



The PHP Company

Better Performance, Simpler Debugging:

The New Zend Server 5 In Action!

Agenda



Zend Server: What & Why?

- Improving your application's reliability
 - Zend Monitor, Code Tracing

- Improving your application's performance
 - Optimizer+, Data Cache, Page Cache, Job Queue

What is Zend Server?

- **A complete, well tested PHP runtime environment**
- **Supported and updated by Zend**
- **Comes with a set of extra features that:**
 - Improve the performance and reliability of PHP applications
 - Make it easier to manage a consistent PHP environment

Drilling in a bit deeper...

- **Business-grade, tested, supported PHP stack**

- ▶ Improves reliability and security of apps; reduces config time

- **Confidence in deployment**

- ▶ Having complete and consistent environments eliminates problems

- **Respond rapidly to problems**

- ▶ Detect problems early, and analyze them quickly

- **Optimize application performance**

- ▶ Faster response times, lower resource utilization

What's new in Zend Server 5.0



- Faster troubleshooting with innovative code tracing
- Better application performance with Job Queue
- Support for PHP 5.3
- Various fixes and minor enhancements

Respond rapidly to problems

- **Zend Server will watch your PHP application...**
 - ▶ Slow functions or request executions? Find out before users start leaving in disgust
 - ▶ PHP Errors, failing functions or queries? Catch them so they can be fixed
 - ▶ High memory consumption? Understand the demands on your resources
- **...notify you...**
 - ▶ Get immediate alert emails
- **...and give you the tools to resolve the issue**
 - ▶ See a trace of the request execution that led to the problem

Monitoring will alert you to problems...

Zend Server - Mozilla Firefox 3.5 Beta 4

File Edit View History Bookmarks Tools Help

http://localhost:10081/ZendServer/Index/Index#1256708440780

Most Visited Release Notes Fedora Project Red Hat Free Content

Zend Studio Debug Profile Extra Stuff Search for PHP information: on Zend.com Go

Zend Server

zend server Help | About | Logout

Monitor Rule Management Server Setup Administration

Dashboard Events Jobs Queue Statistics Code Tracing Server Info PHP Info Logs

Filter: All Open Events Show Filter Details Go to event by Id: Go

Total: 24 Last refresh time: 27-Oct-2009 22:40

ID	Rule Name	Severity	Count	Status	First Occ.	Last Occ.	Occurred at...
000006	Custom Event	Warning	15	Open	15-Oct 16:36	27-Oct 19:58	
000007	Severe Slow Request Execution (Absolute)	Critical	5	Open	15-Oct 16:39	27-Oct 19:58	http://localhost/magento/index.php/
000023	PHP Error	Warning	1	Open	27-Oct 17:43	27-Oct 17:43	/var/www/html/phpExcelReader/Excel
000024	Fatal PHP Error	Critical	1	Open	27-Oct 17:43	27-Oct 17:43	/var/www/html/phpExcelReader/Excel
000022	Severe Slow Request Execution (Absolute)	Critical	1	Open	16-Oct 02:27	16-Oct 02:27	http://localhost/magento/
000017	Severe Slow Request Execution (Absolute)	Critical	2	Open	16-Oct 01:51	16-Oct 02:13	http://localhost/magento/index.php/cat
000021	High Memory Usage (Absolute)	Warning	1	Open	16-Oct 02:13	16-Oct 02:13	http://localhost/magento/index.php/cat

Change status to Closed Change

Restart PHP

...but now you have to resolve them

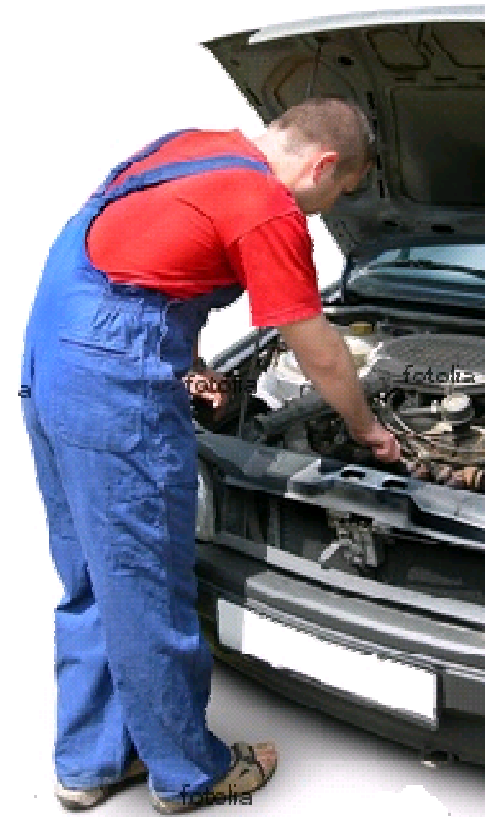
Engine sometimes shuts off while driving...

