

PlateSpin Helps Essent Consolidate Three Data Centers Into One, Saves Company EUR 2 Million

Essent, the leader in the Dutch energy market, recently completed a major data center consolidation effort that involved the physical-to-physical migration of 260 server workloads from HP to IBM servers and the physical-to-virtual migration of an additional 50 workloads to a VMware virtual environment. Using PlateSpin, Essent was able to easily migrate all workloads in one month with a team of fewer than eight people.

The Challenge

In 2006, Essent, a Dutch energy company that supplies electricity, gas and heat to private and business customers in the Netherlands, Germany and Belgium, embarked on a major initiative to consolidate three data centers into one central location. One of these data centers was located in a rented office facility that Essent wished to leave, so the project team had a firm deadline for decommissioning this data center by the end of 2006.

By consolidating data centers into one primary data center located in the south of the Netherlands, Essent's architects had the goal of standardizing their IT infrastructure and bringing more consistency to all architecture layers. Server workloads would be moved from the variety of HP servers to new standard building blocks on IBM hardware.

With some 700 Wintel servers, Essent's primary data center was already large and growing by approximately 100 servers per year. The company faced a number of challenges in accommodating this rapid growth including a lack of floor space and server capacity, as well as power and cooling shortfalls. Moreover, a lot of Essent's primary data center servers were underutilized or used only periodically for specific, time-limited tasks. Essent had the

goal of reducing the physical footprint in their data center through virtualization. By reducing the number of physical servers, Essent could lower its total cost of ownership (TCO). The resulting architecture would also be more mature and would have fewer single points of failure.

Essent understood that a data center consolidation on this scale would require considerable upfront planning and expert execution. Moreover, the company would be relocating 180 mission-critical servers from a secondary data center that supported Essent's most profitable business unit. These systems handled energy trading, or the buying and selling of power, as well as steering the production of energy.

"Much like the stock market, energy trading depends upon buying and selling power at precisely the right moment," explains Marco Spoel, Project Manager, IT Infrastructure, Essent. "If you're a minute off, you can lose a million euros. This places a high demand on the availability of the infrastructure. We couldn't simply power down these critical servers and ship them by truck to our primary data center. The consolidation had to be completed with as little business disruption as possible."

The Data Center Initiative at a Glance

About Essent

- The leader in the Dutch energy market
- Turnover of EUR 6.4 billion in 2006
- Annual IT budget of EUR 130 million
- 12,000 employees and 800+ IT staff

IT Environment

- Three geographically dispersed data centers
- Wintel server infrastructure (HP and IBM hardware)
- VMware ESX Server 2.5
- Majority of data center servers underutilized
- Insufficient power supply to accommodate rapid infrastructure growth

Project Highlights

- Consolidate three data centers into one central location
- Migrate to new hardware (P2P) without system rebuilding
- De-risk system and workload movement activities
- Reduce physical server footprint in the data center
- Standardize IT architecture
- Accommodate many common workload movement scenarios within a single technology investment
- Reduce total cost of ownership (TCO)

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– Marco Spoel, Project Manager, IT Infrastructure, Essent

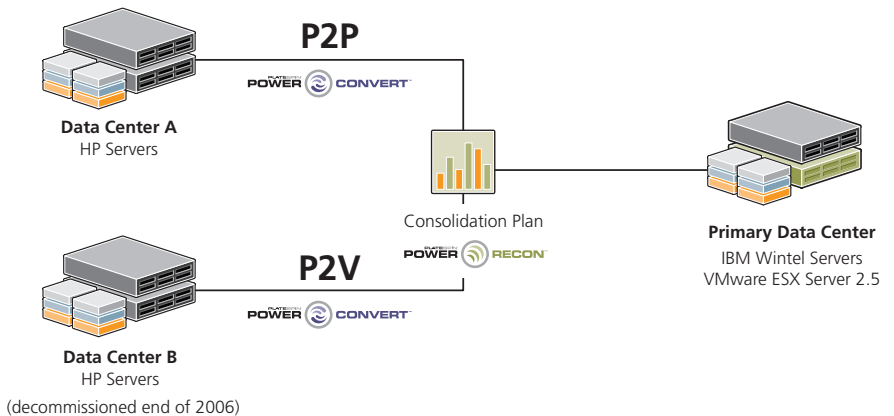
The Solution

With a firm timetable for completing the consolidation, Essent began to search for vendors and implementation partners who could assist in the consolidation effort.

"Initially, we looked at VMware to perform our physical-to-virtual (P2V) migrations, but we realized that physical-to-virtual wasn't our biggest problem," says Spoel. "What we really needed was a broader solution set that could also simplify physical-to-physical (P2P) workload migrations and greatly reduce the business risks associated with having to physically move servers and rebuild every application from scratch. We liked PlateSpin's ability to provide anywhere-to-anywhere workload migrations – not only physical-to-virtual, but also physical-to-physical and virtual-to-physical. By enabling many different workload movement activities, PlateSpin PowerRecon and PowerConvert proved that they would be useful for both our data center consolidation project and the ongoing operational requirements in our data center – all within a single software, support and training investment."

PlateSpin's unique anywhere-to-anywhere workload profiling and portability technology enables organizations to remotely profile, move, protect, and provision workloads in any direction between physical and virtual hosts – physical-to-virtual, virtual-to-physical, physical-to-physical, in and out of imaging formats and so on. This flexibility ensures optimal data center efficiency and enables organizations to better address common challenges such as end-of-lease hardware migration and periodic necessities such as the de-virtualization of applications (virtual-to-physical or V2P).

