



The PHP Company

PHP on IBM i: What's New with Zend Server 5 for IBM i

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Audience

- Used PHP in Zend Core/Platform
- New to Zend PHP
- Looking to understand the strategic direction
- Anyone who does not believe third party vendors ARE investing in this space...

Agenda

- Review the IBM relationship
- Technical Overview
- Product Installation
- Community Edition Features
 - ▶ Toolkit, optimizer, java bridge, debug
- Features of commercial edition
 - ▶ Monitoring, Code Tracing, Job Queue

Questions?

- Let's keep it interactive!

- Follow us!



▶ <http://bit.ly/cjueZg> (Zend Technologies or search for Zend)



▶ <http://twitter.com/zend>

What's New with Zend Server

www.zend.com

IBM Relationship

IBM Relationship History

- Zend is an IBM business partner
- IBM selected Zend to bring PHP to IBM i in 2005
- Beta, then Core, then Platform now Server
- Tens of thousands of downloads from Zend
- Zend Server part of IBM i7.1
- Products are always available at Zend.com

IBM Relationship FAQ's

- **What do we get?**
 - ▶ Zend Server CE
 - ▶ Zend Studio
 - ▶ 1 year Silver Level Support (email/web 72 hour response)
 - ▶ Since Feb 1, 2009

- **What happens after 1 year?**
 - ▶ Product will still run
 - ▶ No updates to product or PHP*
 - ▶ Forum support only

IBM Relationship FAQ's

- **What do I do when support runs out?**
 - ▶ Roll the dice
 - ▶ Zend account representative can discuss support options
 - Gold license and support
 - Platinum license and support
- **I downloaded Core and it's been a year. Can I download Server and get support for another year?**
 - ▶ You can download and install Zend Server without support as the support entitlement is by server, not Zend Product
 - ▶ The product will still run, however.
 - ▶ Forum support is always available

Zend Support Options

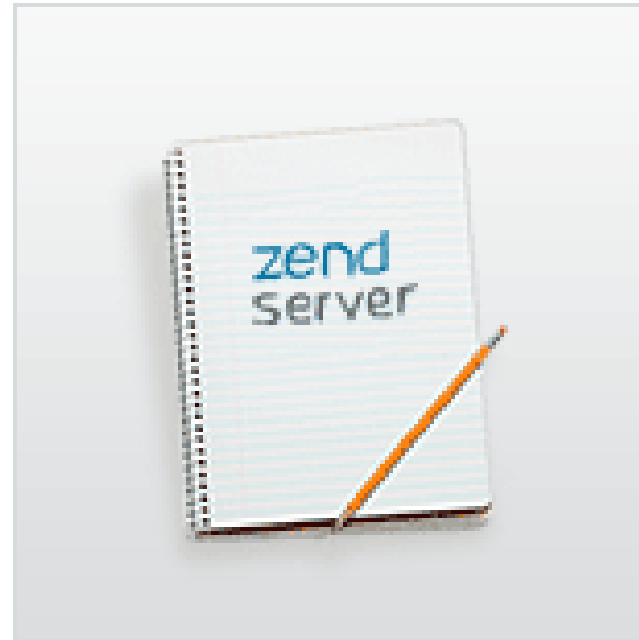
- **Silver for the first year from your first download**
 - ▶ Web ticket/email support
 - ▶ 72 hour response window
- **Gold - Business hour support**
 - ▶ 6 hour response on P1 (site down)
- **Platinum - 24/7**
 - ▶ 2 hour response on P1 (site down)
 - ▶ Customer requested PHP Bug Hot Fixes
- **SLA detailed on Zend Website**
 - ▶ <http://www.zend.com/en/services/support/production-sla>

