, Memory: 14.39 MB
```

```
2 tests triggered 4 notices:
```

```
1) example\SourceClassTest::testSomething
* notice
  /home/sb/example/src/SourceClass.php:11
```

```
* notice
  /home/sb/example/src/SourceClass.php:11
```

```
/home/sb/example/tests/SourceClassTest.php:8
```

```
.
.
.
```



```
3     xsi:noNamespaceSchemaLocation="https://schema.phpunit.de/10.1/phpunit.xsd"
4     bootstrap="vendor/autoload.php"
5     colors="true">
6     <testsuites>
7         <testsuite name="default">
8             <directory>tests</directory>
9         </testsuite>
10    </testsuites>
11
12    <source restrictWarnings="true">
13        <include>
14            <directory>src</directory>
15        </include>
16    </source>
17 </phpunit>
```

phpunit.xml

```
$ ./tools/phpunit --display-warnings
PHPUnit 10.1.3 by Sebastian Bergmann and contributors.
```

```
Runtime:      PHP 8.2.8
Configuration: /home/sb/example/phpunit.xml
```

```
WW 1 / 1 (100%)
```

```
Time: 00:00.002, Memory: 14.39 MB
```

```
2 tests triggered 4 warnings:
```

```
1) example\SourceClassTest::testSomething
* warning
  /home/sb/example/src/SourceClass.php:12
```

```
* warning
  /home/sb/example/src/SourceClass.php:12
```

```
/home/sb/example/tests/SourceClassTest.php:8
```

```
.
.
.
```


PHPUnit 10.2

Released on June 2, 2023

Error Handling

As of PHPUnit 10.2, the suppression of E (_USER) _* can be ignored.


```
1 <?php declare(strict_types=1);
2 namespace example;
3
4 use vendor\VendorClass;
5
6 final class SourceClass
7 {
8     public function doSomething(): void
9     {
10         @trigger_error('deprecation', E_USER_DEPRECATED);
11     }
12 }
```

src/SourceClass.php

```
$ ./tools/phpunit
```

```
PHPUnit 10.2.6 by Sebastian Bergmann and contributors.
```

```
Runtime: PHP 8.2.8
```

```
Configuration: /home/sb/example/phpunit.xml
```

```
. 1 / 1 (100%)
```

```
Time: 00:00.002, Memory: 14.39 MB
```

```
OK (1 test, 1 assertion)
```



```
3     xsi:noNamespaceSchemaLocation="https://schema.phpunit.de/10.2/phpunit.xsd"
4     bootstrap="vendor/autoload.php"
5     colors="true">
6 <testsuites>
7     <testsuite name="default">
8         <directory>tests</directory>
9     </testsuite>
10 </testsuites>
11
12 <source ignoreSuppressionOfDeprecations="true">
13     <include>
14         <directory>src</directory>
15     </include>
16 </source>
17 </phpunit>
```

phpunit.xml

```
$ ./tools/phpunit --display-deprecations
PHPUnit 10.2.6 by Sebastian Bergmann and contributors.
```

```
Runtime:      PHP 8.2.8
Configuration: /home/sb/example/phpunit.xml
```

```
D 1 / 1 (100%)
```

```
Time: 00:00.002, Memory: 14.39 MB
```

```
1 test triggered 1 deprecation:
```

```
1) example\SourceClassTest::testSomething
deprecation
/home/sb/example/src/SourceClass.php:8
```

```
/home/sb/example/tests/SourceClassTest.php:8
```

```
OK, but there are issues!
```

```
Tests: 1, Assertions: 1, Deprecations: 1.
```


PHPUnit 10.3

Released on August 4, 2023

Error Handling

As of **PHPUnit 10.3**, errors (`E_USER_ERROR`), deprecations (`E_DEPRECATED`, `E_USER_DEPRECATED`), notices (`E_STRICT`, `E_NOTICE`, `E_USER_NOTICE`), and warnings (`E_WARNING`, `E_USER_WARNINGS`) are now displayed grouped by issue


```
$ ./tools/phpunit --display-deprecations
PHPUnit 10.3.0 by Sebastian Bergmann and contributors.
```

```
Runtime:      PHP 8.2.8
Configuration: /home/sb/example/phpunit.xml
```

```
WW                                                    1 / 1 (100%)
```

```
Time: 00:00.002, Memory: 14.39 MB
```

```
2 tests triggered 2 deprecations:
```

```
1) /home/sb/example/src/SourceClass.php:10
deprecation
```

```
Triggered by:
```

- * example\SourceClassTest::testSomething (2 times)
 /home/sb/example/tests/SourceClassTest.php:8
- * example\SourceClassTest::testSomethingElse (2 times)
 /home/sb/example/tests/SourceClassTest.php:17

```
2) /home/sb/example/src/SourceClass.php:19
deprecation
```

```
Triggered by:
```


2 tests triggered 2 deprecations:

1) /home/sb/example/src/SourceClass.php:10
deprecation

Triggered by:

- * example\SourceClassTest::testSomething (2 times)
/home/sb/example/tests/SourceClassTest.php:8
- * example\SourceClassTest::testSomethingElse (2 times)
/home/sb/example/tests/SourceClassTest.php:17

2) /home/sb/example/src/SourceClass.php:19
deprecation

Triggered by:

- * example\SourceClassTest::testSomething
/home/sb/example/tests/SourceClassTest.php:8
- * example\SourceClassTest::testSomethingElse
/home/sb/example/tests/SourceClassTest.php:17

OK, but there were issues!

Tests: 2, Assertions: 2, Deprecations: 2, Notices: 1.

Error Handling

As of PHPUnit 10.3, the `#[WithoutErrorHandler]` attribute can be used to disable PHPUnit's error handler for a test.

Garbage Collection

As of **PHPUnit 10.3**, you can control when PHP's garbage collector is triggered.

PHPUnit 10.4

Will be released on October 6, 2023

<https://github.com/sebastianbergmann/phpunit/milestone/57>

PHPUnit 10.5

Will be released on December 1, 2023

<https://github.com/sebastianbergmann/phpunit/milestone/58>

PHPUnit 11

Will be released on February 2, 2024

<https://github.com/sebastianbergmann/phpunit/milestone/46>



<https://thephp.cc>



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