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CUSTOMER SUCCESS

City of Winter Park, Florida

Streamlining VMware Backup, e-Discovery, and Security with Solutions from Symantec and CDW

The City of Winter Park solved data center space and cooling challenges by virtualizing servers. But backing up and recovering virtualized servers efficiently was a challenge. It turned to Symantec solutions to reduce a half-day virtual machine recovery to 15 minutes, cut backup time by 96 percent, reduce two-day email searches to three minutes, and keep the network free from security disruptions for the past 10 years.

Situation: Hot and Crowded

Imagine: You have a server room that was designed to hold 20 servers—and it now holds 55. You happen to be based in Central Florida, and your cooling system is straining to keep the temperature down to an uncomfortable 86 degrees.

This was the reality for the municipal government of the City of Winter Park, a century-old picturesque village of 28,000 people just outside of Orlando, Florida.

Cool Solution

To fix the problem, the City's IT team turned to server virtualization. Using VMware, the team is virtualizing 42 of the 55 systems, and the 42 virtual machines (VMs) will run on just four HP ProLiant DL380 G5 servers.

One benefit is new-found space. Five racks worth of equipment will soon fit onto two racks, using 60 percent less square footage. Having multiple virtual servers running on fewer physical servers will mean as much as a 10-fold greater physical server CPU utilization. By getting more use out of fewer physical servers, the City will see a projected reduction of as much as \$30,000 a year in power and cooling costs.

And the temperature in the server room? With the virtualization project only 75 percent complete, it has already dropped from 86 degrees to 82.

ORGANIZATION PROFILE

Website: cityofwinterpark.org

Industry: Government: State and Local

Headquarters: Winter Park, Florida

Employees: 550

SYMANTEC SOLUTION

Data Protection

Endpoint Security

Discovery & Retention Management

Why Symantec?

- Unique capability to recover virtual machines 16-fold faster
- Doubled backup success rate
- Reduced backup time, backup administration, and email search and recovery time by over 90%



Saving Another \$100,000

Something else dropped as well: the capital outlay required for virtualization, thanks to Symantec partner CDW.

“At first I had two other companies out of Orlando do virtualization analyses for us and present us with plans and pricing,” says Parsram Rajaram, IT Manager for the City. “CDW learned what we were doing and asked to participate. I had thought of them as just our clearinghouse for equipment, but when they sent in their experts, I felt they were more knowledgeable than the other companies we talked with.”

Then came a surprise. “The clincher was pricing. The CDW solution was \$100,000 less than the competition. One key factor is that they introduced us to the cost-efficiency of a LeftHand Networks SAN vs. the more expensive SAN solutions that the others proposed.”

What’s the Best Way to Back up a VM?

Virtualization presented a new challenge, however: how are virtualized servers backed up and recovered most efficiently?

The problem is that installing a traditional backup client inside a virtual machine will protect it, but backup will demand resources needed by other virtual machines residing on that host, slowing productivity.

Another problem is that some data protection solutions back up a virtual machine by first copying it as a virtual machine disk (VMDK) file to a secondary location. From there it gets backed up. But if it needs to be recovered, it must first be restored to that secondary location, and the rest of the recovery is manual. “You have to go through the old way of server recovery where you first build a server, then load your programs back on it,” Rajaram observes.

Veritas NetBackup™ for VMware takes advantage of VMware Consolidated Backup (VCB) technology to offload backup processing from the VMware ESX server to a separate backup proxy server. The result is

SOLUTION AT A GLANCE

Key Challenges

- Support growth through virtualization
- Ensure resilience/data protection for virtualized environment
- Reduce cost of open records request fulfillment
- Improve IT security while reducing security overhead
- Streamline backup and recovery processes for virtual machines
- Gain the ability to back up and recover entire VM images or single files
- Reduce search times for open records requests
- Enhance endpoint protection while reducing security administration

Symantec Products

- Veritas NetBackup™ 6.5 with NetBackup for VMware
- Symantec Enterprise Vault™ with Microsoft Exchange Journaling
- Symantec™ Endpoint Protection

Symantec Services

- Symantec Essential Support Services

Symantec Partner

- CDW (www.cdw.com)

Technology Environment

- Applications: Microsoft Exchange Server 2003, SunGard financials on IBM AS/400
- Databases: Microsoft SQL Server 2000 and 2005
- Server platform: Mostly HP ProLiant servers running Microsoft Windows Server 2003 and VMware ESX 3.5
- Storage: LeftHand Networks, Data Domain DD530
- Tape Library: Overland ARCVault LTO4

BUSINESS RESULTS AND TECHNICAL BENEFITS

- Projected 16-fold faster virtual machine recovery (15 mins. vs. 4 hrs.)
- 100% backup success rate, up from 50%
- No security disruptions to network in 10 years
- \$100,000 savings on server/SAN solution through Symantec partner CDW
- 96% reduction in backup time (12 hrs. vs. 2 weeks)
- 90% reduction in backup admin time (1 hr vs. 10 to 20 hrs. a week)
- 99% reduction in email search time (3 mins. vs. 2 to 3 days)
- 99% reduction in email recovery time (15 mins. vs. 2 days)

faster backups and no impact on other VMs when one VM is being backed up.

Another benefit is that NetBackup for VMware uses the Flashbackup feature of NetBackup to enable two kinds of backups in one pass: entire VMDK file images and single files. Either can be recovered quickly when needed.

And in the NetBackup 6.5.x release or greater, NetBackup for VMware backs up all files and folders, as well as operating system files and VMware system files. As a result, it supports the restoration of the entire virtual machine and of the guest operating system. That saves time.

