BNP Paribas and Zend: The Bank for a Changing World Adopts Technology for a Changing World

BNP PARIBAS

CUSTOMER:

BNP Paribas is an innovative banking and financial services industry leader, with over €43 billion in net banking income and operations in over 80 countries worldwide.

CHALLENGE:

Accelerate development and delivery of high-performing web applications that help employees connect, stay informed, and provide exceptional client services.

SOLUTION:

BNP Paribas chose Zend Server, Zend Studio and Zend Framework as well as other PHP-compatible technologies.

BENEFIT:

Using Zend PHP solutions in a Linux server environment, BNP Paribas developed more than 700 tools and applications in a fraction of the time and cost that would have been required using previous solutions.

PHP's Origins at BNP Paribas

BNP Paribas is among the world's leading banking and financial services organizations, with operations in 80 countries. Its three core businesses include Retail Banking, Corporate and Investment Banking, and Investment Solutions. Across the global company's core businesses, innovative use of technology solutions helps BNP Paribas meet today's competitive business challenges and serve its customers well – including its the organization's pioneering use of technologies such as PHP.

The 600-employee BNP Paribas IT organization, known as the Infrastructure de Production & Solutions (IPS) group, manages the company's IT production solutions. The IPS group first began using PHP because of its ease of use and flexibility. The fact that Zend, Red Hat, and other vendors were fully committed to the evolution and support of PHP-based open source technologies was another important factor leading to their early adoption at BNP Paribas.

Yannic Mahé, PHP audit manager at IPS group, noted that "We wanted to establish an agile, iterative development environment. We chose Zend because of Zend's intimate knowledge of core PHP technology as one of its creators, its ongoing contributions to PHP's evolution as a platform for enterprise web development, and its strong consulting and support services."

BNP Paribas deployed Zend's integrated PHP stack, including the Zend Server web application server for monitoring and performance optimization, Zend Studio IDE for editing/debugging code, and Zend Framework as its base application framework. For the IPS group, Zend provided a highly productive web application development platform that also made it easy to

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connect web applications to Oracle and MySQL back-end databases, and to leverage popular Drupal and WordPress content management systems. Over time, the platform has evolved to support an average of more than one hundred instances of Zend Server running on Red Hat Enterprise Linux (RHEL).

The IPS group has used Zend and PHP solutions to successfully develop the bank's intranet, several divisional websites and more than 700 banking and financial services applications including simple and sophisticated applications, on both dedicated and shared servers. The applications range from data visualization to the implementation of business-critical workflow processes, including the following:

- **Echo'net**, the corporate intranet for the entire BNP Paribas organization
- The website for **L'Atelier** (www.atelier.fr), a division of BNP Paribas focused on helping companies harness digital technology innovations to position, fund and market their businesses
- **E-credit**, a loan management application allowing employees of the retail banking business to manage the loan lifecycle process for all loan requests

In addition to large-scale applications hosted on dedicated systems, IPS uses several shared platforms to handle smaller, less resource-hungry applications. One such shared platform hosts more than 300 applications enterprise-wide, accessible from any bank branch.

BNP Paribas uses Zend Server's monitoring and alert notifications to help ensure that its applications are performing properly at all times. The corporate intranet handles an average of 3 to 4 million page views per day and its complex workflows average 400,000 PHP requests per million page views – a high volume of traffic that requires rapid insight into how applications are working. Zend Server's Code Tracing feature allows the IPS group to pinpoint the root cause of application errors or bottlenecks, providing a full execution history conveniently in the dashboard so problems can be quickly resolved, and sometimes prevented. The IPS group also takes advantage of Zend Server caching to optimize application performance with significantly faster page load times.

To maximize productivity and standardize development, BNP Paribas has adopted Zend Studio as its standard PHP development tool, used by more than 200 developers. According to Mahé, "Our developers are fully satisfied with the PHP language and Zend's PHP solutions. For certain projects, PHP has enabled them to dramatically shorten the development cycle and accelerate application delivery compared with their previous experiences using Java." Raoul Niangba, PHP Developer at BNP Paribas, adds: "Zend Studio's capabilities enable us to save time in terms of development, debugging and bring us reliable applications in the end."

With the goal of reliable applications in mind, IPS made the decision to use Zend Framework for new PHP development projects. In an effort to standardize development processes and tooling among all BNP Paribas' entities, IPS found it tremendously useful to have a common framework with which they could integrate their own processes and methods. Moreover, using Zend Framework allowed them to benefit from the ways in which Zend's solutions all worked together.

Seeking to further improve the overall performance of Echo'net, the corporate intranet, BNP Paribas engaged the consulting services of Zend and its Solution Partner, Business & Decision Group, to conduct a web infrastructure audit. The audit identified areas for improvement and collaborated with the IPS group to automate and streamline Echo'net development and deployment processes. By leveraging the collective expertise of Zend and Business & Decision, BNP Paribas was able to quickly pinpoint and resolve issues and achieve a major improvement in overall application performance in terms of page load times as well as scalability and reliability.

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"The fresh perspective and knowledge of enterprise-class application development and deployment best practices provided by Zend and Business & Decision Group was ultimately one of the most valuable benefits of our engagement," said Mahé.

Embracing Change

Just as BNP Paribas continues to be at the forefront of the evolution of banking and financial services, Zend continues to be a catalyst for the evolution of PHP in application development for the web plus mobile and cloud computing environments. Zend is not only a key contributor to the PHP language itself, but also a leader within the PHP ecosystem.

According to Mahé, "We intend to increase our competitive business advantage in the global banking and financial services industry, through smart use of PHP application development and deployment solutions such as those provided by Zend."