insiderPROFILES

This article appeared in the OCT ■ NOV ■ DEC 2012 issue of *insiderPROFILES* (http://insiderPROFILES.wispubs.com) and appears here with permission from WIS PUBLISHING.

WIS pubs

Virtualization — The Enovos Way

How One European Utility Divides Business Operations and SAP Environments with a New Virtual Platform

by **David Hannon**, Senior Features Editor

When Luxembourg-based energy provider Enovos Group learned that it had to separate its activities of grid operator and energy provider to comply with regulations enacted by the European Union, the IT organization faced a unique challenge. Dividing its business operations essentially meant that the company would have to replicate the majority of its SAP data so it could reside in two distinct environments. To achieve this duplicated landscape, Enovos did not want to build an entirely new data center and, therefore, researched a variety of other options that could solve this business dilemma.

"To separate our operations and systems without virtualization, we would have had to duplicate all of the physical servers, the storage that is required, and the networking components."

— **Paul Van den Abeele**, SAP Solution Architect, Enovos

After careful consideration and planning, the company elected to migrate its SAP systems onto a new, more stable virtualization platform — with the hopes that this platform would provide the flexibility to duplicate and divide the SAP systems as needed without negatively affecting the performance of those systems or the business as a whole.

Separating Systems and Operations

The mandate from the European Union created a complicated business change for Enovos, especially considering the company's role in providing natural gas, electricity, and renewable energy to customers in several European markets including Luxembourg, France, Belgium, and Germany. To comply with the mandate, the company was required to create two distinct companies: *Enovos Luxembourg*, focusing on energy sales within its various markets, and *Creos Luxembourg*, owning the gas and electricity lines and handling energy transmission. Both companies operate independently under a single holding company, *Enovos International*.

The separation process, which began in 2005 and is still ongoing, has been a gradual one with specific milestones to achieve each year. Some business operations were divided between the two units, but others, including the IT organization, remain centralized at the holding company. IT was tasked with determining, together with the different business units, what applications each business would use, what data should be duplicated or divided, and how to ensure complete separation of the two landscapes.

Paul Van den Abeele, SAP Solution Architect at Enovos and one of the key players in this IT initiative, says, "Our exact requirements were evolving as we progressed through the process of reviewing our SAP landscape. We encountered a number of IT-related decisions we could not have predicted, and we continually discover new applications that we need to duplicate. If we had to buy more hardware or disk space each time we had to duplicate an application, it would significantly delay the separation process."

Virtualization was the answer that would provide the needed scalability and flexibility. Enovos had experience with virtual servers as far back as 2005 when it began using VMware solutions in its data center. In fact, the IT organization had already virtualized all but six of its 25 SAP systems. Having been an SAP customer since 1997, the SAP landscape at Enovos has grown significantly over time and includes applications such as SAP ERP, SAP NetWeaver Business Warehouse (SAP NetWeaver BW), SAP ERP Human Capital Management (SAP ERP HCM), and the SAP for Utilities industry solution. The company's extensive history with both SAP software and virtual servers gave the IT team enough knowledge to understand the advantage that virtualization could provide in dividing its SAP landscape and data.

"To separate our operations and systems without virtualization, we would have had to duplicate all of the physical servers, the storage that is required, and the networking components," says Van den Abeele.

Building the Right Platform

Before diving head first into splitting up the SAP landscape, the IT organization at Enovos decided to focus first on finding and implementing a stable, standard infrastructure platform on which it could build its virtualized environment. With that kind of stable platform in place, dividing data and applications across the two businesses would be much more repeatable and make the overall environment more reliable.

As Van den Abeele explains, the IT team set three top priorities when looking for a virtualization platform:

- **System performance.** The benefits brought about by virtualization could not come at the expense of performance. For example, the performance of the company's customer service systems has a direct impact on business, and any dip in system performance would immediately affect the bottom line.

