



Aveve Weeds Out Server Sprawl With VMware Virtual Infrastructure

VMware ESX Server, VirtualCenter and VMotion Reduce Server Count by 85 Percent; Resolve Disaster Recovery Issues; and Significantly Reduce Management Workload

RESULTS

- 85 percent reduction in servers, from 13 down to 2 with further efficiencies expected in the future
- Simplified management of a heterogeneous application environment
- Faster installation, configuration, test and deployment of applications
- Enhanced disaster recovery with VMotion
- Improvement of CPU usage by a factor of three

Growth Through Acquisition Drives Server and Application Consolidation Initiative

The Aveve Group is Belgium's largest agricultural and horticultural supplier, with a diversified portfolio of 60 commercial and industrial companies and more than 600 franchise partners. Aveve employs more than 2,500 people and reported consolidated revenue in 2004 of more than €880 million.

Aveve's IT group began an extensive project to centralize the many different applications used by the operating companies. In the first phase of this project, applications used by the Aveve Group's headquarters and 20 of the operating companies were all moved to two server farms, hosted on a total of 13 servers. A number of the remaining companies will migrate to the new centralized application environment in the near future.

The new centralized system provided significant benefits in terms of simplifying Aveve's distributed IT infrastructure, but the IT team still faced considerable issues. As more of the operating companies' IT environments were centralized, there were problems with scalability and reliability, which would raise costs in the long term.

In particular, the computational demands of the various Windows and Linux applications were making it difficult to load balance across the servers. CPU usage was generally low at an average of 20 percent per server, but it could rapidly spike to 100 percent, causing serious performance and redundancy issues. With such unpredictable server

performance, it was difficult to ensure that disaster recovery procedures were occurring, and keeping on top of these issues consumed a lot of time, resources and budget. Bringing new applications online or migrating existing applications from the operating companies also proved difficult.

Virtual Infrastructure Transforms System Performance and Manageability

The IT team evaluated various solutions to improve the predictability of server performance and overall manageability of the infrastructure.

"In the long term, we needed a way of keeping server sprawl under control as the number of companies using the centralized system increased," says Rudy Beyens, deputy head of IT at Aveve Group. "However, in the short term, it was critically important that we were able to ensure high server performance and implement a reliable disaster recovery strategy. VMware virtual infrastructure has given us a highly flexible solution that we can easily grow, when it's needed."

Using VMware® ESX Server to virtualize and manage every application, Beyens and his colleagues have been able to reduce the number of servers at the two server farms by 85 percent, from 13 down to two. These two servers, one in each datacenter, now run all applications for 20 different companies in addition to those of Aveve's head office.

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*Rudy Beyens
Deputy Head of IT, Aveve Group*



VMWARE VIRTUAL INFRASTRUCTURE AT WORK

- VMware VirtualCenter, VMotion and ESX Server on 4-CPU x445 IBM servers
- IBM FAS T 600 storage system, 1TB storage
- Guest operating systems: Microsoft® Windows®
- Applications in virtual machines include: Citrix Presentation Servers, SQL, Afaria Communication, Exact, ides/Mercator

VirtualCenter and VMotion Simplify Management and Improve Disaster Recovery

To manage its growing virtual infrastructure, Aveve makes extensive use of VMware® VirtualCenter, VMware's management console, and VMware® VMotion. These tools allow Beyens and his team to view the entire system and virtual machine inventory from a central point, monitor server performance and set limits on CPU loads. CPU usage now runs an average of 60 percent.

"Previously, it was very easy for a spike or fault on one of the servers to have a significant effect on the rest of the applications," says Beyens. "With VMotion we can pre-emptively detect unusual hardware or software behavior, both on the physical and the virtual machines, and then seamlessly switch from one physical machine to another with no loss of service. By setting CPU levels in advance, we can completely protect the stability of the production environment."

Using VMware VirtualCenter in combination with VMotion, the IT team can also migrate live virtual machines from one physical machine to another to perform maintenance and hardware upgrades without any service downtime.

The Aveve IT team has added to this flexibility with VMware P2V Assistant. This makes migrating existing physical systems into the new virtual environment significantly easier.

"This tool is incredibly helpful," says Beyens. "P2V Assistant allows us to seamlessly move existing production systems into the virtual environment, sandbox them, test them and deploy them in less than a quarter of the time it would take to install and configure on new physical servers. All of this is achieved on servers that are also running live virtualized production systems."

More than 500 Aveve Group employees currently use IT systems hosted on VMware virtual infrastructure, which is now fully deployed at Aveve's two central locations. The IT team also is in ongoing discussions with some of Aveve's operating companies to encourage them to also invest in upgrading their own IT systems as soon as possible.

"We have built an excellent business case around VMware and it's already in use and proven with 20 of our operating companies," says Beyens. "We're advising all the Aveve entities to upgrade their IT to the VMware solution as soon as they can. The technology has proven its excellence in practice."

As the operating companies come on board with the new infrastructure, Beyens anticipates that he will start to see growth again in the number of servers he has to manage. "But bear in mind that we've already seen an 85 percent reduction. Even with all the operating companies running their IT in the VMware environment, we still won't have as many servers as we had in our old distributed, physical environment. In addition, managing and supporting them will be a breeze using VirtualCenter and VMotion."

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