



Zend
The *php* Company

JavaOne

PHP and Java™ Technology Integration

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TS-9944

Goal of the Talk

Learn the benefits and methods for integrating PHP and Java™ technology

Agenda

Why PHP and Java Technology?

Using PHP-Java Technology Bridges

Demos

Development Tools

Future Directions

Q&A

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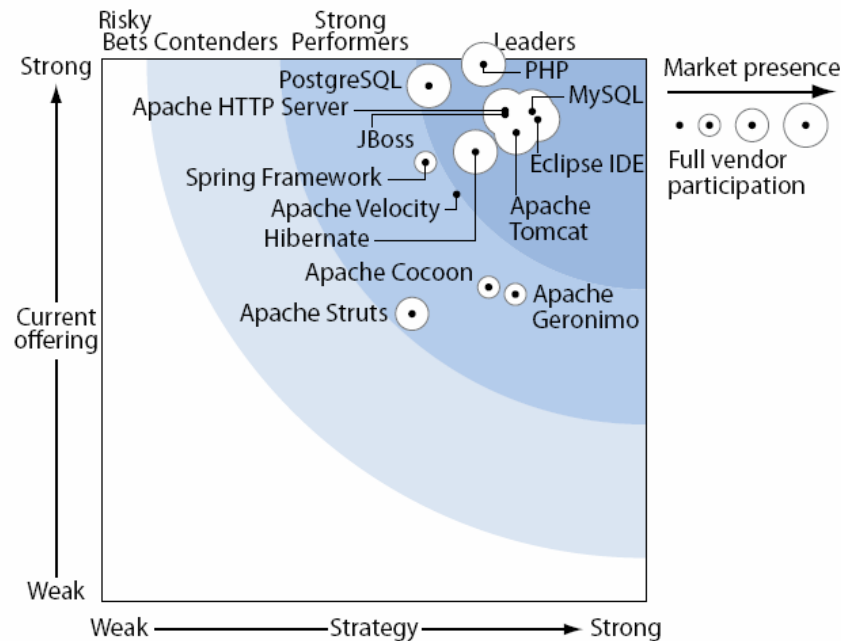
PHP Leads Open Source

June 28, 2006

The Forrester Wave™: Open Source Projects, Q2 2006

by Michael Goulde

Figure 2 Forrester Wave™: Open Source Projects, Q2 '06



PHP and Web 2.0

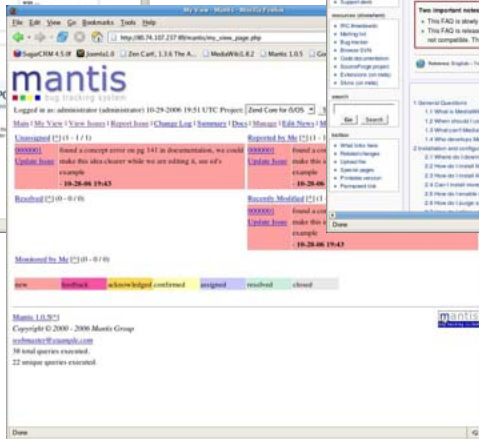


Business-Ready Open Source

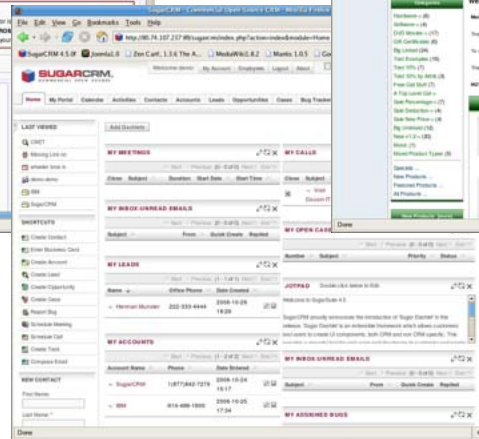
Management

Wiki

E-Commerce



Bug Tracking



CRM







PHP Developers







Developers	2006	%	2007	%	Growth%
Java Technology	5,863	44%	6,806	47%	16%
.Net	6,420	48%	8,176	57%	27%
<i>PHP</i>	4,634	35%	6,426	44%	37%
Total	13,315		14,461		

Recent Survey of Zend's User Base

1. Do you have an interest in PHP / Java integration? (choices 1-3 conclude the survey, but we are still thankful for your feedback!)

No, I only use PHP for personal purposes		22	5%
No, my organization does not use Java		87	20%
No, my org does not (plan to) integrate PHP and Java		84	20%
Yes, and I'll answer the rest of the questions		236	55%
Total		429	100%

Recent Survey of Zend's User Base

13. Please tell us your strategies for integrating PHP and Java applications.			
We do not currently have such strategy		93	39%
We want to integrate PHP and Java, but don't know how		44	19%
PHP and Java apps share access to the same databases		91	39%
PHP and Java apps use Web Services to communicate		75	32%
We use Java Bridge, a Zend Platform technology		14	6%
Other, please specify View Responses		18	8%

Why PHP?