- **Secure system separation.** "We knew down the road we would need to show regulators that we separated the data between the companies," Van den Abeele says. The platform selected would need to be able to divide the various SAP environments securely so the two business units could not access each other's data.

- **Single point of contact.** In some of Enovos' previous work with virtualization, the company experienced the challenge of collaborating with different vendors for the various aspects (storage, networking, and virtualization). Having a single provider or point of contact for those areas would be a major timesaver.

Finding the Perfect Fit

With its business and technical requirements clearly documented, Enovos went out to the market to find its virtualization platform. After an extensive review, the company selected FlexPod, which combines the Cisco Unified Computing System (UCS) platform as a networking solution, VMware virtualization technology, and storage capabilities from NetApp in a prevalidated "packaged" solution. (See the sidebar at the end of the article for a more technical look at the Cisco UCS platform.)

The main driver for Enovos choosing FlexPod was the flexibility the platform provides to successfully manage the unbundling process for the company's SAP applications. Other important factors contributed to the decision process, including:

- **Service levels.** The IT department has to service the Enovos Group and all its affiliate companies, which have legacy solutions with high availability requirements and also high service-level agreements to guarantee.

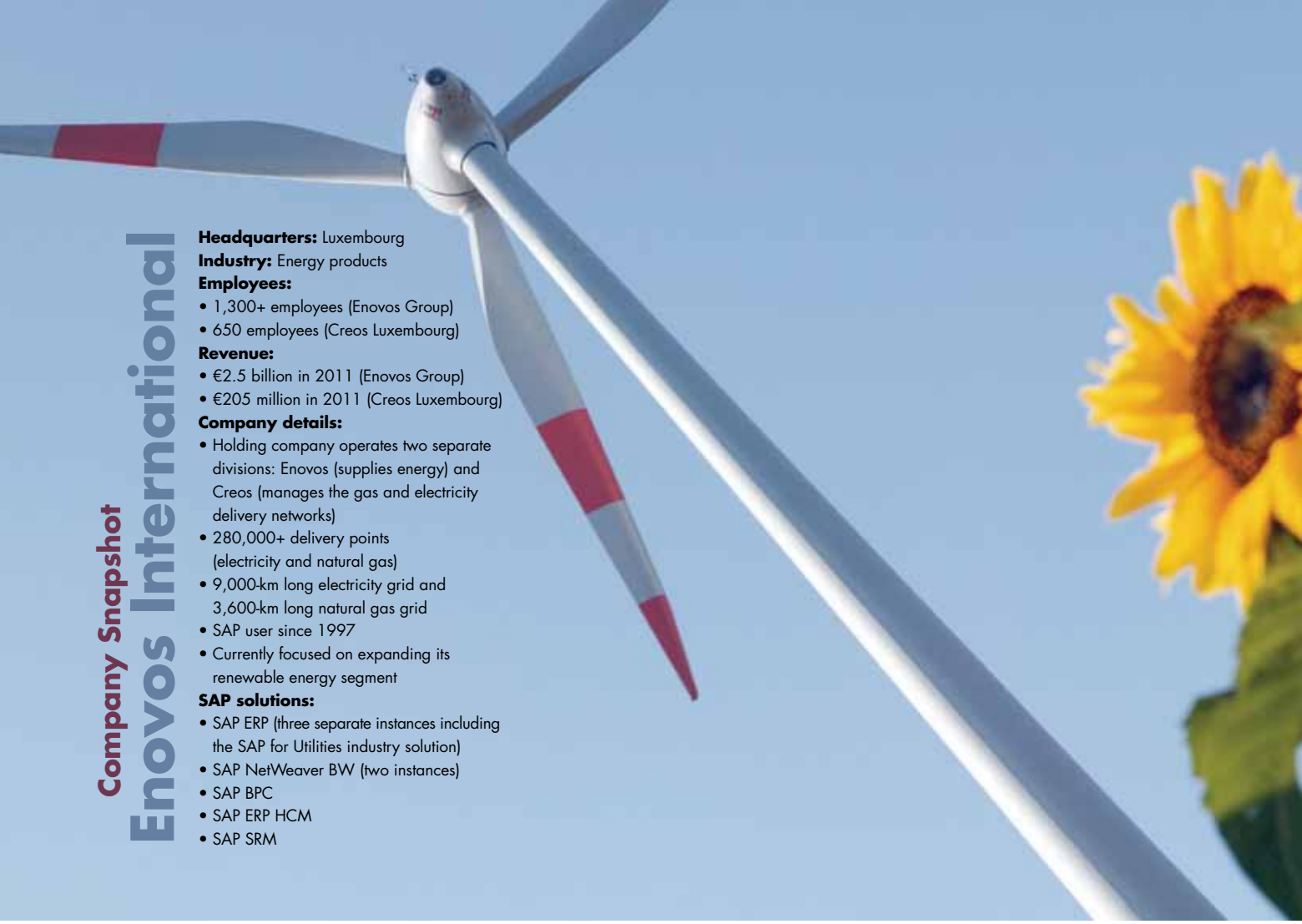
- **Controlled costs.** The company's quickly evolving applications and various infrastructure needs must be handled with controlled costs and in a stable infrastructure to avoid constant additions and increased expenses.

