



VMware Virtual Infrastructure Saves Moen From Hardware Flood

Moen Saves \$250,000 in Hardware Costs in Sixth Months



KEY HIGHLIGHTS

INDUSTRY: **MANUFACTURING**

CHALLENGE

Needed to buy too many servers to keep up with company growth

SOLUTION

VMware virtual infrastructure, P2V Assistant and Workstation reduce hardware and costs, while increasing IT responsiveness

RESULTS

- 10:1 server consolidation ratio
- Saved \$250,000 in hardware costs
- Monthly hardware support costs decreased by 27 percent
- \$96,000 depreciation write-off resulted in \$26,000 in tax savings
- Improved CPU utilization
- Server deployment time decreased from days to minutes
- Increased corporate agility, ability to respond to business requests
- Employees can work more efficiently with stable, high-performance servers
- Aggregate temperature drop of 3 degrees in datacenter
- Increased system reliability

“Being able to set up a production server in hours translates into the developer being able to develop instead of waiting, the marketing manager being able to get feedback on marketing projects quickly. They don’t have to wait for deployment or wait for things to be recovered. It greatly contributes to the company’s agility.”

Robert Buchwald, Technical Lead, Systems Assurance Team, Moen

Moen Seeks Streamlined IT Infrastructure

North America’s #1 faucet maker Moen needed an enterprise-wide IT infrastructure that would keep up with business demands. Known for the variety of styles and high quality of its state-of-the-art bath fixtures and accessories, Moen strives to achieve cost savings and maximized efficiency through the most innovative technologies.

Robert Buchwald, technical lead for Moen’s Systems Assurance Team, was looking for a new technology that would help the IT staff respond more efficiently to the company’s growing business demands. “We came to the point where we needed to find a different way of handling our day-to-day operations to keep up with the company’s rapid growth,” he says. “We had about 150 different Windows-based servers. With a couple of exceptions, they were all one- or two-processor systems. If we kept doing things the way we had been, we would need to buy more hardware and increase our headcount in order to manage it.”

Instead, with the help of VMware® Enterprise VIP Reseller Champion Solutions Group, Buchwald and his team found a way to cut its operations expenses and better use its resources with VMware software.

“We were using VMware Workstation with great success to run Windows and Linux operating systems on a single desktop computer, so we knew its capabilities of consolidating different systems and increasing hardware utilization,” says Buchwald. “Champion demonstrated the VMware server software for us, and we knew immediately it was the solution we were looking for.”

Moen’s goals with VMware software were to:

- Reduce the number of servers
- Cut operations expenses by 25 percent
- Reduce maintenance time

- Improve IT agility and ability to react to business needs

Short Evaluation Phase Demonstrates Sophistication of Software

In June 2003, Moen worked with VMware and Champion to get an evaluation copy of VMware ESX Server™. “We just used it,” Buchwald says. “Once we put servers on it and saw the additional tools this gave us, justifying the purchase was an easy step to take.”

To quickly and effectively phase the software into the company’s IT infrastructure, Moen used VMware P2V Assistant to migrate its applications into virtual machines. Champion consultants worked with Moen technicians for a smooth migration.

After a pilot phase, Moen was able to do a production deployment, this time bringing in Champion consultants to help design the system. Technicians also attended VMware ESX Server training classes to maximize their understanding of the software.

A few months after deploying ESX Server, Moen added VMware VirtualCenter™ to the virtual infrastructure stack for optimized server management and control of computing resources.

Immediate Results

After only six months of using the software, Moen realized a number of benefits, including:

