XHProf & Wonderproxy

Paul Reinheimer

PHP Community Conference - April 2010

Value

Mistakes

Magic of the Campfire

WonderProxy

Friday, April 22, 2011

Story

- Introduction
- Chapter 1 - Problems
- Chapter 2 - Beliefs
- Chapter 3 - Execution
- Chapter 4 - Statistics
- Chapter 5 - Mistakes
- Chapter 6 - The Road Ahead

Introduction

Problems

Beliefs

Execution

Execution

Statistics

- 41 Proxies
- 26 Countries
  Australia, Austria, Belgium, Brazil, Canada, Ireland, Czech Republic, Denmark, Estonia, France, Germany, Italy, Japan, Malaysia, Mexico, Netherlands, New Zealand, Poland, Republic of Singapore, Romania, Russian Federation, South Africa, Spain, Sweden, Switzerland, Ukraine, United Kingdom, åUnited States
- 6 Continents
- 39.7 Terabytes of Relayed Data
- Profitable

Statistics

50 HAPPY CUSTOMERS

Mistakes

The Road Ahead

XHProf

Friday, April 22, 2011

Story

- Introduction
- Chapter 1 - Problems
- Chapter 2 - Execution
- Chapter 3 - Use
- Chapter 4 - Failures
- Chapter 5 - Success

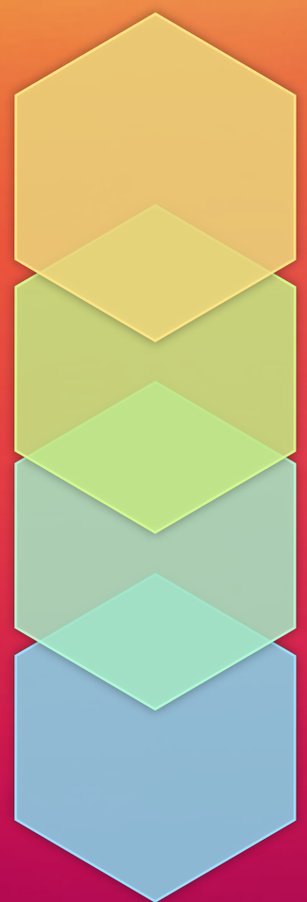
Introduction

Problems

Execution

Execution

USE



INSTALL

CONFIGURE

ANALYZE

RESOLVE

Use

INSTALL

```
GIT CLONE GIT://GITHUB.COM/PREINHEIMER/XHPROF.GIT
```

Use

CONFIGURE

```
PHP.INI -
AUTO_PREPEND_FILE: HEADER.PHP
AUTO_APPEND_FILE: HEADER.PHP
```


```
PHP.INI -
AUTO_PREPEND_FILE: HEADER.PHP
AUTO_APPEND_FILE: HEADER.PHP
```