Zend Server 5 for IBM i

www.zend.com

Technical overview

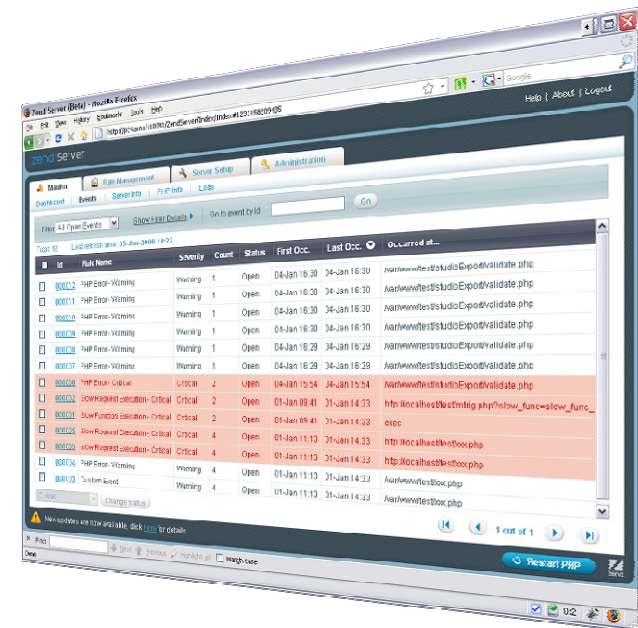
Zend Server 5.0 GA on 04/12/2010!



- The Linux and Windows distributions have been GA since Feb
- Code base consistency is making this gap smaller
- Training class available...see zend.com/store for more info

What Is Zend Server?

- Production quality PHP stack
 - ▶ PHP, ZF, DB connectivity, debugging extension, and more
- Two Editions - Free “Community Edition” provided by IBM & Full commercial edition
 - ▶ Both are production ready
- Application monitoring and diagnostics (integrated with Zend Studio)
- Multi-level performance enhancement capabilities
- Software updates and security hot fixes
- Easy and quick installation
- Zend Framework Integration



Zend Server for IBM i

- Next generation of PHP stack for IBM i
- Best of both Zend Core and Zend Platform
- Single Licensed Program Installation
- Two products (one download)
 - ▶ Zend Server for IBM i Community Edition
 - Available at no charge per IBM partnership
 - ▶ Zend Server for IBM i
 - Subscription available from Zend
 - High value extra features
 - Higher Support SLAs

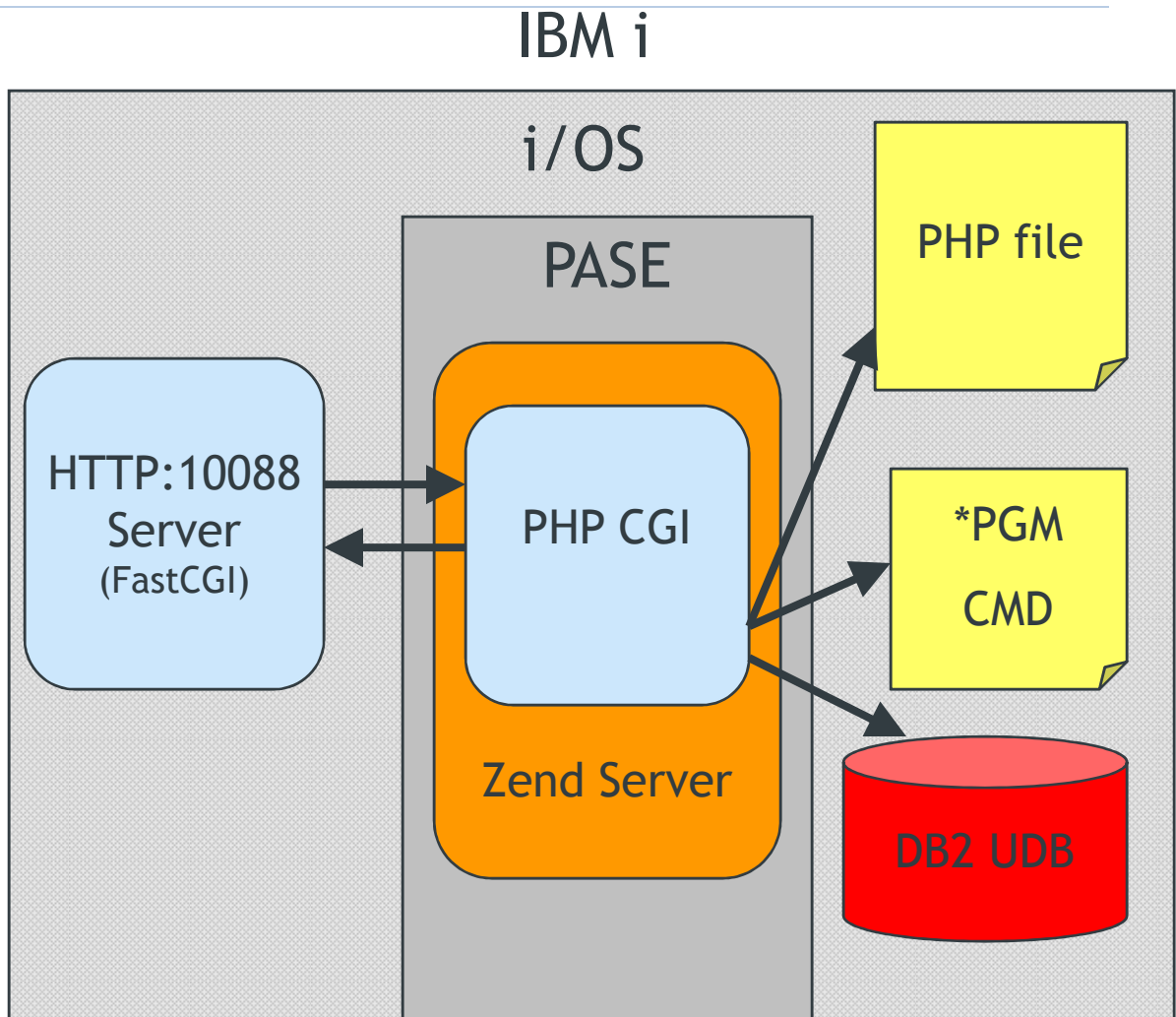
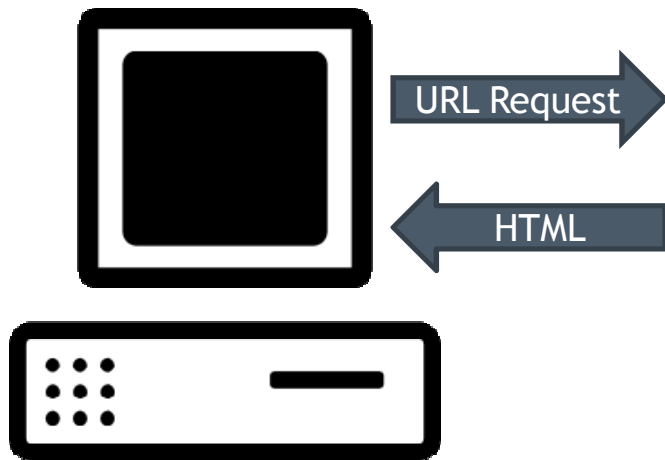
Why a new generation?

