

magento **live**
UK 2013



Magento on HHVM

Speeding up your webshop with a drop-in PHP replacement.

The background of the slide is a repeating isometric pattern of diamonds. Each diamond is composed of a grid of smaller triangles, creating a 3D effect. The diamonds are arranged in a staggered grid, with some appearing lighter and others darker, giving a sense of depth and perspective.

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What is HHVM?

- HipHop Virtual Machine
- Created by engineers at Facebook
- Essentially a reimplementation of PHP
- Originally translated PHP to C++, now translates PHP to bytecode
- Just-in-time compiler, turning generated bytecode into machine code
- In some cases 5 to 10 times faster than regular PHP

So what's the problem?

- HHVM not entirely compatible with PHP
- Magento's PHP triggering many of these incompatibilities
- Choosing between
 - Forking Magento to work around HHVM
 - Fixing issues within the extensive HHVM C++ codebase

Resulted in... fixing HHVM

- Already over 100 commits fixing Magento related HHVM bugs;
 - SimpleXML (majority of bugfixes)
 - sessions
 - number_format
 - __get and __set
 - many more...
- Most of these fixes already merged back into the official (github) repository
- Community Edition running (relatively) stable!

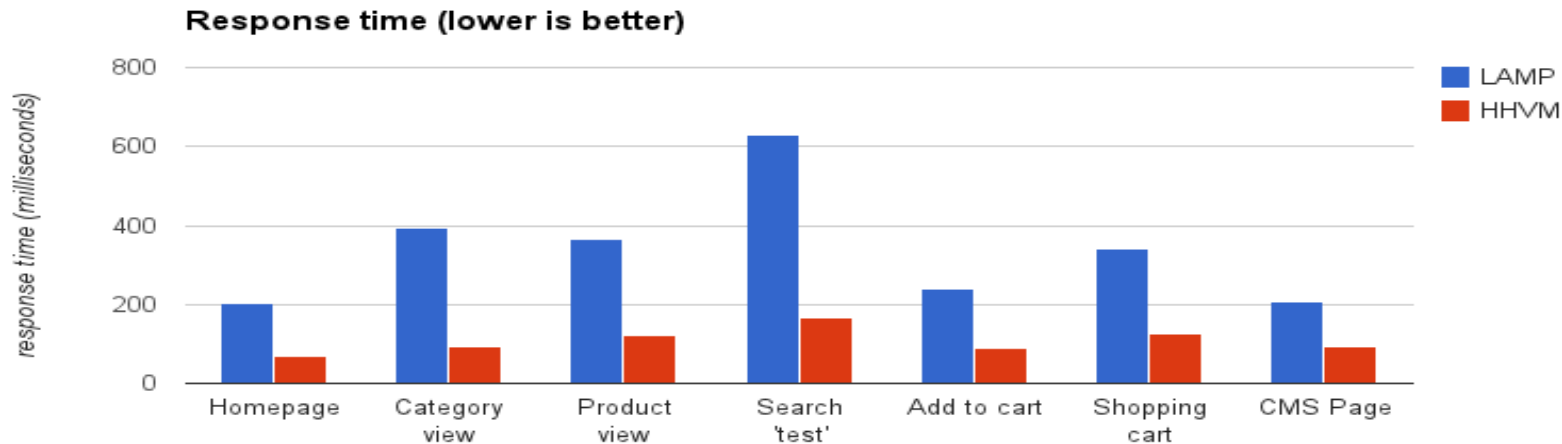
Benchmarks

Before we go to the results...

- Magento 1.8 with sample data
- Standard Apache2 / php-fpm / MySQL stack (with APC opcode cache).
- Standard HHVM configuration (repo-authoritative mode disabled, JIT enabled)
- Repo-authoritative mode has potential to increase performance by a large margin
- Tool of choice: siege

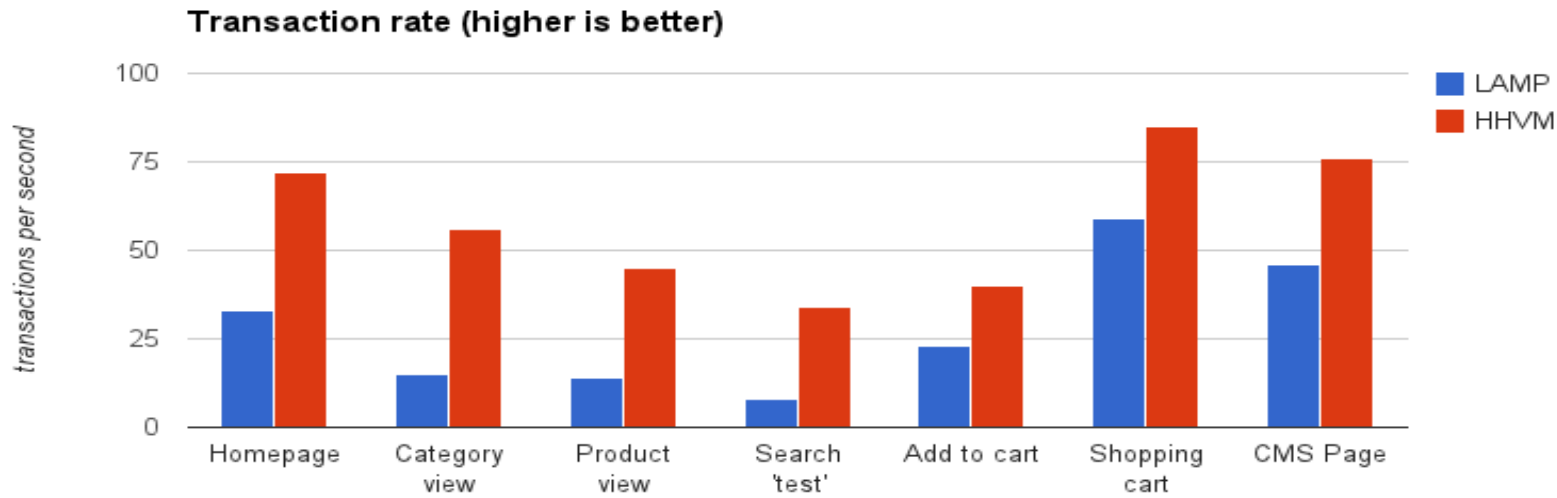
Benchmarks: Response time

Average across 50 requests



Benchmarks: Transaction rate

While increasing siege concurrency until avg. response time ~2 seconds



What about <insert caching mechanism here>?

- HHVM does not get in the way
- Dynamic content still needs to be generated
- Replaces PHP - not Varnish, Redis, FPC, Block Cache, etc.
- As long as you are burning CPU cycles (always), you will benefit from HHVM
- Think about speeding up indexing, order placement, routing, etc.

Possible issues

- Third party modules may still trigger HHVM incompatibilities
- Bleeding edge software, especially in regards to Magento
- Relatively hard to fix issues due to complex HHVM codebase

What's next?

- Rewrite HHVM's ext_simplexml
- Check compatibility with Enterprise Edition
- Run automated tests (TAF) to compare Magento frontend/backend with PHP
- Tweak HHVM configuration to be optimal for Magento
- Documentation on how to deploy and properly scale Magento on HHVM
- Fixing more bugs, please **report** them!

Contact

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Join us on Freenode **#hhvm** **#magento-reddit** where we frequently discuss HHVM.