Use

ANALYZE

XHProf: Hierarchical Profiler Report

XHProf: Hierarchical Profiler Report

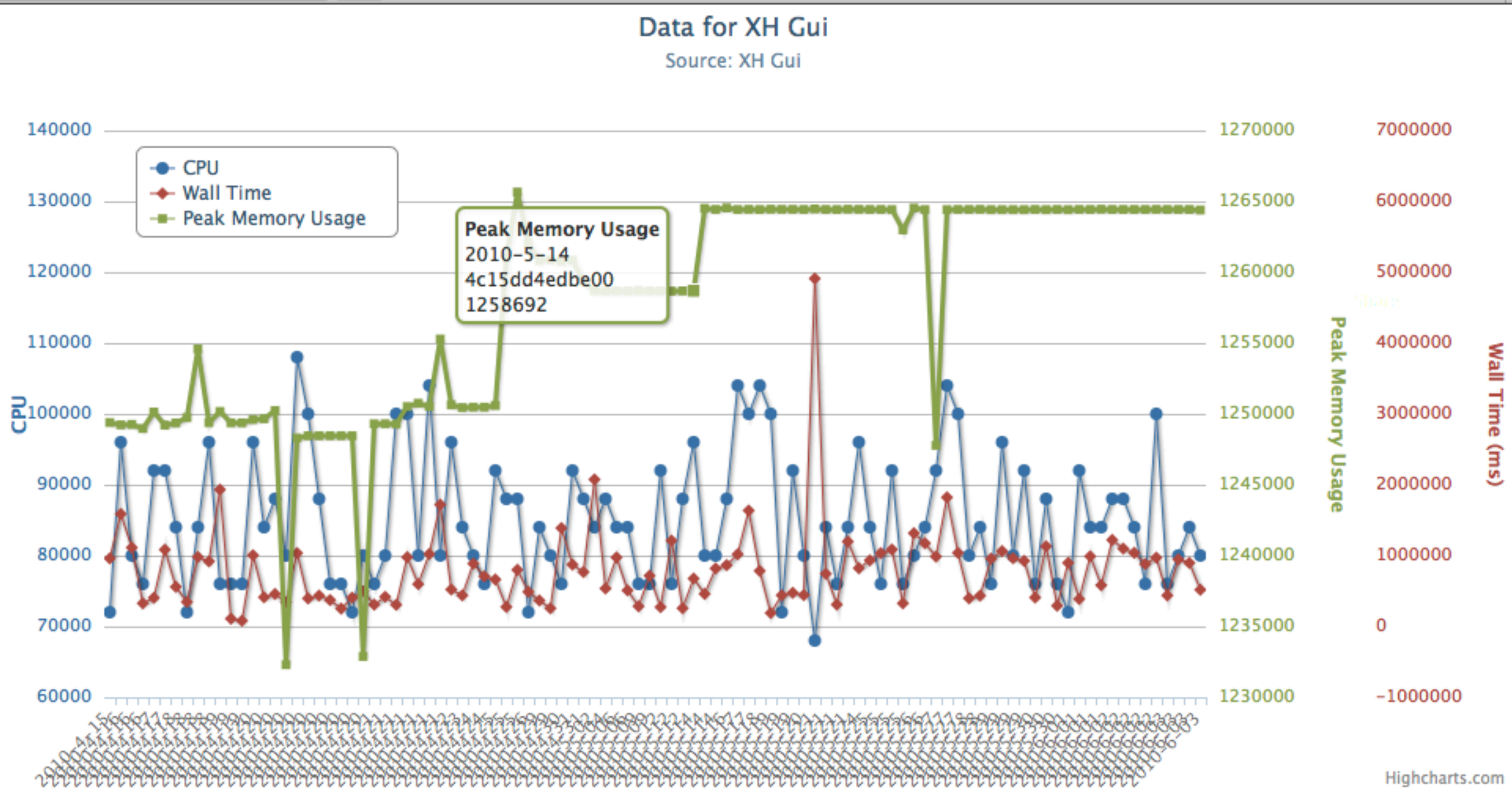
Filter Server: None Apply Filter Domain: None Apply Search: Go

XHGUI

Last 25 | 50 Runs | Hardest Hit Today Past Week | Most Expensive Today Past Week | Most Ram Today Past Week | Longest Running Today Past Week

Last 25 Runs

Timestamp	Cpu	Wall Time	Peak Memory Usage	URL	Simplified URL
Mar 09 04:30:58 4d7748d33ebc0	52003	314820	1133456	/index.php?/archives/145-Credit-Card-Fun.html	/index.php?/archives/145-Cre
Mar 09 03:07:52 4d773558812c9	64003	378272	1127352	/index.php?/archives/365-PHP-Community-Conference.html	/index.php?/archives/365-PHP
Mar 09 01:12:56 4d771a685e9ff	68004	290041	1111404	/index.php?/archives/2004/08/P2.html	/index.php?/archives//08/P2.
Oct 07 18:13:10 4cae45f7471bd	88006	1228901	1292392	/	/
Oct 07 18:03:37 4cae43ba0990b	100007	448230	1237236	/index.php?/archives/254-Good-Practice.html	/index.php?/archives/254-Goo
Oct 07 17:42:20 4cae3ebdc4786	80006	1306057	1292392	/	/
Oct 07 16:12:55 4cae29c7e55c5	104007	228547	1245128	/index.php?/archives/283-Stop-Messing-up-CSRF-Protection.html	/index.php?/archives/283-Sto
Oct 07 12:02:51 4cadef2c05828	60004	270355	1080912	/index.php?/archives/2009/06/10.html	/index.php?/archives//06/10.