- **Based on feedback of key areas for Improvement**
- **Improved basic PHP Performance**
 - ▶ 30% to 600% depending on the application
- **New capabilities**
 - ▶ Code Tracing - Faster problem resolution
 - ▶ Job Queue - Asynchronous PHP script processing (in batch!)
 - ▶ Page Caching - Performance and scalability
 - ▶ Support for PHP 5.3
- **Easier installation, administration & maintenance**

Zend Server Under the Covers

ILE Apache:10088

- Default configuration FastCGI



Zend Server for IBM i

www.zend.com

Installation

Zend Server Installation

- Can install PHP 5.2 or 5.3
- Save File or Windows installer available at Zend.com
- Updated Fast CGI built by IBM requires PTFs
 - ▶ Current group for 57nnDG1 - IBM HTTP Server for i5/OS
 - ▶ http://www-912.ibm.com/s_dir/sline003.nsf/GroupPTFs?OpenView&view=GroupPTFs
 - ▶ V5R4 - Updated!
 - PASE - SI36004 - Updated!
 - HTTP - SI36026
 - ▶ i6.1 - Updated!
 - PASE - SI36005
 - HTTP - SI36027

Zend Core Users

- Can install Zend Server side by side
- Uses new directories
- Uses different port 10088
- Consider running one side at a time
 - ▶ Potential conflict with user based applications.
 - ▶ Other applications
- Once successfully on Zend Server, remove Core
 - ▶ DLTLICPGM

Beta customers

- **Early beta**
 - ▶ Must remove LP and install GA version
- **RC1**
 - ▶ Can apply PTF update
- **How do I know which beta I have?**
 - ▶ Early beta: about screen from Zend Server admin
 - Version Zend Server 5.0 Beta
 - ▶ RC1 beta: about screen in Zend Server admin
 - Version Zend Server 5.0
 - ▶ GA version: Zend Server 5.0.1, nothing more to do.

Zend Server Administration

- New unified interface for all Zend controls
- Multi platform consistency in the interface

- Apache changes
 - ▶ Single server (YAY!)
 - ▶ PASE server eliminated
 - ▶ IBM HTTP Server Powered by Apache
 - ▶ PHP implemented using Fast CGI developed by IBM
 - ▶ Restart button saves round trip to green screen!