At a Glance

Objective: Reconfigure the SAP environment so that two business units can operate secure, flexible, and completely separate SAP virtual systems

Solution: Implemented the FlexPod package as the platform for the new virtual environment

Benefit: Better system performance with more flexibility, higher availability, and faster response times



Company Snapshot
Enovos International

Headquarters: Luxembourg
Industry: Energy products
Employees:
- 1,300+ employees (Enovos Group)
- 650 employees (Creos Luxembourg)

Revenue:
- €2.5 billion in 2011 (Enovos Group)
- €205 million in 2011 (Creos Luxembourg)

Company details:
- Holding company operates two separate divisions: Enovos (supplies energy) and Creos (manages the gas and electricity delivery networks)
- 280,000+ delivery points (electricity and natural gas)
- 9,000-km long electricity grid and 3,600-km long natural gas grid
- SAP user since 1997
- Currently focused on expanding its renewable energy segment

SAP solutions:
- SAP ERP (three separate instances including the SAP for Utilities industry solution)
- SAP NetWeaver BW (two instances)
- SAP BPC
- SAP ERP HCM
- SAP SRM

- **Innovation.** The infrastructure-as-a-service (IaaS) concept would enhance the way the whole organization could accelerate innovation — due to the quick availability of mock-up or test systems with less security restrictions.

- **Integration.** The business needed a platform that could integrate security (application and data), high availability, and disaster recovery.

According to Van den Abeele, Enovos spent about three months setting up the FlexPod infrastructure before migrating SAP systems onto it so that IT could learn all of the new features in the FlexPod environment and leverage them later during the migration process.

"The different teams involved needed to master unfamiliar definitions and invest time to fully understand these new concepts," he says. "We wanted to be sure we knew the implications of the different choices we made as we built the infrastructure. Only when you understand those features can you think ahead and start considering how they may enhance your specific systems and your business."

For example, moving from a previous storage system to NetApp meant learning about the new capabilities available. He adds, "We had a different method of defining and calculating the storage space, so we had to learn NetApp's method to ensure we split the data accurately when we divided systems."

Similar learning took place in the networking areas, according to Van den Abeele, most notably the zoning capability, which was one of the major drivers for the move to FlexPod. "Bringing in powerful new components and capabilities requires that even the most experienced network administrator take some time to get up to speed," he says. And the benefits of that up-front education are already paying off for Enovos.

Migrating the Systems

Once the FlexPod infrastructure was in place and secure, the information systems department began to migrate its SAP systems onto the new platform. To ensure the migration didn't disturb the business during this process, the team started with the testing systems. The end-user feedback showed no disruption to daily processes, so it was on to the development systems next. Lastly, data was migrated from the production systems, moving from the least to the most significant applications.