Runs with URL: /

Timestamp	Cpu	Wall Time	Peak Memory Usage	URL	Simplified URL
May 15 17:22:24 4bef1091dabc8	72004	959712	1249388	/	/
May 16 05:58:46 4befc1d88a58d	96006	1587463	1249228	/	/
May 16 09:13:22					

RunID: 4bef1091dabc8 against blog.preinheimer.com/

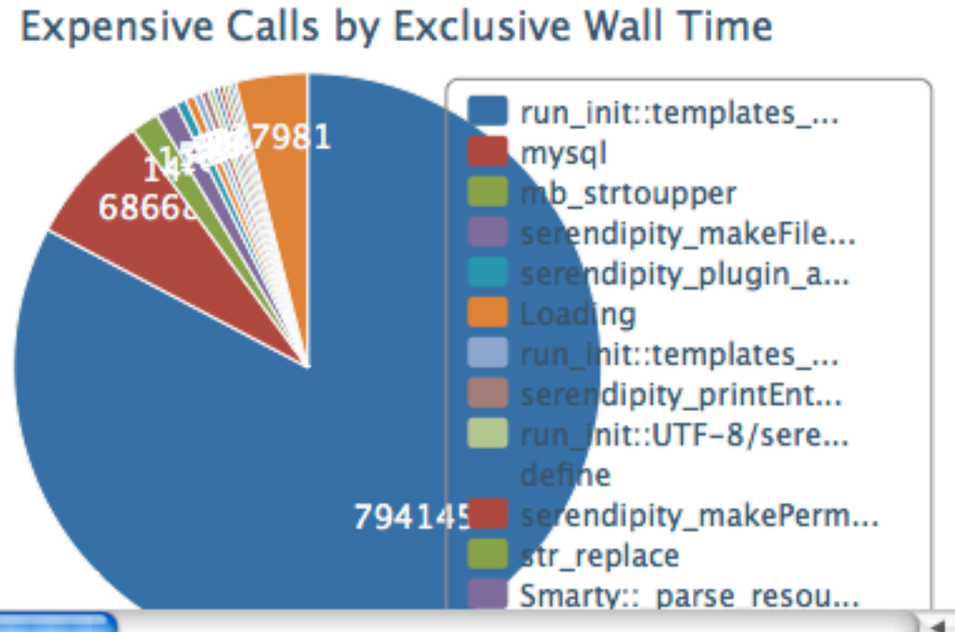
View Callgraph

Stat	Exact URL	Similar URLs
Count	431	431
Min Wall Time	80.0740 ms	80.0740 ms
Max Wall Time	13.4525 s	13.4525 s
Avg Wall Time	1.3560 s	1.3560 s
95% Wall Time	3.9578 s	3.9578 s
Display run Incl. Wall Time (microsec)	**959,712 microsecs**	
Min CPU Ticks	68.0040 ms	68.0040 ms
Max CPU Ticks	300.0190 ms	300.0190 ms
Avg CPU Ticks	87.1422 ms	87.1422 ms
95% CPU Ticks	100.0070 ms	100.0070 ms
Display run Incl. CPU (microsecs)	**72,004 microsecs**	
Min Peak Memory Usage	1,232,296 bytes	1,232,296 bytes
Max Peak Memory Usage	5,934,540 bytes	5,934,540 bytes
Avg Peak Memory Usage	1,292,276 bytes	1,292,276 bytes
95% Peak Memory Usage	1,292,504 bytes	1,292,504 bytes
Display run Incl. PeakMemUse (bytes)	**1,249,388 bytes**	
Number of Function Calls:	**6,684**	
Perform Delta:		Delta

Cookie	Results
__utmz	67726530.1272566240.115.((referral)|utmcmd=r eferr /reducing_oracle_lob_memc
s9y_bd0facf5b05c3c47c6f3b81718ee1acf	aef00bc01afe2127a7a11b5c
_profile	1
__utma	67726530.816787919008456(
__utmc	67726530
__utmb	67726530.17.10.127395665
serendipity	

Get	Results
serendipity	, , 1, 1273958545

Post	Results
serendipity	



Function	Call Count	Wall Time	CPU	Memory Usage	Peak Memory Usage
define	1153	2628	4000	77532	50832
serendipity_property_bag::get	321	889	4000	16300	1388
each	315	718	4000	101216	4328
preg_replace	309	1924	8001	40740	3956
str_replace	306	2462	4000	247252	22484
is_array	265	289	0	9288	1472
mysql_fetch_array	227	1137	0	186708	155188
is_null	168	169	0	2472	1016
date	157	1424	0	15048	572
trim	154	182	0	6348	892
serendipity_get_bool	140	325	4000	14988	764
serendipity_makeFilename	139	15341	8001	39628	32604
utf8_decode	139	261	0	4440	352
function_exists	111	156	0	3988	3272
mb_substr	104	312	0	2860	368
defined	104	224	0	7976	7012
serendipity_serverOffsetHour	96	374	0	19684	5556
serendipity_rewriteURL	95	519	0	35192	2960
smarty_modifier_default	90	265	0	10772	188
serendipity_db_bool	85	213	0	12072	836
serendipity_makePermalink	77	12706	12001	110572	45092