File locations

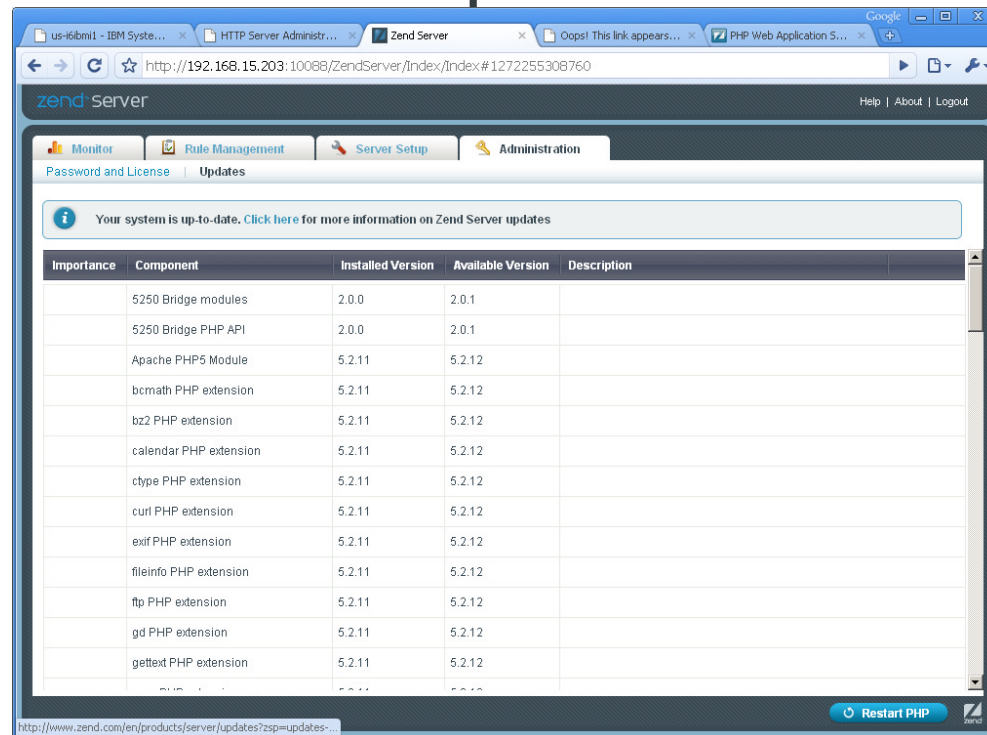
- **Document Root**
 - ▶ /www/zendsvr/htdocs
- **Zend Installation Directories**
 - ▶ /usr/local/zendsvr
- **Zend Framework**
 - ▶ /usr/local/zendsvr/share/ZendFramework
- **PHP binaries (CLI and more)**
 - ▶ /usr/local/zendsvr/bin

Other new defaults

- **Web User**
 - ▶ QTMHHTTP
- **Initial port**
 - ▶ 10088
- **Admin Interface**
 - ▶ <http://yourIBMiNameHere:10088/ZendServer>
- **Nice comparison table of Core vs. Server (Alan Seiden)**
 - ▶ <http://www.alanseiden.com/2010/04/21/differences-between-zend-core-and-zend-server-on-ibm-i/>

Update process

- User controlled PTF
- PTF available from Zend
- Check for updates in Administration panel



