



Adobe improves scalability and performance with SAP applications and IBM cloud-based solutions

Employing more than 9,000 people, Adobe Systems Incorporated (Adobe) provides tools and services that enable its customers to create groundbreaking digital content, deploy it across media and devices, and then continually measure and optimize it based on user data. By providing complete solutions that combine digital media creation with data-driven marketing, the company helps businesses improve their communications, strengthen their brands, and ultimately achieve greater business success.

With the explosion in publishing and distribution platforms, such as tablet and mobile devices, Adobe is increasingly focused on the digital media and marketing industries. These sectors require very fast response to new trends, which in turn generate demand for new business services that the IT department must satisfy as rapidly and cost-effectively as possible. Adobe runs its business and general

management processes using SAP® ERP applications.

Underlying the SAP software was a traditional server architecture, which over time had led to a proliferation of physical machines.

With multiple instances of SAP applications, each one with production development and test servers, Adobe was running more than 120 machines.

Paulette Scheffer, Senior Director of Core Infrastructure and Service Management at Adobe, explains:

“When I first joined the Adobe team, my primary responsibility was managing the migration of the SAP environment to a new data center. One of the first things I did was enter into a dialog with our internal business unit leaders to get a measure of the quality of IT service within the organization. The most frequently-cited issue with the legacy system was speed. On average, with

Overview

Challenge

As the number and variety of digital publishing platforms explodes, Adobe Systems Incorporated wants to take advantage of new sales opportunities for its media software.

Solution

Adobe chose to move from its traditional IT infrastructure to running its SAP applications in a fully virtualized environment, with private cloud capabilities based on IBM Power servers and IBM PowerVM.

Key benefits

Adobe estimates that the solution will contribute to project savings and cost avoidance of around \$60 million over five years.

Business Challenge

US-based multimedia software company Adobe Systems wanted to take advantage of the explosion in digital media and publishing platforms.

The company's existing IT infrastructure with many physical servers was relatively slow to respond to new business demands, limiting the company's ability to scale cost-effectively and causing delays in responding to new business requirements.

our legacy landscape it was taking four months to provision a single server, which, in a fast-moving industry such as ours, isn't adequate. In addition, I found that we were only using four percent of our total compute power – giving an effective return of just four cents to the dollar.”

“In order to solve these problems, we had to make wholesale changes to the way we were running our infrastructure.”

Strategic view

Adobe ran more than 122 SAP applications, from core financial management through customer relationship management to supply chain management.

Ashraf Omar, Manager of the SAP Basis Team at Adobe, continues: “We depend on SAP to calculate our financial figures for Wall Street every quarter- and year-end. SAP is also instrumental to the smooth running of our e-commerce site, as it creates sales orders, checks the validity of credit cards, and handles shipping. If the SAP applications are down for even a few hours, we lose a lot of income.”

“As our business was expanding, so was our SAP environment. We were regularly installing new SAP

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Paulette Scheffer

Senior Director of Core Infrastructure and Service Management
Adobe Systems Incorporated

components and new servers, and it was becoming a real struggle to fit them into the data center. We had numerous physical servers, some new, some old, some large, some small, and it was becoming extremely difficult and costly to manage them all.”

Need for a new approach

Adobe wanted to gain the agility to respond to the demands of business growth and the changing business model, and invited other competitive vendors to propose solutions. Paulette

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Ashraf Omar

Manager of the SAP Basis Team
Adobe Systems Incorporated

Scheffer comments, “We were really trying to push the envelope and think about things differently, and that meant bringing in external resources.”

“The IBM team hit the ball out of the park. In addition to addressing the technical challenges of the solution, they took the future direction of the business into account – that really set IBM apart from the pack. In fact, IBM’s vision was so impressive that it forms the whole basis for the strategy that we’re deploying today.”

Consolidating the server landscape with IBM

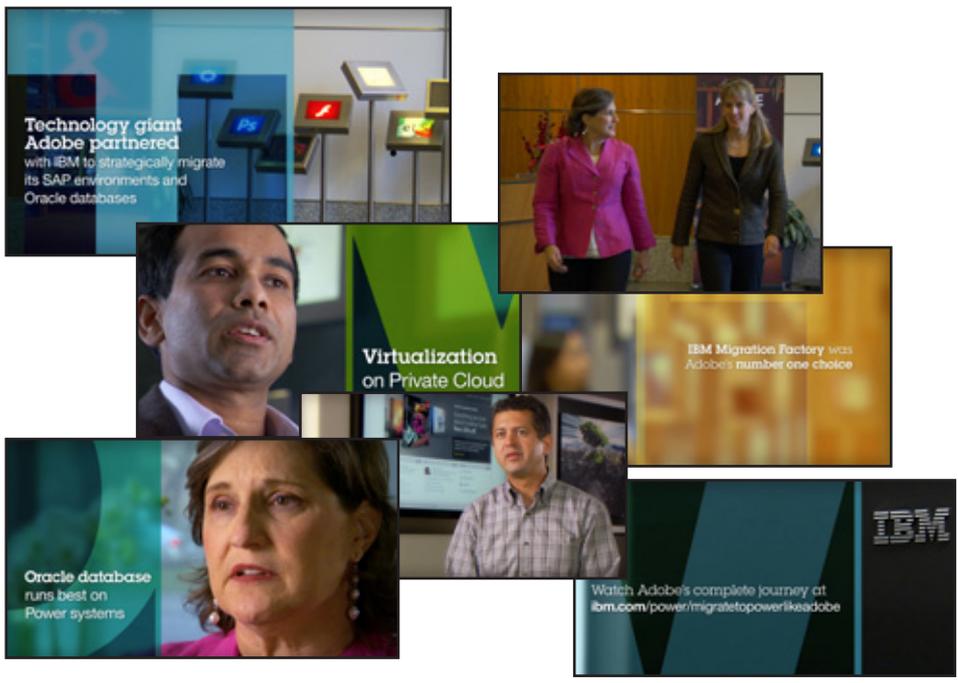
IBM proposed the introduction of end-to-end virtualization and the provision of services using cloud computing techniques, the most important of



Solution

Working with IBM, Adobe Systems moved from a traditional server environment to a fully virtualized environment, with private cloud capabilities based on IBM Power servers and IBM PowerVM.

