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HOSTING

PHP 5.6 vs HHVM 3.7 vs PHP 7 Benchmarks

Find out the results of our PHP 5.6 vs HHVM 3.7 vs PHP 7 Benchmarks tests and which gives better performance.

Written by Jonathan Griffin
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SiteGround has recently made PHP 7 with OpCache available on all their shared hosting servers. As a result of PHP 7 coming into the mainstream (albeit in Beta), we thought it would be useful to take a look at some benchmarks carried out by Zend. Initial reports suggest PHP 7 is \ will be much faster than HHVM.

Editor's Note: As of 4th December 2015 PHP 7 stable release was launched.

Before you get all excited, though, it must be stressed that PHP 7 is still in beta. As a result, you may find some compatibility issues so you should test it thoroughly before using this on a production (live) website.

HHVM (HipHop Virtual Machine) on the other hand is more stable \ compatible with existing PHP functions. It was initially developed by Facebook to increase PHP performance by using a just-in-time compilation approach.

The logo to the right is a concept by **Vincent Pontier**.

PHP 5.6 vs HHVM 3.7 vs PHP 7 Performance Benchmarks

The people at Zend have carried out some benchmark tests on some popular apps, such as WordPress,

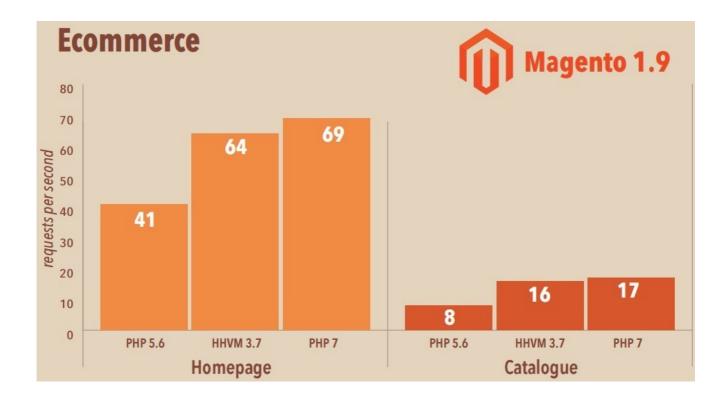
Magento, and Drupal, to compare PHP

5.6, PHP 7 and HHVM 3.7. The results are impressive:



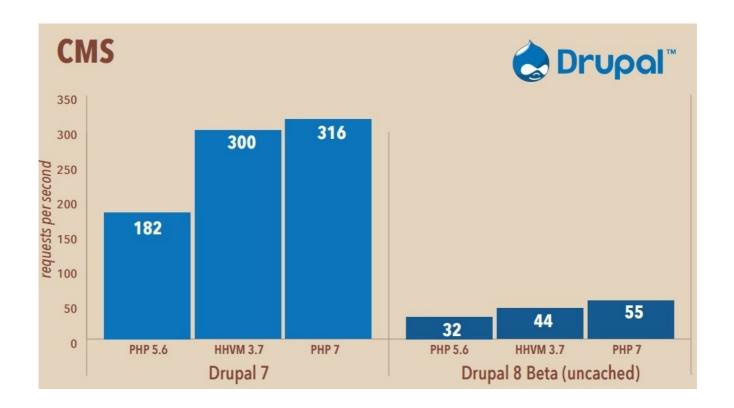
Magento PHP 5.6 vs HHVM 3.7 vs PHP 7

You can see from the chart below that you can make up to 3 times as many Magento catalog server requests on the same hardware, and interestingly PHP 7 uses 30 percent less memory as well.



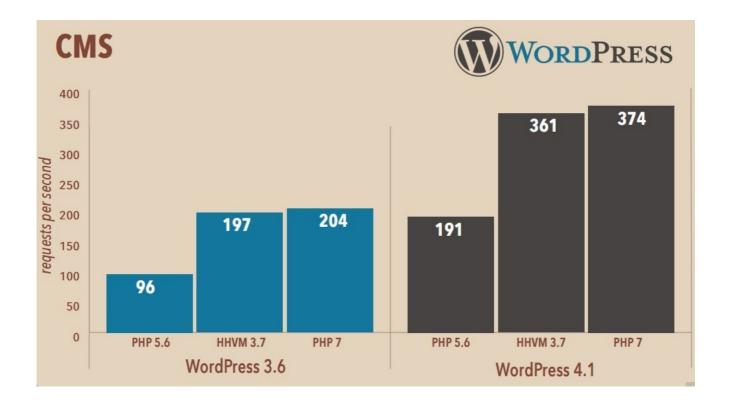
Drupal PHP 5.6 vs HHVM 3.7 vs PHP 7

The figures below show the comparison for Drupal using both caching, and no caching. For uncached pages, Drupal 8 runs a massive 72 percent faster with PHP 7 than with PHP 5.6. It also runs significantly faster than HVVM.



WordPress PHP 5.6 vs HHVM 3.7 vs PHP 7

The results indicate that there is not much difference between HHVM and PHP 3.7. However, one interesting fact is that PHP 7 requires just 25 percent of the server executions to do the same job as PHP 5.6. This will mean that far fewer servers will be needed to serve the same amount of users.

