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Delaware North Companies Cuts Costs and Boosts Performance With VMware Virtual Infrastructure Software

Delaware North Lowers Costs and Centralizes IT Management With VMware Server Products

RESULTS

- Cut hardware costs by 33 percent

- Reduced labor costs by 85 percent

- Saved 84 percent on hardware maintenance

- Conserved resources including space, power, cooling and switches

- Achieved higher performance, with higher numbers of transactions a day

- Quickly deployed new servers and applications to meet business demands

Growing Company Makes No Concessions for a Strong IT Infrastructure

From sports venues to national parks to Kennedy Space Center to the world's leading airports and gaming destinations, Delaware North Companies share the vision of providing the highest level of customer satisfaction while maximizing returns to stakeholders. With its dedication to high quality products and services, the company landed a 25-year contract for complete food services operations at the new, yet-to-be-built 90,000 seat Wembley Stadium in the UK while Delaware North Australia completed another successful Australian open, doing a record $11 million in business.

To win this kind of business and offer the best customer service means having a lean, mean IT infrastructure. "Four years ago, our company took the path of centralizing our IT because the field units, for the most part, don't have technical people on staff to manage the systems," says Bob Armstrong, IT director for Delaware North.

But creating a central datacenter for the company was a challenge. "Every time we brought in a new application or worked with a new vendor, they requested a standalone separate environment that was specific to their software and was not commingled with other software or applications," Armstrong says. "But when we built a new data center in 2000, we soon exceeded space, power and cooling capacity due to demand for a server for each new

application. We realized that if we didn't do something quickly, we were going to run out of capacity and have to invest a lot of money into upgrading our datacenter again."

Delaware North Companies needed to find a way to create an IT infrastructure that would scale with the company's growth while keeping costs down. "The charge we had was to reduce our footprint in the datacenter, find a way to manage the systems, and find a solution endorsed by hardware and software vendors so we would eliminate a need for a physical server every time we bring something new into our datacenter. This brought us to VMware® and server virtualization."

A Successful Test Phase

Armstrong and his team found that VMware was the only company that could satisfy their requirements. "We knew VMware was the industry leader, so we got an evaluation copy of GSX Server™ and gave it a try," he says. VMware GSX Server and ESX Server™ allow companies to run multiple applications independently, each within its own isolated partition – or virtual machine – on the same Intel-based server.

Delaware North Companies began with a proof of concept (POC) in a development environment in August 2003. "We wanted to start slowly and start in development so people would not see the new technology as a hurdle. Once people saw what it was, what it could do and its benefits, deciding to use it in production was a slam dunk."

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>
> *Bob Armstrong*
> *IT Director, Delaware North*

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To test the VMware products, in August 2003, Armstrong and his team, led by DNC Network Engineer Todd Bekiel, created seven development virtual machines on GSX Server to run applications, including IBM® Lotus® Domino and a Web interface. "Everything went tremendously well. We didn't have any problems. We found it to be so seamless, the software vendors were unaware that their systems were operating in virtual sessions," says Bekiel.

Then Delaware North put GSX Server to the real test. "We're cautious with whatever we do, so GSX Server running our reservation system was our first big test," says Armstrong. Delaware North Companies manages over 5,000 hotel and resort properties in the United States and Canada. The company's online reservation system accounts for over 25 percent of reservations. "It's critical that it operates and has real time availability," says Armstrong. "In two months running on GSX Server, our response rate was better and systems were more available than previously with server-based hardware."

Higher Performance at Lower Costs

With the success of the test phase, Delaware North Companies began placing systems in production in October. First, the front end of the Web reservation system was installed in virtual machines. "We manage many properties and hotels for national parks," Armstrong explains. "We also have some standalone properties. Those were the first servers we put in production."

Since then, Delaware North has slowly added to its production environment. It now has two production servers running ESX Server, each with seven virtual machines. Moving forward, the company expects to place 14 virtual machines on each physical server.

Since moving to a virtual infrastructure, the company has seen numerous benefits including:

• **Hardware Savings**. Delaware North has cut its hardware spending by 33 percent. "Had we gone the traditional route of one server for each system, we would have spent around $88,000," Armstrong says. "We spent about $60,000 to build our production environment, which includes licensing and hardware."

• **Reduction in Labor Costs**. Before using VMware software, it took an average of six hours of labor to stage a new server. Now, it takes less than one hour to stage a virtual machine, meaning an 84 percent reduction in labor costs.

• **Lowered Hardware Maintenance Costs**. Hardware maintenance on each blade server is $800 or $900 a year, instead of $1,500 for each standard server. With the high number of virtual machines per server, Armstrong estimates an 84 percent savings in maintenance fees.

• **Better Performance**. Delaware North has noticed better performance in the applications running in virtual machines. Internet Reservations realized a 50% reduction in response time by leveraging multiple virtual environments. "We looked at our hotel reservations application and some other transactions and saw that performance has increased," Armstrong says.

• **Faster IT Response**. With its systems virtualized, the Delaware North IT team can respond faster, with shorter turn-around times. "We were able to bring up a brand new Bally's Player tracking application and deliver it ahead of schedule," he says.

• **Reliable Storage/Data Management**. Delaware North has both of its ESX blade servers connected to the same SAN, with single paths to storage from each server for redundancy. "Key to our rollout is our storage device to manage the whole thing."

Meeting Company Goals

Delaware North is running key business applications in virtual machines. For example, it runs central messaging engine (CME) software for its credit card and casino player database on a virtual machine in order to have information on where customers stay, where they ate, and to collect customer preferences. Other applications running on virtual machines include Shift4, a credit card processing application for hotels and properties, and Kronos, a time-keeping and attendance application. The company's Active Directory and Crystal Reports applications also reside in virtual machines.

"We're doing things now in QA and in a test environment that weren't possible before, either due to physical restraints, or because we were limited in man hours," Armstrong says. "We can react much more quickly to business requirements; we can quickly set up applications that positively impact the business. From a cost standpoint, we feel pressure to cut costs, reduce labor and bring things to market faster. With VMware software, we can quickly deliver for new ventures and we've eliminated the headaches of IT."

He added that VMware software is helping the company meet its goal to effectively manage its large family of subsidiaries. "Delaware North was started in 1915 and has expanded its lines of business. As an IT department, we want to assist headquarters in effectively managing our subsidiaries and provide our companies with the tools to increase their business. A VMware virtual infrastructure strategy is the only way we've found we can get there."

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