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— Shaul Swartz  
CEO, Netkeepers

#### KEY HIGHLIGHTS

##### Challenge

IT costs were skyrocketing. Netkeepers wanted to avoid contracting for more space with the datacenter providers and provide faster, more cost-effective services to its customers.

##### Solution

VMware V13 Enterprise, VirtualCenter, and VMware’s entire suite of server-based consolidation tools, and a fibre SAN from EMC.

## Netkeepers

Netkeepers is a full-service solutions provider located in Toronto, Ontario, Canada. The company’s managed application services provide full infrastructure hosting, enabling enterprises to focus on their core revenue-generating activities while offloading the tactical management of the technology stack.

“To stay competitive, companies need access to the very latest technology—24 hours a day, 7 days per week,” explained Shaul Swartz, CEO of Netkeepers. “For application management and dedicated hosting functions, simply staffing a decent IT department and managing the entire technology stack and application layer can be a daunting task—especially for small and mid-size businesses (SMBs). Our managed application hosting solutions cost-effectively act as an extension to these companies’ IT facilities and staff already in place.”

Netkeepers currently supports over 500 customers worldwide—80% in the United States and Canada, with the remaining across Europe, Africa, and Australia. “We focus on SMBs—companies with revenue between \$5 million and \$200 million, or 25 to 500 seats. We are currently managing about 25 TB of customer data. In addition to hosting and managing applications in our datacenter, we also help customers build disaster recovery solutions off site, and provide high availability web-based solutions for those customers whose businesses depend on their websites—making sure they are always up and running correctly.”

### The Challenge

“Prior to virtualizing our environment, for every customer that we would bring on we would have to purchase more infrastructure; server hardware, datacenter space and power,” stated Swartz. “In most cases, we were financing these purchases. At least 70% of my time was spent organizing our cash flow—arranging the financing to bring new customers on.”

Netkeepers rents datacenter space at two large Telcos in Toronto. “We have a 16 x 16 square foot space with 11 cabinets, and a 10 x 10 square foot facility with 4 cabinets,” described Swartz. “Three years ago, our business had grown to the point where we had only half a cabinet of space left. We were in the process of negotiating with the Telcos for more space. But we didn’t want to face the significant increases in monthly fees.”

Instead of contracting for more space, Netkeepers decided to leverage virtualization to eliminate the need for a larger datacenter footprint. “We calculated that with the configuration that we had put together, we could deploy 20 servers in the cabinet we had left, using just a fraction of the space,” stated Swartz. “And now we can add servers into that space as we needed them and not have to worry about physical space for a while.”

## VMWARE AT WORK

VMware Infrastructure 3 Enterprise, featuring:

- VMware ESX Server 3
- VMware vCenter Server

## The Solution

“We started to consider virtualization in the datacenter several years ago,” explained Swartz. “We were in the process of evaluating VMware version 2.5, looking at the functionality it could bring to us. The flexibility in the datacenter was very appealing in terms of rapid deployment. We weren’t even thinking yet about how we could take just one server and host 10 servers on it—and that our profitability structure would change completely.”

Netkeepers is now using VMware VI3 Enterprise Server, VirtualCenter, VMware’s entire suite of server-based consolidation tools, and a fibre SAN from EMC. Netkeepers quickly deployed VMware in the datacenter and started to use the virtualized servers for all of its new customers as they came on board. The provider now has eight very large powerful servers that are running 300 nodes within that cloud, with another 100 nodes scheduled for virtualization next year.

## Reduced Deployment Times

“We immediately noticed a couple of things,” noted Swartz. “Our deployment cycle times were dropping significantly. What used to take 40 hours, now took just four to five hours. Lowering the deployment costs for our customers gave us a huge leg up on the competition and the ability to win more contracts.”

Netkeepers then started replacing the older hardware in its datacenter. “We replace all of our servers every three to five years in order to maintain our service level agreements,” explained Swartz. “The cost to replace them is significant, and they’re our costs alone—not our customers’. We were facing major infrastructure upgrades over the next several years. This is when we decided to virtualize everything we could across the datacenter. Just last week we virtualized an additional four servers—took them off the grid, and pulled them out of the datacenter. In the last two years we’ve gone from having no virtualization, to having a very strong virtualization offering today.”