Hundreds of standalone servers and business-critical SAP systems and Oracle databases were consolidated to just five IBM Power 770 servers running IBM PowerVM software.



Key Solution Components

Industry

Computer Services

Applications

SAP® ERP

Hardware

IBM Power® 770 servers

Software

IBM AIX®, IBM PowerVM®, Oracle

Services

IBM Global Technology Services® – IBM Migration Factory

which was automated provisioning. This would allow more than 100 physical servers to be consolidated to just a handful of high-performance IBM Power® 770 servers, releasing valuable data center real estate.

More importantly, by switching to virtual servers, implementation of new services in answer to business requests could be cut from months to just a few hours, using the private cloud model.

With the help of the IBM Migration Factory, Adobe implemented five IBM Power 770 servers virtualized with IBM PowerVM® software. Each server contains multiple virtual servers using logical partitions (LPARs), and processor, memory and network resources can be assigned to each LPAR according to the predicted workload. Adobe is able to set the LPAR resource allocations by defining the priority of the workload, and PowerVM automatically and dynamically ensures that each LPAR is able to meet its performance and service level targets.

Because the LPARs can share access to all the available server resources, any individual LPAR can dynamically gain access to more processing power out of a shared resource pool than a single physical server would be able

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Management
Adobe Systems Incorporated

to provide. Conversely, when a given system has less workload than usual, its resources are made available as spare pool resources to be consumed by LPARs where needed. This makes the most efficient possible use of the system's capacity at any given time.

“It made sense to migrate our Oracle databases to the new system, as we

pay license fees based on number of CPUs that we have on their servers,” says Ashraf Omar. “Running Oracle in a lean environment with fewer CPUs means that we save a great deal on previously expensive overheads.”

Migrating to the new landscape

With the new servers installed, the key step was moving business-critical SAP applications and Oracle databases from the legacy servers to the new IBM Power 770 servers. Adobe engaged the IBM Migration Factory to assist with the transition.

Paulette Scheffer comments, “We were really impressed by how smoothly the migration went. From the very beginning, we invited IBM to sit down with us at the planning table, and we all worked as a single team.”

“I think it was that integration between our two organizations that got us to where we needed to be. The IBM Migration Factory did an outstanding job. The total program took six months, and once live the entire environment was stabilized in a matter of days.”

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After fine-tuning the solution, Adobe found that it was getting far greater value than from its legacy hardware.

“We actually achieved the exact same performance on SAP using only half of the compute and memory resources of the legacy solution, and we were getting as much out of our landscape as we possibly could,” says Paulette Scheffer. “For a lower cost, we were able to achieve the exact same performance. By investing the money we saved on additional capacity, we actually improved performance worldwide on SAP, which has been a big home run for us, as SAP performance had always been a big challenge in the past.”

Significant savings

The virtualized IBM Power 770 server platform enables Adobe to achieve exceptional business agility. Internal demands for new services such as SAP instances and other software that in the past would have required

Business Benefits

- **Adobe Systems estimates total project savings and cost avoidance in physical systems, license fees, maintenance costs, and energy from their IaaS Project will come to \$60 million over five years, and the IBM and SAP portion contributed to that number.**
- **The optimized infrastructure and simplified landscape makes the solution easier and more cost-effective to manage.**
- **Servers that previously took weeks to procure and set up can now be enabled in a matter of hours, greatly speeding the time to market for new offerings.**

Watch the IBM video on Adobe Systems Incorporated



<http://ibm.biz/BdxXkH>





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a new physical server, taking months to specify, install and deploy, can now be satisfied in hours. The wider IT transformation project at Adobe Systems is expected to save or avoid around \$60 million in costs over five years. Ashraf Omar explains, "Before the migration, if a project required hardware for a new application or a new solution that we were building, we would have to go to our vendor, complete a sizing exercise, purchase the hardware, wait for it to be delivered, then wait for the data center to set it up, before finally hooking it up to the network."

"Thanks to the IBM solution, our internal customers can now go to a web page and fill out a form. By next day, we've provisioned an LPAR, with the CPUs and memory that they need for their new system, which saves both time and money." Ashraf Omar continues, "After the migration was complete, we went from more than a hundred physical servers to just five. The massive reduction in our server footprint from 120 machines to five Power 770 servers has cut our energy costs and carbon footprint significantly."

The former servers were typically utilized between 10 to 15 percent, and although the total processing

capacity was high, Adobe was unable to use it effectively. In the virtualized server environment, the total compute capacity can be more accurately sized to meet the average maximum requirements, with processor utilization in the high 80 percent range. Additionally, with fewer processors, Adobe operating system and database license fees have been cut dramatically, by approximately 40 percent.

Future-ready, hassle-free

The virtualized server landscape has enabled rapid response to changing business demands, and greatly enhanced system flexibility. If total workload grows, Adobe is able to add processing capacity to one or more of the Power 770 servers, which will then be available to any participating LPAR.

Ashraf Omar concludes, "In the past, we were always worried about the future. We had to pay close attention to make sure that databases didn't outgrow their servers, as scaling out was a major operation that entailed upheaval costs and potential business risk. Now we have peace of mind; should we ever require additional capacity, we need only ask IBM to remotely activate additional processors in the Power 770 servers and we can move to production right away."