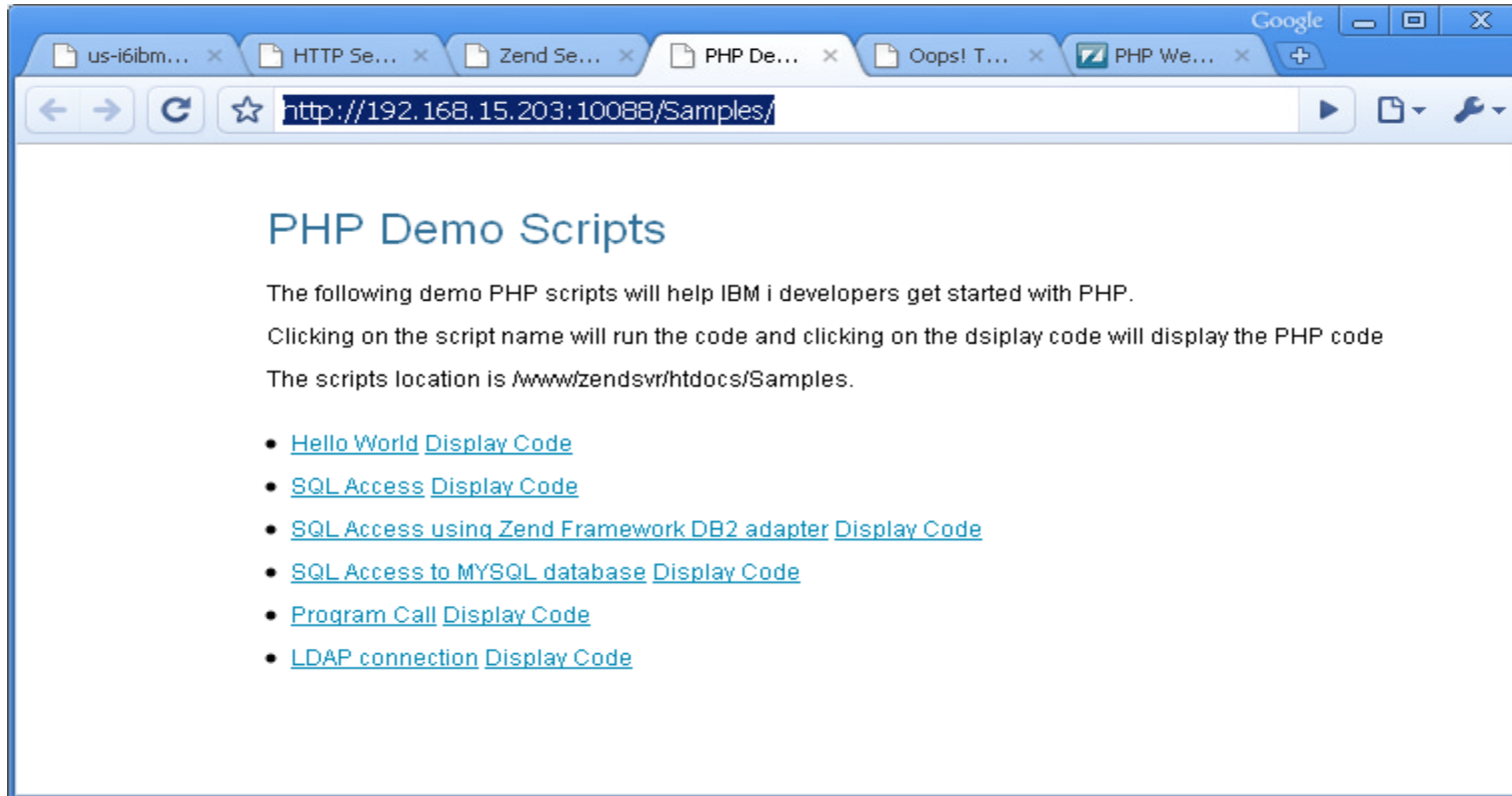
The screenshot shows the Zend Server Administration interface. The 'Updates' tab is active, displaying a message: 'Your system is up-to-date. Click here for more information on Zend Server updates'. Below this is a table listing components, their installed versions, and available versions.

Importance	Component	Installed Version	Available Version	Description
	5250 Bridge modules	2.0.0	2.0.1	
	5250 Bridge PHP API	2.0.0	2.0.1	
	Apache PHP5 Module	5.2.11	5.2.12	
	bcmath PHP extension	5.2.11	5.2.12	
	bz2 PHP extension	5.2.11	5.2.12	
	calendar PHP extension	5.2.11	5.2.12	
	ctype PHP extension	5.2.11	5.2.12	
	curl PHP extension	5.2.11	5.2.12	
	exif PHP extension	5.2.11	5.2.12	
	fileinfo PHP extension	5.2.11	5.2.12	
	ftp PHP extension	5.2.11	5.2.12	
	gd PHP extension	5.2.11	5.2.12	
	gettext PHP extension	5.2.11	5.2.12	

At the bottom right of the table area, there is a 'Restart PHP' button.