...why?

Need to reproduce the problem in order to fix it

Is the key factor the

- ▶ Speed?
- ▶ Time of day?
- ▶ Type of road being driven on?
- ▶ Number of passengers in the car?
- ▶ Etc.



Making root cause analysis easy: Code Tracing

- **Record live code execution in production**
 - ▶ Like a plane's black box flight recorder - captures the full problem data as the problem occurs
- **Activated automatically through existing monitoring rule mechanism, or manually**
- **View a replay of recorded code execution trace to quickly pinpoint root cause of functional and performance problems**
- **Can cut time for resolving problems by 50%!**
- **Game-changing capability for reducing downtime**

Code Tracing vs. XDebug

- **Development tool vs. Production tool**
 - ▶ What's the overhead?
 - ▶ Dumps of errors vs. dumps of EVERYTHING
- **Monitoring workflow?**
- **GUI: data aggregation, sorting, etc.**

Code Tracing Demo

Zend Server's approach to performance

A Web application's performance is affected by many different factors...



...So taking a partial approach will yield only partial results

Tools in your optimization toolkit

- **Zend Server gives you several ways to optimize apps:**
 - ▶ **Opcode optimization and caching**
 - Reduces disk access by caching compiled bytecode
 - ▶ **Data caching**
 - API to cache data items (DB query results, web service calls, etc.)
 - ▶ **Page caching**
 - Cache entire HTTP response based on customizable parameters
 - ▶ **Job Queue (*NEW in 5.0!*)**
 - Asynchronous execution of PHP scripts
- **All fully integrated in a single tool**

Job Queue: streamline offline processing

- **The problem:**
 - ▶ Some tasks need to be scheduled, not part of regular execution
 - Can't let long/intensive tasks be an application bottleneck!
- **The solution: Job Queue enables asynchronous execution of PHP scripts (Jobs)**
- **Value:**
 - ▶ Improve application performance
 - E.g. run a time-consuming report generation script on a different server, or at night
 - ▶ Time execution of scripts
 - E.g. periodic database cleanup

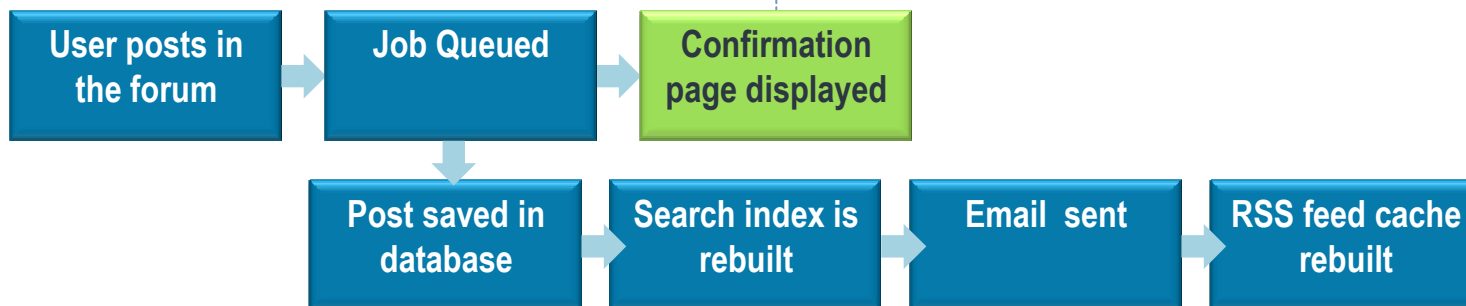
Improving the end-user experience



Without Job Queue



With Job Queue



Job Queue Demo

Q&A