Filter Server: None Apply Filter Domain: None Apply Search: Go

XH GUI

Last 25 50 Runs | Hardest Hit Today Past Week | Most Expensive Today Past Week | Most Ram Today Past Week | Longest Running Today Past Week

Parent/Child report for serendipity_property_bag::get [View Callgraph]

Function Name	Calls	Calls%	Incl. Wall Time (microsec)	IWall%	Incl. CPU (microsecs)	ICpu%	Incl. MemUse (bytes)	IMemUse%	Incl. PeakMemUse (bytes)	IPeakM
Current Function										
serendipity_property_bag::get	321	85.6%	889	0.1%	4,000	5.6%	16,300	1.4%	1,388	
Exclusive Metrics for Current Function			889	100.0%	4,000	100.0%	16,300	100.0%	1,388	
Parent functions										
serendipity_plugin_api::hook_event	315	98.1%	871	98.0%	4,000	100.0%	15,560	95.5%	908	
serendipity_event_entryproperties::event_hook	6	1.9%	18	2.0%	0	0.0%	740	4.5%	480	

RunID: 4bef1091dabc8 against blog.preinheimer.com/

View Callgraph

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Display run Incl. PeakMemUse (bytes)	**1,249,388 bytes**	
Number of Function Calls:	**6,684**	
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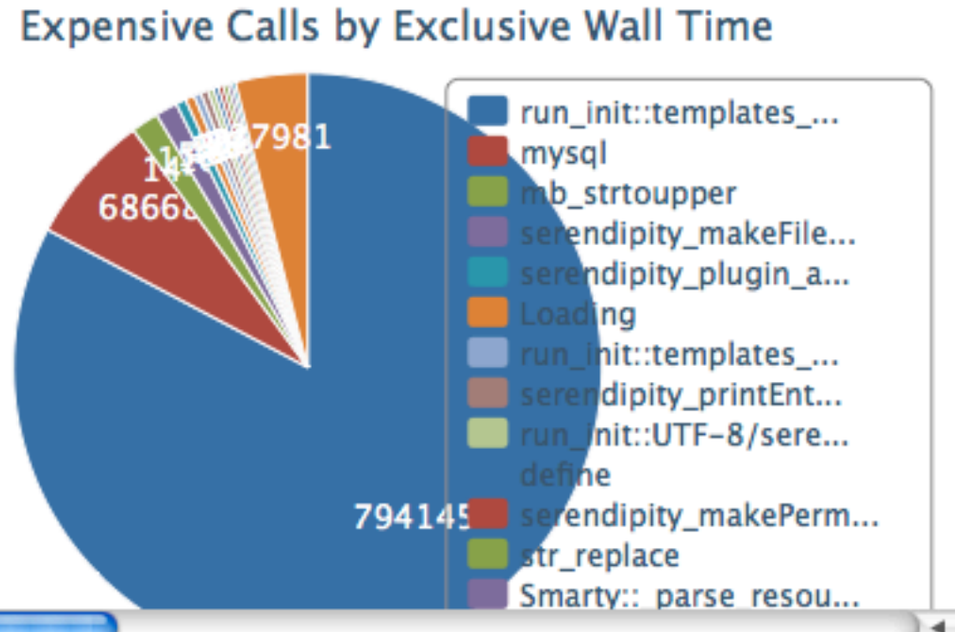
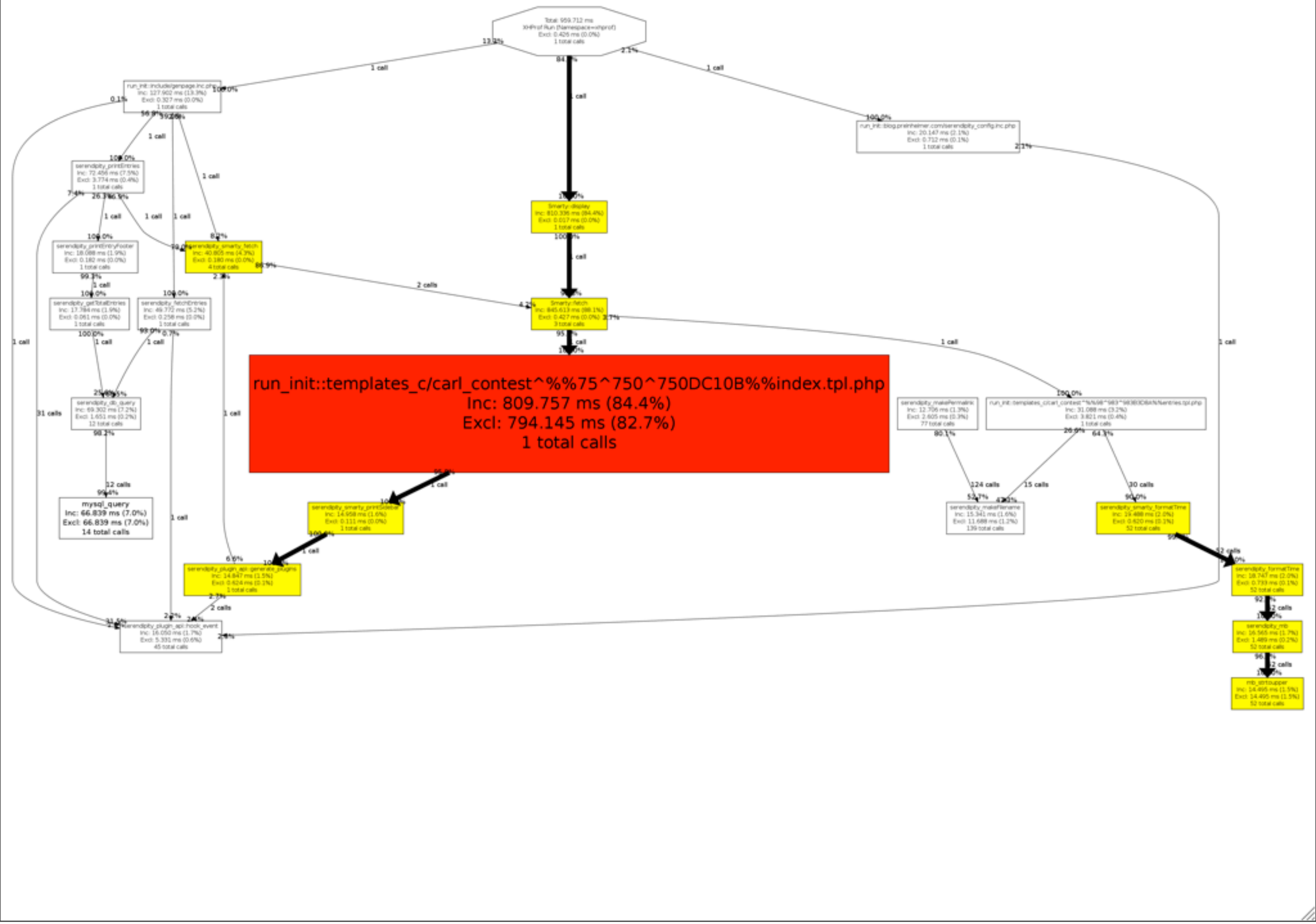
Cookie	Results
__utmz	67726530.1272566240.115.((referral)|utmcmd=r eferr /reducing_oracle_lob_memc
s9y_bd0facf5b05c3c47c6f3b81718ee1acf	aef00bc01afe2127a7a11b5c
_profile	1
__utma	67726530.816787919008456(
__utmc	67726530
__utmb	67726530.17.10.127395665
serendipity	