Sample scripts

- Free for the install <http://yourIBMiName:10088/Samples/>
- Basic concepts, if you want an application consider Open Source community



Zend Server for IBM i

www.zend.com

Community Edition Features

Zend Server CE vs. Commercial

Feature	CE	Commercial
Certified PHP	•	•
Zend Framework	•	•
Apache integration	•	•
MySQL	•	•
Built-in database connectivity	•	•
Java connector	•	•
Web-based admin	•	•
Debugger	•	•
Bytecode acceleration	•	•
Caching API	•	•
PHP 5.3	•	•
PHP IBM i toolkit	•	•
Page Cache		•
Application Monitoring		•
Code tracing		•
Job queue		•
Software updates and hot fixes		•
Technical support		•

Database resources supported

- **DB2**
 - ▶ db2_connect
- **MySQL**
 - ▶ mysql_connect
- **Microsoft SQL Server**
 - ▶ mssql_connect
- **IBM i PHP Toolkit**
 - ▶ i5_connect

Leverage investments in existing technology

- **Call High level language programs**
 - ▶ RPG
 - ▶ COBOL
 - ▶ CL programs via toolkit
 - ▶ C based API's
- **Call Java Program via Java Connector**
 - ▶ Now part of the both Zend Server and Zend Server Community Edition

Optimizer+

Eliminates what's not needed

- ▶ Opcode cache
 - Caches the PHP bytecode in RAM
 - Significantly reduces disk access
- ▶ Opcode optimizer
 - Optimizes certain code fragments to improve execution speed

Now part of the free Community Edition package

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Commercial Edition Features

Data Caching

Provides a set of API functions for caching data items

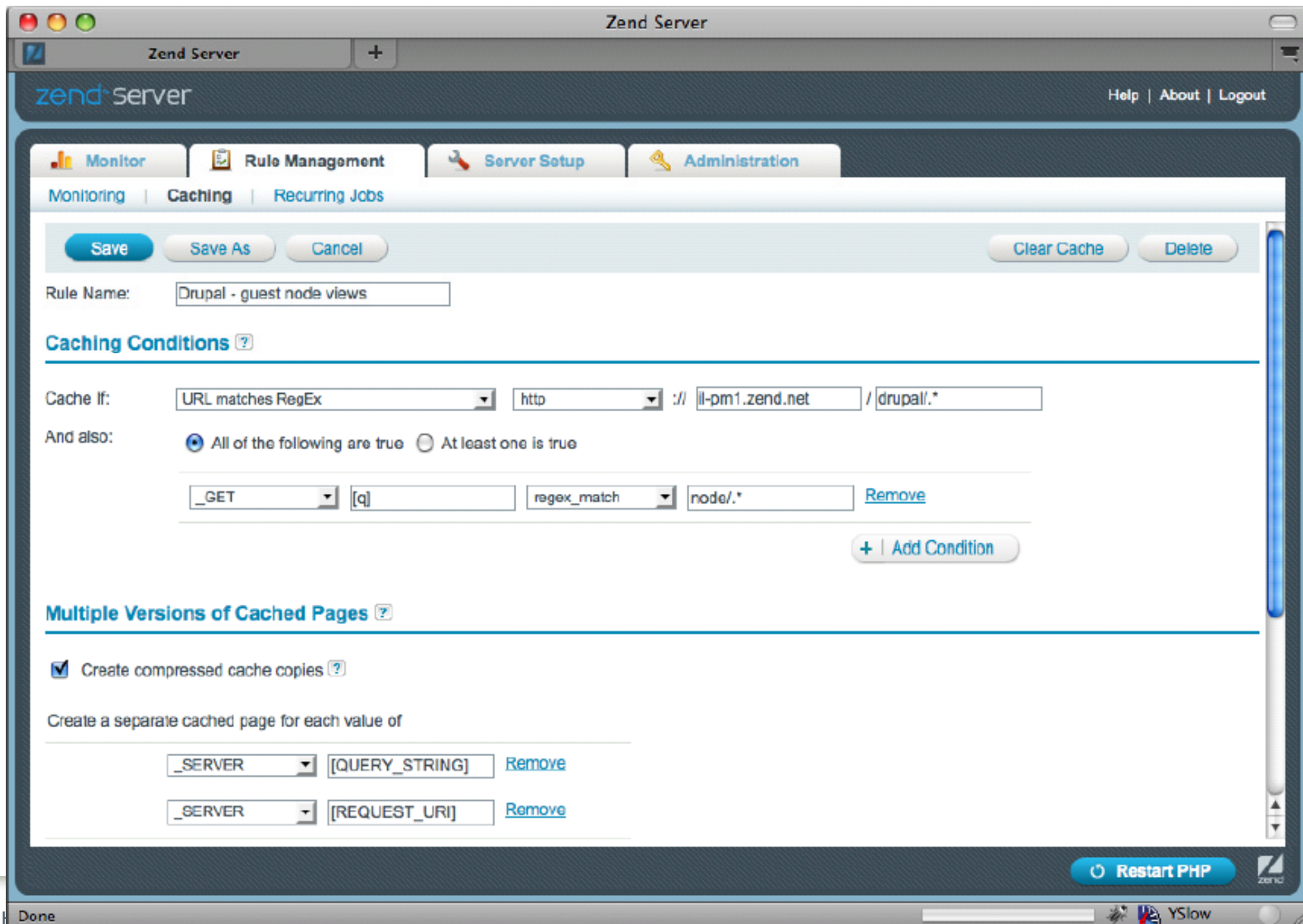
- ▶ DB query results, web service calls, complex or hard-to-get data
- ▶ Output elements
- ▶ Allows skipping slow PHP code chunks
- ▶ Shared memory and Disk storage backends
- ▶ Data can be grouped using namespaces
- ▶ APC user cache compatibility layer
- ▶ Zend Framework Zend_Cache_Backend adapters