"We needed virtual-to-physical migration for two reasons," Spoel explains. "V2P provides a means of troubleshooting applications and pinpointing whether issues are caused by the application itself or the virtual layer. This was necessary to get our business units to accept the adoption of virtualization. V2P also gives us a way to easily scale out of the virtual environment should the growth of an application require it. Some of our applications start out with a



Remote physical-to-physical and physical-to-virtual workload streaming saved Essent time and effort in consolidating its data center.



About PlateSpin PowerConvert

PlateSpin PowerConvert automatically streams workloads between physical servers, blade infrastructures, virtual hosts and image archives over the network with a simple drag and drop. PowerConvert decouples data, applications and operating systems from server hardware, reconfigures and optimizes resources and automatically streams workloads to any virtual or physical platform.

dozen users and rapidly grow to hundreds of users, requiring them to be moved to a more robust physical server environment.”

After due diligence, Essent purchased an 800 server PlateSpin PowerRecon and PowerConvert package through PlateSpin Platinum Partner, PQR. “PQR performed the initial proof of concept, and later took an expert role in training our project and operational teams in the use of PlateSpin software,” Spoel says.

Making it Happen

PlateSpin PowerRecon was used to remotely monitor the server environment and obtain an accurate and detailed view of the entire data center landscape including server inventory and utilization metrics. PowerRecon enabled Essent to quickly and easily identify which servers were the ideal candidates for virtualization. After this assessment phase, PlateSpin PowerConvert was used to execute Essent’s consolidation plan and perform all the physical-to-physical and physical-to-virtual workload migrations quickly and easily with minimal business disruption.

“If we hadn’t gone with PlateSpin, it would have taken a team of 25 half a year to build all the applications in the consolidated data center at an estimated cost of over EUR 3 million,” says Spoel. “With PlateSpin, we were able to migrate all of our servers in one month with a team of less than eight people. The PlateSpin solution is really inexpensive and brings a high return of investment. In retrospect, after seeing the time and cost savings, we would have been willing to pay a lot more for the PlateSpin solution.”

While the migrations went smoothly for the most part, Essent did encounter issues. “The enterprise-grade IBM hardware to which we were migrating required very specific hardware drivers,” says Spoel. “We used PlateSpin’s support organization extensively to address these driver issues. Whenever we encountered an issue, PlateSpin support issued a new boot image with proper drivers within a couple of days. PlateSpin’s support organization was much better than many other vendors.”

To date, PowerConvert has been used to rapidly migrate over 260 server workloads from HP hardware to IBM servers. In addition to these P2P migrations, PowerConvert was also used to migrate approximately 50 servers to VMware ESX Server 2.5, reducing the physical footprint in the consolidated data center by 7-8%. The use of virtualization and blade servers has helped Essent address power and cooling issues in the consolidated data center, a major concern for the company, which has a commitment to conservation and environmental responsibility.

“The PlateSpin solution saved Essent about EUR 2 million for the data center consolidation project alone,” says Spoel. “However, the real savings are invisible. PlateSpin made it possible to complete our data center consolidation without any costly business disruption and reduced the risk of such a large scale IT initiative to an acceptable level. Although it’s difficult to put a price tag on business continuity, the value to our organization over time could easily be in the order of hundreds of millions of euros.”

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About PlateSpin PowerRecon

PlateSpin PowerRecon provides new levels of intelligence for consolidating and optimizing the data center by collecting hardware and software inventory and utilization metrics across thousands of servers with zero manual effort. PowerRecon remotely captures server resource capacity and workload utilization statistics to determine optimal server consolidation and disaster recovery plans.

The Road Ahead

This is likely just the beginning of Essent's virtualization initiatives. Now that the concept of virtualization has been proven, Spoel expects more and more of Essent's server infrastructure will be earmarked for virtualization. In addition to further virtualization initiatives, Essent also plans to move towards a managed data center services model in the future. Spoel believes that physical-to-physical migration is the only way to feasibly make this transition.

"Given the ease with which we can perform P2P and other migrations with PlateSpin, and the speed with which we can get the resulting servers up and running, we expect the PlateSpin solution will play a key role in our infrastructure for a long time," says Spoel. "In the future, we may also use PowerConvert to seamlessly migrate from VMware ESX Server 2.5 to VMware Infrastructure 3."

"PowerRecon provides us with a powerful capacity planning and analysis solution for all our current and future data center initiatives. We run PowerRecon prior to every virtualization project to monitor our entire infrastructure and find candidates for virtualization," says Spoel.

Essent views PlateSpin not as a project-based purchase, but a long-term infrastructure investment, and has purchased a multi-year maintenance agreement with the company.

"The energy industry in which we operate has a high degree of merger and acquisition activity," says Spoel. "Essent typically buys smaller energy companies once or twice a year. Having PlateSpin solutions in our data center will make it possible to complete the IT consolidations associated with M&A activity with relative ease. Now that we have PlateSpin as part of our standard infrastructure, we know exactly what shutting down another data center will cost, how we will do it and how long it will take. PlateSpin gives us an easy and repeatable process for P2P, P2V, V2V and V2P migrations, and much greater operational flexibility than we ever had before."

PQR

PQR is a leading value added solution advisor based in The Netherlands. PQR brings specialized expertise in the design, delivery and implementation of server and storage solutions, security and IP. Areas of expertise include consolidation and virtualization, information lifecycle management, business continuity, server-based computing, application deployment and ICT management services. PQR is a PlateSpin Platinum Partner. For more information, visit: <http://www.pqr.com/>.

PlateSpin Ltd.

PlateSpin provides the most advanced data center automation solutions designed to optimize the use of server resources across the enterprise. PlateSpin technology liberates software from hardware and streams server workloads over the network between any physical or virtual machine. Global 2000 companies use PlateSpin solutions to lower costs, improve service levels and solve today's most critical data center challenges including server consolidation, disaster recovery and hardware migration. For more information, visit: <http://www.platespin.com>.



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