Get	Results
serendipity	, , 1, 1273958545

Post	Results
serendipity	




Total: 959.712 ms
xhprof Run (Namespace=xhprof)
Excl: 0.426 ms (0.0%)
1 total calls
13.3%
84.4%
2.1%
1 call
1 call
call
run_init::include/genpage.inc.php
Inc: 127.902 ms (13.3%)
Excl: 0.327 ms (0.0%)
1 total calls
run_init::blog.preinheimer.com/serendipity_config.inc.php
Inc: 20.147 ms (2.1%)
Excl: 0.712 ms (0.1%)
1 total calls
serendipity_printEntries
Inc: 72.456 ms (7.5%)
Excl: 3.774 ms (0.4%)
1 total calls
Smarty::display
Inc: 810.336 ms (84.4%)
Excl: 0.017 ms (0.0%)
1 total calls
serendipity_printEntryFooter
Inc: 18.088 ms (1.9%)
Excl: 0.182 ms (0.0%)
1 total calls
serendipity_smarty_fetch
Inc: 40.805 ms (4.3%)
Excl: 0.180 ms (0.0%)
4 total calls
2 calls
serendipity_getTotalEntries
Inc: 17.784 ms (1.9%)
Excl: 0.061 ms (0.0%)
1 total calls
serendipity_fetchEntries
Inc: 49.772 ms (5.2%)
Excl: 0.258 ms (0.0%)
1 total calls
Smarty::fetch
Inc: 845.613 ms (88.1%)
Excl: 0.427 ms (0.0%)
3 total calls
run_init::templates_c/carl_contest^%%75^750^750DC10B%%index.tpl.php
Inc: 809.757 ms (84.4%)
Excl: 794.145 ms (82.7%)
1 total calls
serendipity_db_query
Inc: 69.302 ms (7.2%)
Excl: 1.651 ms (0.2%)
12 total calls
31 calls
12 calls
mysql_query
Inc: 66.839 ms (7.0%)
Excl: 66.839 ms (7.0%)
14 total calls
serendipity_makePermalink
Inc: 12.706 ms (1.3%)
Excl: 2.605 ms (0.3%)
77 total calls
run_init::templates_c/carl_contest^%%98^983^98303C6A%%entries.tpl.php
Inc: 31.088 ms (3.2%)
Excl: 3.821 ms (0.4%)
1 total calls
124 calls
15 calls
30 calls
serendipity_makeFilename
Inc: 15.341 ms (1.6%)
Excl: 11.688 ms (1.2%)
139 total calls
serendipity_smarty_formatTime
Inc: 19.488 ms (2.0%)
Excl: 0.620 ms (0.1%)
52 total calls
serendipity_smarty_printSidebar
Inc: 14.958 ms (1.6%)
Excl: 0.111 ms (0.0%)
1 total calls
serendipity_plugin_api::generate_plugins
Inc: 14.847 ms (1.5%)
Excl: 0.624 ms (0.1%)
1 total calls
2 calls
serendipity_plugin_api::hook_event
Inc: 16.050 ms (1.7%)
Excl: 5.331 ms (0.6%)
45 total calls
52 calls
serendipity_formatTime
Inc: 18.747 ms (2.0%)
Excl: 0.733 ms (0.1%)
52 total calls
2 calls
serendipity_mb
Inc: 16.565 ms (1.7%)
Excl: 1.489 ms (0.2%)
52 total calls
2 calls
mb_strtoupper
Inc: 14.495 ms (1.5%)
Excl: 14.495 ms (1.5%)
52 total calls

Invert Report

Run One ID: 4c2c68108e4af against blog.preinheimer.com

Run Two ID: 4bf597fec3a8a against blog.preinheimer.com

View Callgraph

Run One ID: 4c2c68108e4af	Cookie Results
serendipity	

Run:4c2c68108e4af	Get Results
serendipity	, , 1, 1277978640

Run:4c2c68108e4af	Post Results
serendipity	

	Run One ID: 4c2c68108e4af	Run Two ID: 4bf597fec3a8a	Diff
Number of Function Calls	6,730	6,684	-46
Incl. Wall Time (microsec)	387,178	497,082	109,904
Incl. CPU (microsecs)	92,006	80,005	-12,001
Incl. MemUse (bytes)	1,191,396	1,184,312	-7,084
Incl. PeakMemUse (bytes)	1,264,432	1,232,880	-31,552

Run Two ID: 4bf597fec3a8a Share	Co
__utmz	67 (r /r
_profile	1

Run:4bf597fec3a8a	Get Results
serendipity	, , 1, 1274386430

Run:4bf597fec3a8a	Post Results
serendipity	

Function	Call Count	Wall Time	CPU	Memory Usage	Peak Memory Usage
main()	0	109904	-12001	-7084	-31552
mysql_query	0	72410	0	0	0

Filter Server: None Apply Filter Domain: None Apply Search: Go

XHGUI

Last 25 50 Runs | Hardest Hit Today Past Week | Most Expensive Today Past Week | Most Ram Today Past Week | Longest Running Today Past Week

