

Remplacer PHP par hhvm (ou phpng)?

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Histoire

- ▶ Facebook : 60 millions de lignes de code
- ▶ Utilisateurs : 1 milliard
- ▶ 2008
 - ▶ HPHPC : PHP \Rightarrow C++ \Rightarrow binaire
 - ▶ plafonnement des performances
 - ▶ PHP pas complètement supporté
 - ▶ HPHPi, HPHPd
 - ▶ Les serveurs Facebook l'utilisent
- ▶ 2010
 - ▶ HHVM
 - ▶ VM, JIT, OpenSource
- ▶ Remplacement de PHP

- ▶ PHP 6.0
 - ▶ core unicode support
 - ▶ échec donc les améliorations hors unicode ont été portés les version 5.x
- ▶ PHPng
 - ▶ initiative de Zend, réponse à HHVM
 - ▶ améliorations de performances (mergé dans dev)
- ▶ PHP 7.0
 - ▶ future version
 - ▶ contiendra PHPng
 - ▶ autres ajouts et changements dans le langage

alors quoi faire ?

- ▶ 300 sites
 - ▶ la majorité en php
 - ▶ 10 nœuds
- ▶ promesse de HHVM
 - ▶ multiplié par au moins 2 la vitesse
 - ▶ réduire l'empreinte mémoire
 - ▶ on double notre infrastructure 👍
- ▶ promesse de PHPng (PHP 5.7 OU 7.0)
 - ▶ la même en gardant le langage
- ▶ Il faut tester pour vérifier ce qu'on lit ici ou là
 - ▶ je suis comme Saint Thomas

Tests

- ▶ Une machine (VM)
 - ▶ HHVM (fast cgi)
 - ▶ php 5 (fast cgi)
 - ▶ PHPng (fast cgi)
 - ▶ nginx
 - ▶ WordPress installé et configuré
 - ▶ mysql installé
- ▶ Un outil de test
 - ▶ ab

- ▶ HHVM
 - ▶ la croix et la bannière à compiler (pas mature)
 - ▶ je me suis rabattu sur les packages pré-compilés
 - ▶ ubuntu 14
- ▶ PHPng
 - ▶ se compile sans souci
 - ▶ une fois les dépendances installées bien sûr
- ▶ Le reste
 - ▶ apt-get

▸ nginx

```
upstream hhvm {
    server unix:///var/run/hhvm/hhvm.sock;
}

upstream phpfcgi7 {
    server unix:///tmp/fcgi-php7.sock;
}

upstream phpfcgi5 {
    server unix:///tmp/fcgi-php5.sock;
}

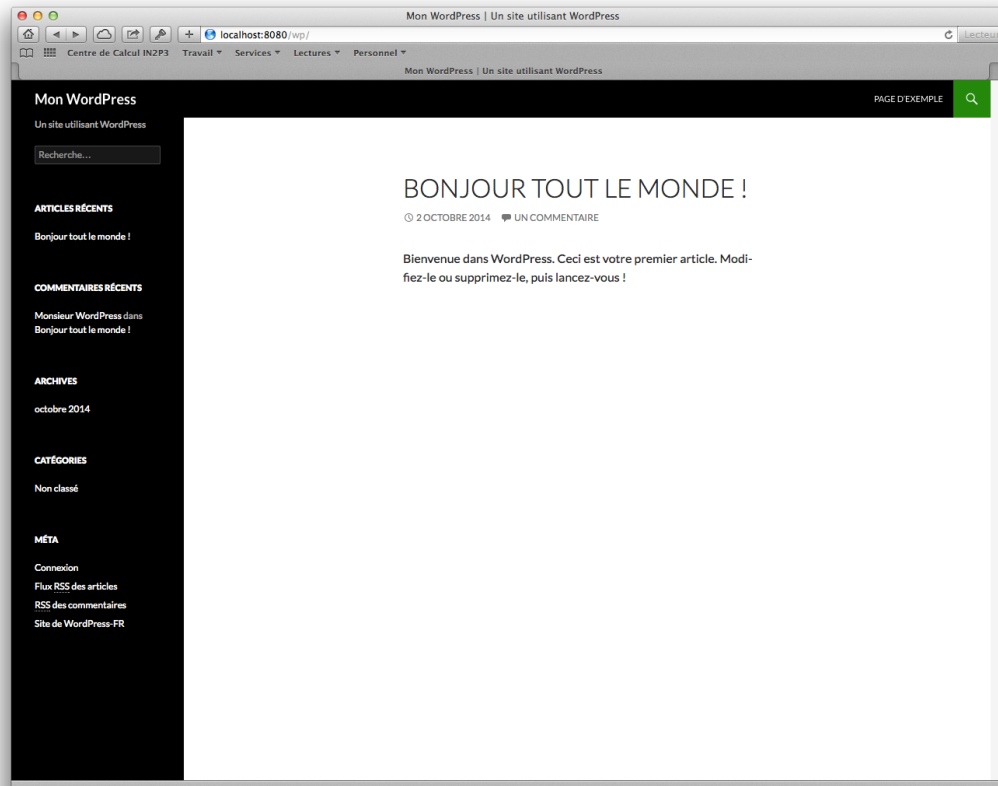
location /wp/ {
    alias /usr/share/nginx/wordpress/;
    index index.html index.htm index.php;
    location ~ \.(hh|php)$ {
        fastcgi_pass          hhvm;
        include                fastcgi_params;
    }
}

location /wp2/ {
    alias /usr/share/nginx/wordpress/;
    index index.html index.htm index.php;
    location ~ \.php$ {
        fastcgi_pass          phpfcgi7;
        include                fastcgi_params;
    }
}

location /wp3/ {
    alias /usr/share/nginx/wordpress/;
    index index.html index.htm index.php;
    location ~ \.php$ {
        fastcgi_pass          phpfcgi5;
        include                fastcgi_params;
    }
}
```