- Simple, intuitive, easy-to-use yet powerful
- PHP is the perfect Web Integration Platform
 - Perfect front-end glue language
 - Outperforms Java platform and other traditional languages in ability to simply interoperate with Web Services, XML, and legacy systems
- PHP gets the job done, fast
- PHP performs and scales (e.g., Yahoo!)
- PHP is backed by a very strong community
 - ~ **500** contributors
 - Thousands of open source projects

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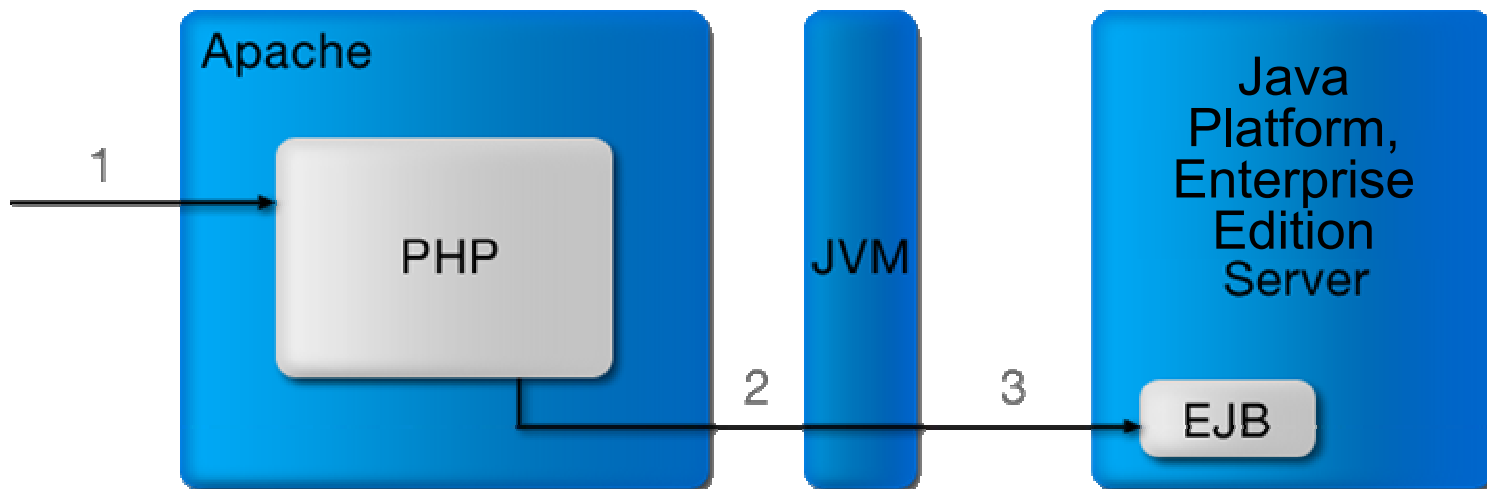
Q&A

Java Technology Bridge

- Currently available options
 - Zend Platform (commercial product)
 - Sourceforge (free, open source, LGPL)
- Excellent for integrating separate pre-existing codebases
- Article on using PHP-Java technology bridges
 - Websphere:
http://www.ftponline.com/channels/java/2006_11/agutsman/
 - Weblogic:
<http://dev2dev.bea.com/pub/a/2007/02/php-java-bridge.html>

Zend Java Technology Bridge

- Contained in Zend Platform commercial product
- Runs under Apache
- Instantiates one JVM implementation per machine
- Obtains WLS resources through Java Naming and Directory Interface (J.N.D.I.) API



EJB = Enterprise JavaBeans™

Zend Bridge Setup

- Download and install Apache (on Windows you may use IIS)
- Download and install Zend Platform
- Add wls-api.jar to system classpath
- Add any classes the PHP script will use to system classpath
- Restart Apache
- When PHP issues “new Java(‘com.x.y’)”, class is loaded

Calling an Enterprise JavaBeans™ (EJB™) via Java Technology Bridge

```
33 function getBean() {  
34  
35     $envt = array(  
36         "java.naming.factory.initial" => "weblogic.jndi.WLInitialContextFactory",  
37         "java.naming.provider.url" => "t3://localhost:7001"  
38     );  
39     $ctx = new Java('javax.naming.InitialContext', $envt);  
40     $home = $ctx->lookup('TraderHome');  
41  
42     return $home->create();  
43  
44 }
```