## Improved Manageability and Scalability

Netkeepers has found the VMware environment to be extremely easy to manage. “VMware has allowed us to create a really flexible infrastructure,” said Swartz. “We basically just have to plug a couple of cables into it to build out a big dedicated secure network for a customer. Even if just two servers are needed, we don’t have to build out a ton of infrastructure, like adding more switching infrastructure and all of the associated management that is required.”

Netkeepers is now able to work strategically with its customers to provide a very high level of application availability. Virtualization provides the ability to achieve recovery time objectives (RTO) as low as 30 minutes, whereas with a single server, 48 hour recovery would be the norm. “We recommend the cloud as a better solution than physical hardware for our customers for improving RTOs as well as recovery point objectives (RPOs),” explained Swartz. “When we renegotiate contracts and say we’d like to deliver a better RTO and charge less for it—our customers are ecstatic!”

## DEPLOYMENT ENVIRONMENT

- EMC Fibre Channel SAN

## Increased Profits

In addition to lowering costs for its customers, virtualization results in more profitability for Netkeepers as well. “When our datacenter was about 350 nodes, we had one person dedicated to just dealing with hardware failures. The cost structure of running our business was going through the roof. But by building a virtual infrastructure, we were able to get our customers better pricing and still become more profitable as a company. We were able to reassign the person who was dedicated to dealing only with hardware failures into a more strategic role managing the VMware environment.”

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## Going Green

As a result of virtualization, Netkeepers has also been able to reduce its total carbon footprint. “We realize significant savings for every server we don’t have to buy and have shipped to us. Each server has its associated manufacturing costs, cost of trucking to our facility, and the recycle costs when the asset is decommissioned at end of life. These are in addition to the costs of actually running the servers when they are at our datacenter, including the physical space, electrical, and cooling costs. I’ve done the calculations and so far we have diverted 76.3 tons of carbon per year by going to virtualization. Going forward, we will be diverting about 136 tons of carbon per year.”

As a result of these savings, Netkeepers is changing its company logo to be more green, calling its services ‘future friendly IT solutions.’ “So it’s not just the cost savings for us or our customers—there’s a feel-good piece about reducing the carbon footprint,” explains Swartz. “We can provide our customers with a carbon audit, showing them how much carbon their current server infrastructure is consuming per year, and by virtualizing 30% of that, we can save this amount for them.”

## Summary

“Today, virtualization is do or die,” summarized Swartz. “A lot of services have become commoditized. You can host an Exchange mailbox for just \$10 per user per month. If you’re in this space as a small provider, how can you compete with Microsoft, Amazon, Yahoo, or Google? You can’t unless you have a solution like VMware in your datacenter.

“With today’s downturn in the economy, we would be out of business without VMware. I can’t see how we could have survived. When you look at the scenario we were in—our datacenter costs alone were only going up by 30% per year, and our power costs had doubled. Now, if you divide the costs among all of the servers we were able to bring into the datacenter from a virtual perspective, the increases are minimal.

“When it comes to server virtualization and the tools VMware provides us—they are not matched by the competition. Our team loves being able to deploy 4 to 5 servers in a couple of hours, move them from one area in our datacenter to another, in real-time without having to take them down for maintenance. The flexibility that VMware brings in and all the future visibility coming down the pipe is why we are really excited about VMware. Tying ourselves to the VMware train and keeping ourselves on the same track is enabling us to be a lot more competitive and offer more services to our customers that they would not be able to deploy themselves.”

“We are a small business, so our people here count a lot,” concludes Swartz. “My business partners and I need to ensure that we run the company properly so that our employees can pay their mortgages and we never have to lay anybody off. In reality, we will probably have to hire more people in the next few months to keep up with the success that VMware has enabled us to achieve. That’s important to us. And the reason that we are profitable is VMware.”

## Results

- Increased company profitability by 30%
- Reduced time to deploy applications from 40 hours to < 5 hours
- Accelerated RTOs from 48 hours to as low as 30 minutes
- Increased flexibility and manageability for new deployments
- Reassigned IT staff member from managing hardware failures, to more strategic role managing the virtualized environment
- Provided the ability to divert 136 tons of carbon per year