- **Cost savings.** Moen was able to save \$250,000 because it was able to reallocate hardware the company already owned instead of buying 20 new servers. Monthly hardware support costs decreased by 27 percent.
- **Server consolidation.** Moen was able to run 29 virtual machines on three physical machines. “That is 20 percent of our environment,” Buchwald says. “That’s quite a lot, considering we’ve only had VMware software for six months. And we plan to do more.”
- **Improved CPU utilization.** Before using VMware software, Moen had a large number of one- and two-CPU servers running single applications. Now, Moen is able to utilize its CPUs better, with several virtual machines residing on fewer physical servers and the ability to allocate and share resources across the virtual machines.
- **Decreased server deployment time.** In past, if someone needed a new server right away the best-case delivery time was three days due to the time it took to purchase and configure a new server. Now, Buchwald says, “We can deploy servers in a pinch. With VirtualCenter, it takes 10 minutes. It’s absolutely fantastic to be able to deliver a server and have the applications up, have them test and then put them in production in a matter of four or five hours.”
- **Increased agility.** VirtualCenter allows the Moen IT staff to allocate resources based on business demand and remap resources to software for better responsiveness and efficiency. As a result, the IT team can react quickly to support users – including 70 IT and development staff members and the 1,700 employees accessing applications in virtual machines. For example, if a senior researcher needs to do a CPU-intensive deployment, Buchwald and his team can allocate the CPUs to him. “Having this control helps us fulfill requests. Employees are happy that they get what they need, and we can control it in a way that cuts expenses and technician time.”

VMWARE WORKSTATION, ESX SERVER, VIRTUALCENTER AND P2V ASSISTANT AT WORK

- 2-CPU IBM x345 Servers each with 4GB RAM
- Guest operating systems: Microsoft Windows® 2000, Windows® 2003 and Windows NT
- Applications running in virtual machines include: development and sandbox systems, identity management solution, file and print servers, Microsoft Exchange, SAP-related application modules, Citrix domain controllers
- About 70 people in IT and development use VMware software; about 1,700 access applications running on VMware technology
- Developers use VMware Workstation to run Linux and Windows operating systems on the same machine

- **Increased system reliability.** VMware ESX Server and VirtualCenter provide advanced resource management controls, allowing IT administrators to guarantee service levels across the enterprise. This capability has created a reliable, highly-available computing platform for Moen employees.

A Strong IT Infrastructure Impacts Business

Moen is focused on being the best consumer-driven global fashion plumbing and accessory products company. To achieve this goal, the company needs to have the corporate agility to adapt rapidly to business changes. Moen achieves flexibility enterprise-wide with innovative projects and responsive vendor relationships, including its wholesale and retail distribution channels. The company's ability to achieve such responsiveness depends on a stable, reliable IT infrastructure.

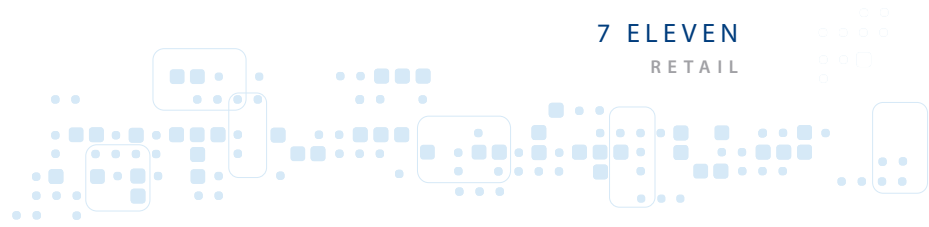
"IT needs to be able to adapt rapidly to any business request that comes to it," Buchwald says. "The results we've been able to achieve give business units confidence in our ability to deliver and help them work more efficiently. Being able to set up a production server in hours translates into the developer being able to develop instead of waiting, the marketing manager being able to get feedback on marketing projects quickly. They don't have to wait for deployment or wait for things to be recovered. It greatly contributes to the company's agility."

**VMware, Inc. 3145 Porter Drive Palo Alto CA
94304 USA Tel 650-475-5000 Fax 650-475-5001**

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7-Eleven Inc. Speeds Deployment and Consolidates Servers With VMware Virtual Infrastructure

VMware ESX Server, GSX Server, VirtualCenter and VMotion Exponentially Speed Deployment and Help Fully Utilize Server Resources



KEY HIGHLIGHTS

INDUSTRY: **RETAIL**

CHALLENGE

Consolidate servers - including trading platform
- without sacrificing performance

SOLUTION

Used VMware P2V Assistant to migrate servers to ESX Server platform

RESULTS

- 15:1 server consolidation on 2-CPU servers, 30:1 on 4-CPU servers
- Shortened deployment time from 6-8 weeks to one day
- Improved server utilization by 60 percent
- Optimized server management with VirtualCenter
- Reduced downtime with VMotion
- Compressed development and testing cycles
- Drastically reduced energy and cooling costs
- Provided mainframe levels of reliability and data security at lower cost



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