Hardest Hit

URL	Hits	Total Wall Time	Avg Wall Time
/	431	584,456,044 ms	1,356,047 ms
/index.php?/archives/172-SimpleXML,-Namespaces-Hair-loss.html	36	24,776,689 ms	688,241 ms
/index.php?/archives/354-Memory-usage-in-PHP.html	34	28,386,825 ms	834,907 ms
/index.php	31	53,024,845 ms	1,710,479 ms
/index.php?/archives/358-XHGui-Improvements.html	20	7,228,362 ms	361,418 ms
/index.php?/archives/359-Wheres-it-Up.html	18	7,570,972 ms	420,610 ms
/index.php?/archives/247-addslashes-vs-mysql_escape_string.html	15	7,950,395 ms	530,026 ms
/index.php?/archives/334-Storing-Sessions-in-Memcache-how-everything-behaves.html	13	13,423,474 ms	1,032,575 ms
/index.php?/archives/356-The-accountability-problem.html	12	12,707,550 ms	1,058,963 ms
/index.php?url=archives/274-Read-your-Receipts.html	12	5,700,900 ms	475,075 ms
/index.php?/archives/355-A-GUI-for-XHProf.html	11	3,600,599 ms	327,327 ms
/index.php?/categories/2-IIS-Project	11	4,063,453 ms	369,405 ms
/comment.php?type=trackback&entry_id=332	10	4,279,079 ms	427,908 ms
/index.php?/archives/340-.htaccess-to-httpd.conf.html	10	11,514,769 ms	1,151,477 ms
/index.php?/archives/2005/04.html	10	3,852,012 ms	385,201 ms

XHProf: Hierarchical Profiler Report

http://xh.paulhost.ca/?getruns=cpu&days=600

XHProf: Hierarchical Profiler Report

Filter Server: None Apply Filter Domain: None Apply Search: Go

XHGUI

Last 25 50 Runs | Hardest Hit Today Past Week | Most Expensive Today Past Week | Most Ram Today Past Week | Longest Running Today Past Week

Worst runs by cpu

Timestamp	Cpu	Wall Time	Peak Memory Usage	URL	Simplified URL
Jul 05 16:09:25 4c323bf6ccde2	300019	1122986	5934540	/	/
Jul 17 17:59:12 4c4227b1031d1	220014	641906	981392	/comment.php?type=trackback&entry_id=84	/comment.php?type=trackb
Jun 07 19:45:31 4c0d849c426e3	156009	943139	1255244	/index.php?/archives/P7.html	/index.php?/archives/P7.
Jul 26 03:27:45 4c4d38f2092d5	156009	523796	1239208	/index.php?/archives/2004/11.html	/index.php?/archives//11
Oct 01 04:00:56 4ca5953993103	152010	1146415	1310240	/index.php?/archives/356-The-accountability-problem.html	/index.php?/archives/356
Jul 05 05:26:22 4c31a53f53c66	152009	424905	1235092	/index.php?/archives/2004/06.html	/index.php?/archives//06
Sep 24 18:33:50 4c9d274f5b3c3	148010	933250	1355216	/index.php?/archives/354-Memory-usage-in-PHP.html	/index.php?/archives/354
Jun 01					

XHProf: Hierarchical Profiler Report

http://xh.paulhost.ca/?getruns=pmu&days=700

Filter Server: None Apply Filter Domain: None Apply Search: Go

XHGUI

Last 25 50 Runs | Hardest Hit Today Past Week | Most Expensive Today Past Week | Most Ram Today Past Week | Longest Running Today Past Week

Worst runs by pmu

Timestamp	Cpu	Wall Time	Peak Memory Usage	URL	Simplified URL
Jul 05 16:09:25 4c323bf6ccde2	300019	1122986	5934540	/	/
Jul 10 06:21:19 4c3849a028396	108007	968297	1369424	/index.php?url=archives/354-Memory-usage-in-PHP.html	/index.php?url=archives/354-Memory-usage-in-PHP.html
Sep 24 00:25:20 4c9c283370b1c	84006	2507673	1360440	/index.php?/categories/1-PHP	/index.php?/categories/1-PHP
Sep 27 16:51:21 4ca103c9ea122	84005	807670	1360436	/index.php?/categories/1-PHP	/index.php?/categories/1-PHP
Aug 13 17:28:12 4c65b8eda727f	96006	756188	1360412	/index.php?/categories/1-PHP	/index.php?/categories/1-PHP
Aug 13 14:46:44 4c6593149f7ee	88005	351398	1359660	/index.php?/categories/1-PHP	/index.php?/categories/1-PHP
Aug 30 12:25:09 4c7bdb665a179	88005	1104141	1359116	/index.php?/categories/1-PHP	/index.php?/categories/1-PHP
Jul 09 05:21:59	120008	808261	1355376	/index.php?/archives/354-Memory-usage-in-PHP.html	/index.php?/archives/354-Memory-usage-in-PHP.html

Filter Server: None Apply Filter Domain: None Apply Search: Go

XHGUI

Last 25 50 Runs | Hardest Hit Today Past Week | Most Expensive Today Past Week | Most Ram Today Past Week | Longest Running Today Past Week