Page Caching

Don't execute a single line of PHP if you don't have to

- ▶ Caches entire HTTP response
- ▶ Configured from UI, no code changes required
- ▶ Live / cached decision is based on request or session parameters
- ▶ Variants can be created based on request or session parameters

Page Caching



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Code Tracing

Code Tracing Supported Workflows

- **Monitoring workflow:**

- ▶ When a monitoring event is created, the associated trace data of the specific request is captured
- ▶ Trace data is attached and associated to the monitoring event

- **Manual tests/functional workflow:**

- ▶ Manually through the GUI or from a browser by adding a parameter to the request

- **Production workflow**

- ▶ Can be activated automatically in case of a Zend Monitoring event, for example a PHP error, a slow execution or high memory usage

Code Tracing Enhancements since last demo

- We are working this stuff pretty hard 😊
- Toggle Critical path display
- Toggle Memory display
- Arguments display

Zend Server 5: Technical Overview

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Job Queue

Job Queue allows you to...

- **Put certain tasks into a separate execution queue**
 - ▶ Off-load to new process (or defer to a later time)
 - ▶ Off-load to a different server
- **Execute certain tasks at a specified time**
 - ▶ Distribute processing load to off-hours
- **Execute certain tasks periodically**
- **While..**
 - ▶ Maximizing reuse of existing infrastructure & code
 - ▶ Making sure nothing falls between the cracks
 - ▶ Doing it all from a PHP API

Creating Jobs

- Jobs are created using the `createHttpJob()` method

```
$queue = new ZendJobQueue ();  
$queue->createHttpJob (  
    'http://backend.local/jobs/somejob.php' );
```

- Pass parameters
 - ▶ Simple ones, via query string `$_GET`
 - ▶ Complex ones, as an associative array of key => value pairs
- Set job options
 - ▶ Name, priority, schedule, etc.
 - ▶ Create deferred or recurring jobs
- Or... create from the UI

Resources

- Recorded Webinars

- ▶ <http://www.zend.com/en/resources/webinars/i5-os>

- Zend Server for IBM i main page, link to downloads

- ▶ <http://www.zend.com/en/products/server/zend-server-ibm-i>

- Zend Server manual:

- ▶ PDF: <http://www.zend.com/topics/Zend-Server-5-for-IBMi-Reference-Manual.pdf>

- ▶ Online: http://files.zend.com/help/Zend-Server-5/zend-server.htm#installation_guide.htm

Thank you & Q&A

- If you have a question you can

- ▶ Type in the Q&A panel
- ▶ Tweet #zendwebinar

- Follow us!



▶ <http://bit.ly/cjueZg> (Zend Technologies or search for Zend)



▶ <http://twitter.com/zend>

Q&A

www.zend.com

mike.p@zend.com

*Please fill out your
Session Evaluation!*

A small thumbnail image of a session evaluation form. The form is titled "Zend Business & Marketing Evaluation" and "Professional Development Evaluation". It contains several sections with checkboxes and a grid for ratings. The grid has columns for "Strongly Dislike", "Dislike", "Like", and "Strongly Like". The form also includes a section for "Comments" and a "Date" field.