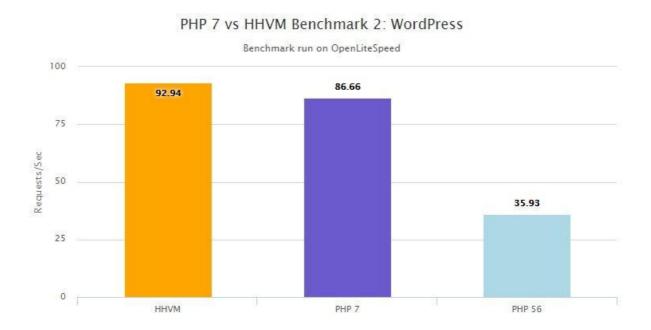


Caveats to these Tests

The battle between PHP 7 and HHVM has only just begun. These tests use HHVM 3.7, and there are reports that the latest dev version (HHVM 3.8) is 13.9 percent faster than HHVM 3.7.

A comparison for WordPress **made by LiteSpeed** indicated that the new HHVM 3.8 is slightly faster than PHP 7, although they admit that PHP 7 is 140 percent faster for a simple "hello world" PHP page.

Here are their results when running on OpenLiteSpeed:



Also, **Kazanir carried out some benchmarks for Drupal** with HHVM 3.7.1 and these also showed HHVM as superior. Here are his results:

Concurrency: 1	Drupal 7, No Cache	Drupal 8, No Cache	Drupal 8, Page Cache
PHP 5.6	18.881431767338 ms	59.322388059701 ms	4.3355761143817 ms
PHP 7 Nightly	9.6919250538884 ms	29.00537109375 ms	2.4721870477577 ms
HHVM 3.7.1	9.8024794772995 ms	33.148272017838 ms	2.7152219977343 ms
HHVM 3.7.1 w/ Repo.Auth	9.352187149495 ms	24.877097315436 ms	1.9751959189708 ms
Concurrency: 5	Drupal 7, No Cache	Drupal 8, No Cache	Drupal 8, Page Cache
PHP 5.6	38.900183390097 ms	120.97404703974 ms	9.5226556343559 ms
PHP 7 Nightly	19.206674053313 ms	59.194753577106 ms	5.1739456043208 ms
HHVM 3.7.1	18.939017359553 ms	63.98563464837 ms	5.7813411673458 ms
HHVM 3.7.1 w/ Repo.Auth	17.91012121212 ms	47.262248295544 ms	3.6359491754163 ms
Concurrency: 20	Drupal 7, No Cache	Drupal 8, No Cache	Drupal 8, Page Cache
PHP 5.6	163.54299384826 ms	496.97964270877 ms	37.044550591612 ms
PHP 7 Nightly	74.770701435466 ms	234.28212674122 ms	19.385923792941 ms
HHVM 3.7.1	73.781373517787 ms	262.5686704695 ms	21.350067339409 ms
HHVM 3.7.1 w/ Repo.Auth	69.725548552755 ms	186.66401497426 ms	10.07130574152 ms

As you can see, the benchmark results are not 100 percent clear cut, and will depend on the server configuration, application and version number of HHVM to see which is better.

Either way, it is likely PHP 7 will be better supported in the shared hosting environment longer term with HHVM relegated to Cloud or Dedicated solutions. The fact that significant performance improvements are being made with both solutions is very positive, and of course, a little competition is extremely healthy!

Where can you try out HHVM or PHP 7?

Now we have wet your appetite for some increased website performance; you might want to try either HVVM or PHP 7 out. HHVM is the more stable solution right now, as PHP 7 is still in Beta and some PHP functions have **been depreciated**.

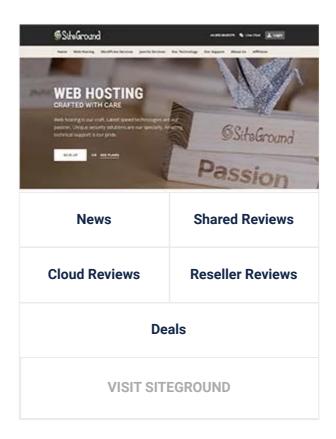
For HVVM, we recommend the **SiteGround Cloud**, and for PHP 7 we recommend **SiteGround Shared Hosting**. HVVM 3.7 (as of the date of this post) is only available with their Cloud and at present PHP 7 only available on their Shared hosting. **You can currently get 60 percent off SiteGround Shared Hosting, and 10 percent off their Cloud**.

Also, these solutions work well with their **SuperCacher**, which also incorporates Memcached and NGINX dynamic cache. SiteGround has also implemented HTTP/2 for

HTTPS (SSL).

Do you know of any other Benchmark tests that might be useful to our readers?

Let us know in the comments. Note that your comment will not appear automatically if it contains a link, but don't worry, we will read and approve as necessary.



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Jacques Marques • a year ago

PHP 7 was released in 03 Dec 2015, its in stable version not in beta?



Jonathan Griffin → Jacques Marques • a year ago

Correct, I will be doing a follow up post shortly.

Siteground have already upgraded to the stable version. cPanel said on their forums that they would like to concentrate on implementing PHP7 with EasyApache 4 as one of their next tasks.

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