Worst runs by wt

Timestamp	Cpu	Wall Time	Peak Memory Usage	URL	Simplified URL
Aug 22 03:35:39 4c70d36262d76	80005	23068818	1290564	/index.php	/index.php
Aug 24 02:58:11 4c736d90a1e44	100006	13452484	1292388	/	/
Sep 29 10:56:07 4ca3539357779	92005	11905605	1292388	/	/
May 17 02:21:24 4bf0e06f8baf2	44004	10772245	1057092	/comment.php?type=trackback&entry_id=302	/comment.php?type=trackback&entry_id=302
Sep 15 12:39:11 4c90f6ba27514	84005	10551378	1292392	/	/
Sep 26 16:36:10 4c9faec5060fb	92005	10458235	1291108	/	/
Sep 21 03:14:25 4c985b5a65fbd	100006	8838533	1291000	/	/
Aug 31 13:07:06	92005	8819727	1272488	/index.php?/archives/P3.html	/index.php?/archives/P3.html

Use

RESOLVE

Failures

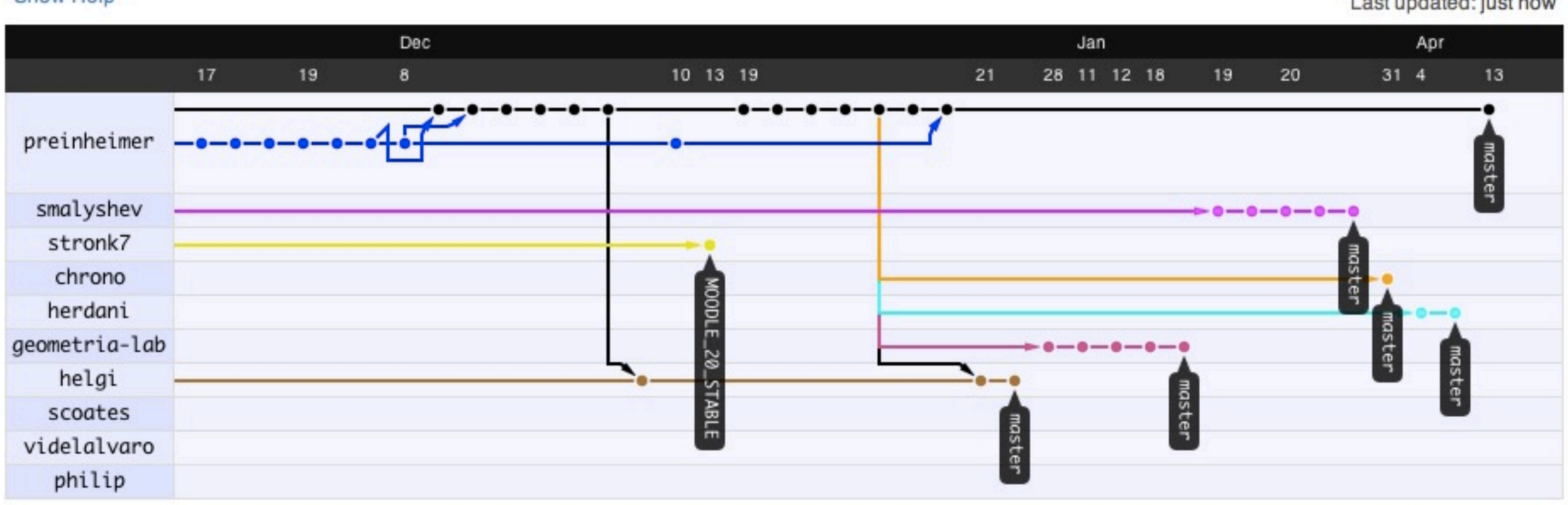
The xhprof network graph

Keyboard shortcuts available

All branches in the network using ***preinheimer/xhprof*** *as the reference point. Read our blog post about how it works.*

Show Help

Last updated: just now



Success

The End

The End

The End

The End

Acknowledgements

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- Will Roberts - For building WonderProxy with me

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- You.

Appendix

- Morgan Tocker's Perf Talk - http://www.slideshare.net/morgo/what-every-developer-should-know-about-performance
- Frank Chimero, Digital campfire - http://www.webstock.org.nz/talks/speakers/frank-chimero/digital-campfire/
- WonderProxy's Blog: http://wonderproxyblog.com/
- Joind.in link - http://joind.in/3346