Zend and IBM: Bringing the power of PHP applications to the enterprise

A high-performance PHP platform that helps enterprises improve and accelerate web and mobile application development

Highlights:

- Leverages existing infrastructures and systems to modernize business-critical applications
- Supports rapid PHP application release with web API and a continuous delivery platform
- Delivers unprecedented visibility into the application stack to help improve code quality
- Enhances application speed and performance with caching and queuing capabilities
- Supports ongoing security and compliance efforts through monitoring and auditing features
- Provides robust performance with IBM Power Systems™ servers and IBM POWER8® processors

Enterprises around the world and across industries are tapping into web and mobile applications to accelerate their pace of innovation and unlock new operational efficiencies. From modernizing workflows to updating programs and processes, these applications play a pivotal role in enterprise success.

When developing these applications, enterprises must balance a number of interests and goals. Operations managers, especially those focused on DevOps, want to deploy applications with speed and ease, but they don't want to sacrifice performance or security. Meanwhile, system administrators want to leverage existing infrastructures and systems while preserving business-critical applications and data.

To achieve this, developers need advanced tools and interfaces that can help them write better code more efficiently. And organizations need powerful compute platforms to offer the reliability, availability and security-rich environment necessary to deliver enterprise-wide application performance. The solution from Zend Technologies and IBM helps organizations meet their goals by combining Zend's robust PHP platform with proven IBM systems.

Solution overview

Web and mobile applications present new opportunities for productivity, efficiency and growth to enterprises around the world. While DevOps managers, developers and system administrators alike want to develop and deploy high-quality applications with speed and ease, they also want to preserve existing business logic, infrastructure and security efforts.

Together, Zend and IBM are helping enterprises develop, deploy and manage business-critical PHP applications. Zend Server™ is an application platform for PHP that runs natively on IBM Power Systems™ servers. Together with Power Systems servers and IBM POWER8® processors, the Zend and IBM solution helps enterprise developers deliver cutting-edge web and mobile applications on a trusted platform.

Delivered natively on Linux and IBM i environments, Zend Server includes a certified PHP distribution plus more than 80 certified PHP extensions and libraries. PHP applications integrate smoothly with organizations' back-end business systems and data, such as enterprise resource planning (ERP) and CRM systems on IBM i and IBM AIX® operating systems. This allows businesses to leverage the speed, resiliency and security of their existing systems, while IT departments can reduce network traffic as they don't have to transfer data from back-end systems to an x86 environment.

In addition to helping enterprises leverage existing systems, the solution helps improve application delivery throughout the entire lifecycle — from development to production to deployment to maintenance.

Zend Server supports a continuous delivery platform, which plays a significant role in driving rapid PHP application release. The platform, enabled by Zend Server Web API, delivers continuous integration, release automation, infrastructure automation and application management for a simplified and accelerated experience.

Zend Server's Z-Ray technology, meanwhile, gives developers unprecedented visibility into the application stack. Z-Ray provides insights on how code is running as developers make changes, so they can improve code quality and solve errors or issues before code reaches production. The Z-Ray toolbar is integrated into the browser, so developers have this information (such as SQL queries, functions, errors, warnings and more) at their fingertips — without changing their workflow or installing additional tools.

For even more visibility, Zend Server collects URL performance data and creates performance snapshots that offer critical URL insights, such as the slowest, poorest-performing and most popular URLs. Developers and system administrators can dig into the data by application, timeframe and more or select a single URL to examine its performance over time, including its load on the server, memory consumption and trends. With these snapshots, developers can view real-world requests to identify problems or bottlenecks and find ways to help make the application run faster.

Developers and system administrators can access a number of sophisticated monitoring capabilities through the Zend dashboard. Zend Server monitoring integrates into the PHP runtime environment and detects various events, such as failing functions, slow scripts, database errors and more, for early detection of PHP script problems. If an event occurs, Zend Server collects and reports relevant debugging information to help developers swiftly remedy issues. Zend Server monitoring comes with predefined thresholds that trigger an event, but it can be customized depending on an enterprise's needs.

For organizations with strict regulatory requirements, Zend Server tracks and logs virtually all actions, providing necessary audit trails and audit notifications. For instance, retailers and businesses with e-commerce sites can use Zend Server auditing to prove they are processing, storing or transmitting credit card information in a manner that addresses PCI compliance. Healthcare facilities, too, can rely on Zend audit logs to help ensure that their web and mobile applications address HIPPA requirements.