- ▶ php 5
 - ▶ `opcache.enable = 1`
- ▶ hhvm
 - ▶ `hhvm.eval.jit = true`
- ▶ phpng
 - ▶ `opcache activé`

- ▶ `ab -n 200 -c 20 http://127.0.0.1:8080/wp[2|3]/`
 - ▶ 200 requêtes
 - ▶ 20 requêtes en parallèle
 - ▶ sur la page d'accueil de WordPress



	PHP	PHPng	HHVM
Concurrency Level	20	20	20
Time taken for tests	5.238 seconds	3.014 seconds	2.581 seconds
Complete requests	200	200	200
Failed requests	0	0	0
Write errors	0	0	0
Total transferred	1601600 bytes	1600200 bytes	1599600 bytes
HTML transferred	1555600 bytes	1555600 bytes	1555600 bytes
Requests per second	38.18 [#/sec] (mean)	66.35 [#/sec] (mean)	77.49 [#/sec] (mean)
Time per request	523.813 [ms] (mean)	301.418 [ms] (mean)	258.091 [ms] (mean)
Time per request	26.191 [ms] (mean, across all concurrent requests)	15.071 [ms] (mean, across all concurrent requests)	12.905 [ms] (mean, across all concurrent requests)
Transfer rate	298.59 [Kbytes/sec] received	518.45 [Kbytes/sec] received	605.26 [Kbytes/sec] received

- ▶ Oui HHVM va vite
- ▶ Oui PHPng va quasiment aussi vite
- ▶ pas encore mûrs, loin de là
- ▶ PHP 7 contiendra PHPng
 - ▶ mais il arrivera quand ?
- ▶ D'ici là, peut-être que HHVM dominera l'ex monde PHP

- ▶ wikipedia
 - ▶ http://fr.wikipedia.org/wiki/HipHop_for_PHP
 - ▶ http://en.wikipedia.org/wiki/HipHop_for_PHP
 - ▶ <http://fr.wikipedia.org/wiki/PHP>
 - ▶ <http://en.wikipedia.org/wiki/PHP>
- ▶ HHVM
 - ▶ <http://hhvm.com>
 - ▶ <https://github.com/facebook/hhvm>
- ▶ PHPng
 - ▶ <https://wiki.php.net/phpng>
 - ▶ <https://github.com/php/php-src>
- ▶ blogs
 - ▶ <https://blog.engineyard.com/2014/hhvm-hack>
 - ▶ <http://www.journaldunet.com/developpeur/php/hhvm-de-facebook.shtml>
 - ▶ <http://fr.blog.codizy.com/php-7-il-sera-berceau-phpng/>
 - ▶ <http://www.sitepoint.com/php-fights-hhvm-zephir-phpng/>
 - ▶ <http://blog.mageekbox.net/?post/2014/08/29/A-propos-de-pnpng-et-de-PHP-7>
 - ▶ <http://zsuraski.blogspot.fr/2014/07/benchmarking-phpng.html>
 - ▶ <http://www.i-programmer.info/news/98-languages/7555-the-next-version-of-php-and-phpng.html>
 - ▶ <http://blog.zend.com/2014/07/17/php-next-generation-outperforming-facebooks-hhvm/#.VDQNmL71tD0>
 - ▶ <https://www.jverdeyen.be/php/phpng-on-ubuntu-trusty/>