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Parsram Rajaram

IT Manager
City of Winter Park

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Because NetBackup for VMware offers better approaches to VM backup and recovery, it won Best of VMworld 2007 and 2008 in competition with 100 other products.

Projected 16-fold Faster VM Recovery

“We had considered a solution from Backup, but I did some research and it did not handle the virtual machine backups the way I wanted them to be done,” Rajaram says. “I was convinced that NetBackup was the right product because of the way it handles the VMDK file. We didn’t want to spend half a day trying to restore a virtual machine when we could spend 15 minutes using a VMDK file from NetBackup.” Fifteen minutes is 16 times faster than four hours.

In addition, Rajaram consulted with a colleague who manages a virtualized server environment for Charlotte County, Florida and also uses NetBackup for VMware. He strongly endorsed the product.

The decision was easy. Now the City uses NetBackup for VMware to take its VMDK files off its SAN and deposit them on a Data Domain storage system. “From there, we cut them out to tapes once a month using NetBackup and send the tapes offsite,” Rajaram says. “I’m very comfortable now because I have three different places I can restore files from: our SAN, the Data Domain system, and the tapes.”

90 Percent Less Backup Admin Time

Backups go much faster. “We have 5.5 terabytes of data, and with 55 servers, our previous backup solution was overtaxed,” Rajaram says. “We could never back up all the servers in one pass. We did full backups of some and incrementals of the others—and the next week we’d flip it. A full backup took two weeks, and our backup success rate was maybe 50 percent. Now it takes 12 hours to get a full backup—instead of two weeks—and our success rate is 100 percent.”

Administration has been streamlined. “With NetBackup for VMware, backup administration takes an hour a week compared to 10 to 20 hours a week with our old solution,” says Rajaram. That 90 percent reduction makes 470 hours of staff time annually available for more valuable tasks.

Enterprise Vault: Cutting Multi-day Searches to Minutes

Another area that the City has streamlined is handling public record requests. For five years, the team has been using Symantec Enterprise Vault™ to archive email. They’ve set the Microsoft Exchange Journaling agent of Enterprise Vault to make a copy of any message that is sent or received.

That makes searching easy. “When we get an open records request, instead of having to hunt through everybody’s email box, we just hunt through a journal box,” Rajaram says. “It’s an advantage to us in that we still have copies of messages that people may have deleted accidentally—or deliberately.”

The time saved is substantial. I was asked to gather messages from a government employee to a broad list of people,” Rajaram explains. “It took me three minutes to comply using Enterprise Vault. Before that, without an archive, we would have had to ask all those individuals to send every email from this person to an admin box. Then we’d create a PST from it. A search that took three minutes with Symantec Enterprise Vault would have taken two or three days without it.”

Similarly, Rajaram points out, helping someone to recover accidentally deleted messages with Enterprise Vault takes 5 minutes, whereas restoring them from tapes would take 48 hours.

The City plans to implement a retention period of two years for most information. “We may soon begin categorizing our emails, and it’s useful that Enterprise Vault has an option to automate email classification or make it easy for employees to manually classify a message, just by right-clicking it,” Rajaram says.

Currently the City keeps messages in Microsoft Exchange Server for 600 days before they are archived by Enterprise Vault, and the team is considering shortening that period. The total email store on Microsoft Exchange email servers is now 96 gigabytes. Reducing the waiting period for archiving to 60 days could reduce that storage by up to 90 percent, reclaiming up to 86 gigabytes of primary disk space.

Endpoint Protection: Zero Disruptions

The City has had positive results from the antivirus technology in Symantec Endpoint Protection™. “For the last 10 years, we have not had a situation where our production environment had to be shut down because of a virus outbreak,” Rajaram says. “Symantec’s LiveUpdate™ feature has been very good at keeping our endpoints secure. We’ve never investigated any other endpoint protection technology. And we’ve had many instances where we caught viruses before they could attack the system.”

Symantec Endpoint Protection can also enable the City IT team to control and enforce policies on USB connectivity. “This is useful,” Rajaram notes. “We have a city auditing team and in their interview with me, they asked how we can prevent users from copying data off of our network onto USB devices. Symantec Endpoint Protection gives us the control options we need.”

Multi-tier Protection Against Spam

The team is also evaluating a Symantec Multi-Tier Protection license, which includes Symantec Endpoint Protection along with several other protection options. One of these is Symantec Mail Security for Microsoft Exchange, which provides antivirus, anti-spamware, content control, and other security technologies at the gateway. It can include a subscription to Symantec Premium Antispam.

“I’m very excited about adding Symantec Premium Antispam because spam is a bigger problem than viruses at this point, believe it or not,” Rajaram says. “We have two layers of antispam protection now, but there is always room for improvement.”

The Right Stuff from Symantec Education Services

The City sent one IT staff person to a Symantec Education Services Enterprise Vault training class, and plans to send another staff person to an upcoming NetBackup class.

“Our staff person said that Symantec Education Services provided really good training,” Rajaram says. “We had a general corruption in Microsoft Exchange that was disrupting Enterprise Vault, and after the class, he was able to fix it.”

The City uses Symantec Essential Support Services for 24x7 protection. “My team reports that when we’ve had to call Symantec support, we got the help we needed,” Rajaram says.

Providing IT services to the city government in Winter Park is now easier, Rajaram says. “Thanks to Symantec, our administration time in backup, records requests, and security have been reduced drastically,” he sums up. “It’s now easier to come home and sleep properly because we’re getting reliable backup.”