Zend Server's ongoing monitoring, alerting and deep-visibility capabilities help make it easier for enterprises to maintain application security. If, however, a security issue or vulnerability should occur, Zend Technologies will create and deliver patches or fixes to support the swift resolution of an organization's issue.

To enhance application performance and speed, Zend Server includes such features as Zend Page Cache and Zend Job Queue. Zend Page Cache speeds up recurring access to PHP pages by caching pages that contain dynamic content, helping to improve page load times. Zend Job Queue allows system administrators to execute time-consuming jobs asynchronously. System administrators can also select off-peak hours during which to run jobs that might slow application performance, such as an e-commerce catalog update, to improve the end-user experience.

Meanwhile, robust Power Systems servers with POWER8 processors help support applications' most demanding workloads by delivering dynamic resource allocation. These technologies are specifically designed for compute-intensive applications and can scale up to support workload growth as needed to help applications run faster and more efficiently. The solution also can scale out across server clusters, both on-premise and cloud-based. Zend Session Clustering helps enable session data sharing between servers in a cluster for session continuity and high system availability.

As enterprises grow and change, they can rely on Zend and IBM to support their transformation in size, workload and innovation. Backed by millions of developers, PHP has a proven track record of more than 20 years, providing a reliable, long-term foundation upon which to build business-critical applications.

Solution benefits

Enterprises across industries can use the solution from Zend and IBM to deliver cutting-edge mobile applications faster while leveraging their proven infrastructures and existing systems.

- **Reliable support and security** — By offering extensive visibility into code performance, as well as ongoing monitoring and alerting capabilities, the solution equips system administrators with the tools they need to keep applications highly secure. If an issue should occur, however, Zend provides quick-response support, delivering patches and fixes to help minimize risk exposure. The solution also helps enterprises address regulatory requirements by providing audit trails and audit notifications that support ongoing compliance.

- **Increased productivity** — The solution gives developers unprecedented insight into code quality and performance, so they can solve issues faster, improve code quality and spend more time innovating rather than debugging. Features, like Z-Ray, offer deep and live insights into the PHP elements constructing each page, so developers can quickly identify and correct errors or performance issues before applications move to production. What's more, Zend Server's continuous delivery platform and API plugins support rapid PHP application release.

- **Agile performance, powerful scalability** — Backed by reliable Power Systems servers and POWER8 processors, the solution is able to handle applications' most demanding workloads and can scale up as needed. At the same time, Zend Server's modern and robust architecture allows enterprises to scale out their environments across on-premise and cloud-based server clusters, supporting system continuity and high availability.

Zend and IBM: A closer look

Together, Zend and IBM are helping enterprises quickly develop, modernize and deploy new applications for improved performance and productivity. Components of the solution from IBM may include the following:

- **IBM Power Systems servers** — Built with open technologies and designed for mission-critical applications, Power Systems servers enable application choice, enterprise integration, IT efficiency, data availability and comprehensive security capabilities. The servers deliver intelligent, dynamic resource allocation and rapid response to changes in application, business and workload requirements and are specifically designed for big-data and compute-intensive applications.

- **IBM POWER8 processor** — This advanced processor features cores with scalable simultaneous multithreading (SMT) and uses intelligent threads technology designed to maximize workload performance and run multiple workloads at the same time. POWER8 processor–based systems are designed to scale up to support workload growth as necessary and help applications run faster and more efficiently.

- **IBM i** — IBM i is an integrated operating system, database and middleware solution built for businesses. Native to the IBM Power® platform, IBM i applications deliver world-class performance, dynamic infrastructure flexibility and trusted security. The operating system's built-in virtualization, including workload management, enables clients to run multiple applications together in a single instance of IBM i, driving up system utilization, simplifying the IT environment and delivering a better return on IT investments.

- **Linux on IBM Power Systems servers** — Enterprises can confidently run highly scalable, reliable and flexible Linux environments on POWER8 processor–based servers to deploy new applications or improve the performance of existing applications. Linux is an open-source operating system that leverages the advanced hardware and software capabilities of POWER8 technology to deliver enhanced application performance, portability and scalability. And, with POWER8 technology, Linux and IBM i can run on the same server. Zend Server is available for the Red Hat and Ubuntu distributions of Linux on Power Systems servers.