"We chose that approach so we could continue to gain more experience as we moved onto larger, more critical systems," says Van den Abeele.

Over the course of several months, Enovos migrated all of its SAP systems onto the FlexPod platform, with the exception of the SAP ERP system that ran its centralized operations. Because of the number of users and concerns about performance, that system was never virtualized in the past. But based on the success in migrating the progressively larger and more complicated SAP systems onto FlexPod, the IT team was confident the new platform would provide the level of performance required for its largest SAP system.

"Migrating all SAP systems onto FlexPod was always the goal, and the project would have been a disappointment if we didn't do it," Van den Abeele says. "All systems are now migrated, and everything went fine. Today, performance is great, and our response times have improved and are faster than ever."

Targeting the Most Important Benefits

FlexPod's ability to separate the various systems and data into "zones" or "tenants" is what sold Enovos on the solution because it meets the current requirements of the regulator without having to move data from one physical server to another. Van den Abeele says those zoning capabilities are facilitated by the NetApp and Cisco components and VMware infrastructure within FlexPod, and make the business move much more manageable.

"In the new architecture, we can separate the data in a logical way, but keep it all within one infrastructure," Van den Abeele says. "You can create tenants on the storage and networking level to guarantee the data in one part of the infrastructure is exclusively accessible by one part of the business and not the other. It functions as if it were a separate infrastructure."

Rather than constantly buying new physical servers throughout the project and continually juggling their loads, the virtual division of systems and data streamlines the process exponentially while reducing the costs.

Troubleshooting issues is more direct because there is one primary contact rather than multiple points of contact. "In our past virtualized environment, if we had a server issue, we had to contact the server vendor. If the problem involved storage, we went to the storage provider and so on," Van den Abeele says. "Now, one service provider manages the entire infrastructure and then contacts the appropriate vendor when it is necessary to do so."

Another benefit Enovos achieved by migrating to FlexPod was standardization. In the previous environment, its virtualized servers ran on various operating systems and versions so the move to a new virtual infrastructure was also a good excuse to standardize on a single operating system.

"We really didn't move the 25 SAP systems so much as we reinstalled and reconfigured them in the new environment because we wanted a new start for the SAP systems," he says. "We agreed on naming conventions and developed clear rules for managing the infrastructure before we moved anything onto it."

When asked to summarize the variety of benefits his company has received from this project, Van den Abeele puts it simply: "We're getting more flexibility and faster response times with higher availability." ■

The Cisco UCS Platform for SAP Landscapes, Virtual or Not

The Cisco Unified Computing System (UCS) server platform provides a unique Intel Xeon processor-based, industry-standard infrastructure for business-critical applications and is ideal for cloud and in-memory computing technologies. The platform offers stateless computing capabilities with dynamic server provisioning, unified fabric, and comprehensive management across both physical and virtual environments for reduced total cost of ownership (TCO).

Cisco and SAP are uniquely positioned as global leaders in technology, providing innovations for many shared customers. Together, Cisco and SAP provide differentiated, scalable, and secure end-to-end solutions that help reduce deployment risks and complexity. When the Cisco UCS platform was introduced in 2009 as a new model in data center efficiency and agility, it was designed with the performance and reliability needed to power memory-intensive, mission-critical applications and virtualized workloads.

For example, SAP's in-memory computing technology, SAP HANA, provides SAP customers the speed to power analytics at exceptional performance levels. Customers get information immediately, without the delay of typical enterprise data warehouses, by building on the benefits of the Cisco UCS platform, which provides an agile, scalable, highly available, and cost-effective industry-standard infrastructure platform.

For the systems that are part of the architecture that supports the SAP installation, the Cisco UCS platform offers hardware-state abstraction that transparently integrates server, storage, and networking resources used for any application, virtualized or not, thus eliminating the waste that can be caused by dedicating pools of resources to a specific purpose.

For more information about the Cisco UCS server platform, visit **www.cisco.com**.