Interoperating With Websphere EJB Technology

```
1 <?php
2
3 // Get the provider URL and Initial naming factory
4 // These properties were set in the script that started the Java Bridge
5 $system = new Java("java.lang.System");
6 $providerUrl = $system->getProperty("java.naming.provider.url");
7 $namingFactory = $system->getProperty("java.naming.factory.initial");
8
9 $envt = array(
10     "javax.naming.Context.PROVIDER_URL" => $providerUrl,
11     "javax.naming.Context.INITIAL_CONTEXT_FACTORY" => $namingFactory,);
12
13 // Get the Initial Context
14 $ctx = new Java("javax.naming.InitialContext", $envt);
15
16 // find the EJB
17 $obj = $ctx->lookup("WSsamples/BasicCalculator");
18
19 // Get the Home for the EJB
20 $rmi = new Java("javax.rmi.PortableRemoteObject");
21 $home = $rmi->narrow($obj, new Java("com.ibm.websphere.samples.technologysamples
22
23 // Create the Object
24 $calc = $home->create();
25
26 // Call the EJB
27 $num = $calc->makeSum(1,3);
28 print ("<p> 1 + 3 = $num </p>");
29
30 ?>
```

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Demos

- Calling EJB technology from PHP
- Using the PDT with the Zend bridge
 - PHP and Java code debuggers: PHP script calling an EJB technology
 - Editing PHP script: The Eclipse PDT editor



DEMO

<code />

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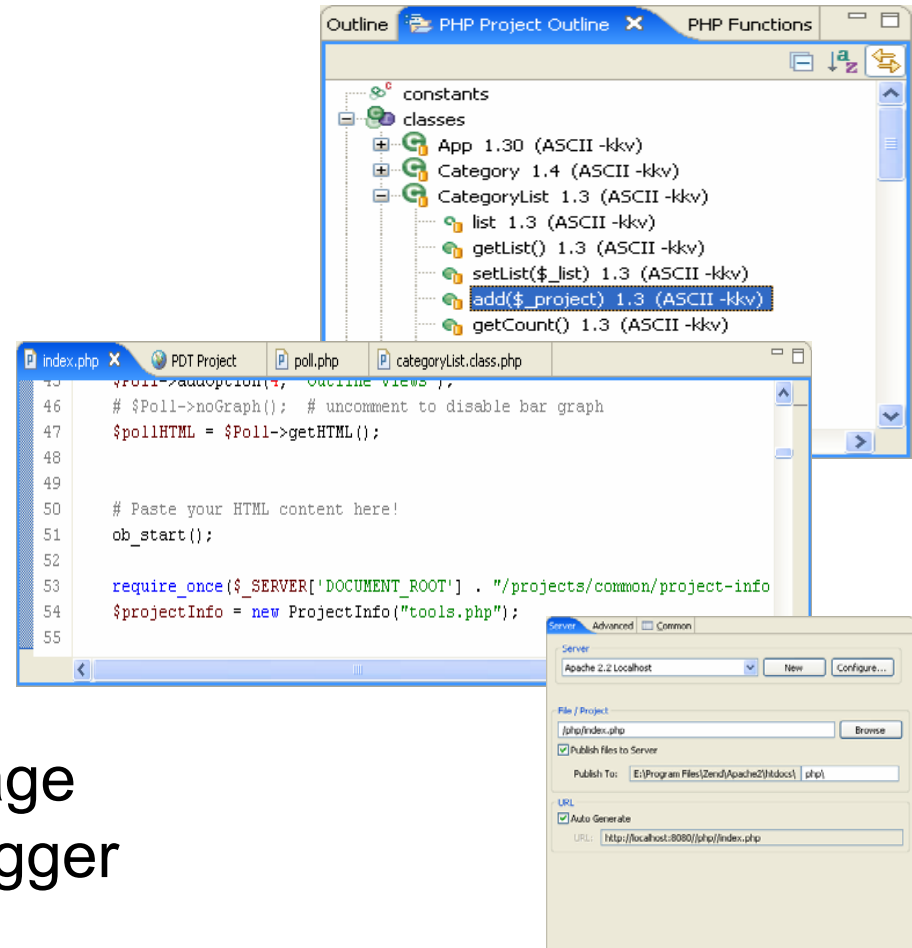
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PDT—Overview

- Open source project since May 2006
- Based on WTP (HTML/XML editor, web services)
- Project led by Zend in corporation with IBM
- Foundation for managing, developing and debugging PHP
- 40,000 downloads a month (third location in Eclipse)

PDT—Features and Components

- Editor
 - Syntax highlighting
 - Code assist
 - Code folding
- Inspection
 - File and project outline
 - PHP explorer view
- Debug
 - PHP script and Web page
 - Support for Zend Debugger and Xdebug (patch)



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- Tighter integration between the Zend Java technology Bridge and Java Platform, Enterprise Edition (Java EE platform) servers
 - Plug-in to Java EE platform deployment
 - Ability to synchronize PHP and Java technology sessions
 - Persistent Java technology objects
 - More flexible and robust language mappings
- Tighter integration between PHP and Java technology development tools



Thanks...Q&A

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