Zend and IBM: Enabling enterprise innovation

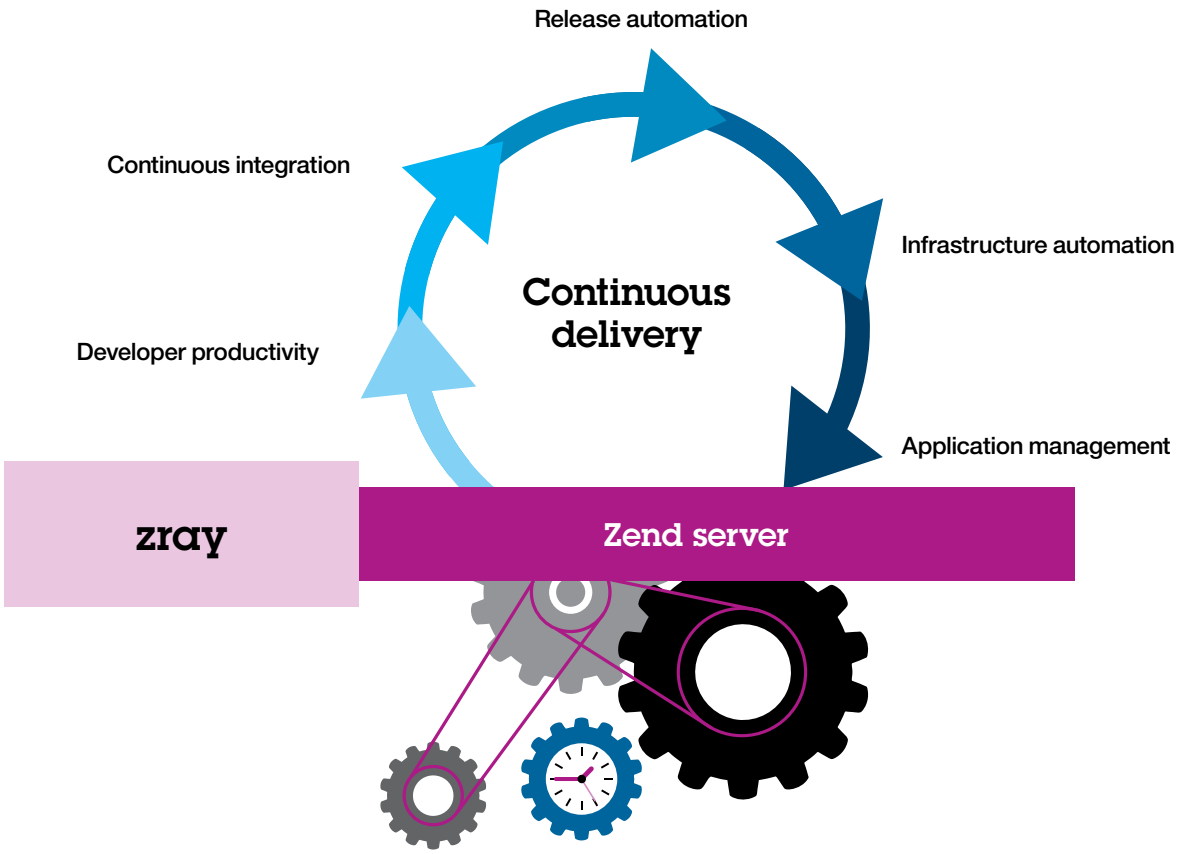
Zend Technologies

Zend Technologies, the PHP company, is committed to empowering companies to deliver innovation faster by helping them use PHP in more-effective ways. With more than 200 million apps and websites running on PHP and 5 million developers, PHP is one of the most popular languages for corporate web development. Zend supports and enables the use of PHP for new applications by providing a platform for the continuous and rapid delivery of PHP applications.

IBM

IBM is committed to helping enterprises across industries support their most innovative and demanding endeavors while uncovering new opportunities for efficiency and productivity. With highly secure, flexible and open platforms like IBM Power Systems servers and advanced processing power from IBM POWER8 processors, IBM provides the tools and technology necessary to support ever-evolving business processes, scales, workloads and environments.

Zend and IBM solution architecture



With a high-performance PHP application platform, unprecedented visibility into code and a robust IT infrastructure, the solution from Zend and IBM helps enterprises develop powerful applications quickly.

For more information

To learn more about IBM Power Systems servers, please contact your IBM sales representative or visit:
ibm.com/systems/power

To learn more about Zend Technologies, please visit:
www.zend.com

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Produced in the United States of America
September 2015

XXXXXXXX-USEN-00