

Quest vReplicator and vRanger Delivers the Same Recoverability Standards as a SAN Solution for Oakbrook Terrace, IL—at 10 Percent of the Cost

Oakbrook Terrace, Illinois is approximately 18 miles directly west of the City of Chicago. It covers approximately 1.8 square miles and has an overnight population of about 2,100 and a daytime population of more than 30,000. The City is home to numerous restaurants, retailers, entertainment venues and more than 4,000,000 square feet of office development. For a cost-effective and easy-to-use backup and recovery solution, the City of Oakbrook Terrace turned to Quest Software.

The Challenge

Oakbrook Terrace relies on its IT infrastructure to deliver information and services to both residents and employees. Keeping its IT systems available is critical not only to City business but also to public safety; the systems are used by the police and public works departments, as well as City administration.

To help ensure recoverability of its important data and applications, the City was performing traditional nightly backups. A review with a consultant revealed that this approach had critical limitations. First, the data recovered after a failure would be up to 24 hours old. More importantly, since no stand-by servers were in place, the City might have to purchase new hardware in case of failure, and set it up using the backup tapes. A recovery could take up to four days.

Accordingly, the City began investigating other approaches that would offer faster recovery of more current data, while keeping in mind two constraints: Oakbrook Terrace has no internal IT staff, and a limited budget for ongoing support and maintenance. Therefore, the solution needed to have a low ongoing cost of ownership and be easy to test and maintain, as well as simple for non-IT staff to use in the event of a disaster.

For help in choosing and implementing a solution, the City turned to Current Technologies Corporation (CTC), a Chicago-based IT consulting firm. CTC and the City of Oakbrook Terrace considered several approaches. The first was offsite replication using a SAN. Although this strategy offered strong advantages, the hardware and administrative costs were prohibitive since the City had only two or three servers that would need to be replicated.

They also considered using other software solutions to replicate each of the servers to a recovery server. However, the costs of this approach were also too high. First, there were additional administrative costs: the scope of the replication includes only changed data, not updates or patches; therefore, whenever updates are made to the production machine (such as an update to antivirus software, a database application, or the version of SQL), the same changes must be made manually to the recovery server. In addition, the City would have had to buy significant additional hardware to host the recovery servers.

Moreover, both of these approaches would be challenging for the non-technical staff of Oakbrook Terrace to maintain and use in the case of a disaster—a critical requirement.

The Quest Solution

In the end, only one backup and recovery strategy satisfied all of the City's requirements: a virtualized approach using Quest vReplicator and vRanger.

Quest vReplicator is built specifically for image-based VMware ESX replication of virtual machine (VM) images across local and wide-area networks (LANs and WANs). It provides simple and

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— Mark Rhodes
Vice President, IT Consulting Services
Current Technologies Corporation

OVERVIEW

Headquarters

Oakbrook Terrace, Illinois

Services

City services

Critical Needs

To be able to recover more current data more quickly in case of disaster

Solution

vReplicator and vRanger

Results

- Reduced the recovery time objective (RTO) 98 percent from more than 3 days to just one hour
- Reduced the recovery point objective (RPO) 83 percent from 24 hours to four hours
- Delivered the same RTO and RPO as a SAN solution at 10 percent of the cost—\$5,000 instead of \$50,000
- Delivered time savings of three days per year in server maintenance
- Delivered ease of use, enabling non-technical staff to quickly switch to the standby server in case of disaster

CASE STUDY

fast disaster recovery of VMs, creating exact replicas. In addition, vReplicator centralizes VM images from remote sites for easier access during data protection efforts.

vRanger speeds ESX(i) backup while dramatically reducing the size of the backup image. It is optimized for image-based data handling on VMware servers. It has the ability to skip both whitespace and deleted data and enables object-level recovery for Microsoft Exchange.

"Using vReplicator and vRanger was the best solution because it didn't require huge hardware investment and it will allow the City to keep very up-to-date backups of the machines throughout the day without really impacting the performance on the systems," reported Mark Rhodes, Vice President of IT Consulting Services, Current Technologies Corporation. "In addition, the administration time required is very low as compared to other solutions. So it met all of our goals."

The Bottom Line

The Quest tools have delivered outstanding value for Oakbrook Terrace; the City can now recover much more current data much faster than before, at 10 percent of the cost of a SAN-based solution. "Everything comes down to the recovery time objective (RTO)—getting back up and running quickly—and the recovery point objective (RPO)—restoring the most current data possible," explained Rhodes. "The Quest solutions give the City the same RTO and RPO as a SAN solution with hardware-based replication. But the Quest solution, plus some additional NAS storage, required an investment of only \$5000, as opposed to \$50,000 it would have cost to buy two arrays to do hardware-based replication. So the Quest approach was ten times less costly."

Specifically, the RTO has dropped from more than 3 days to just one hour—a 98 percent improvement. "Before, it would have taken the City three to four days to recover a server, since they would have had to purchase new hardware and set it up from backup tapes," said Rhodes. "Now with the Quest solutions, the City is replicating its virtual machines to a data center offsite and is ready to turn on a standby server, so functionality could be restored in under one hour."

The recovery point objective (RPO) has decreased almost as much—from one day (24 hours) to four hours, an 83 percent improvement. This means that in case of a disaster, the data restored is no more than four hours old, instead of from the previous night's backup. Therefore, any outages are far less disruptive to the City's employees and the community.

In addition, the Quest solution is much easier to maintain than other replication solutions which was critical for Oakbrook Terrace because of their very limited IT resources. "With some of the other solutions,

whenever the production server needs a system upgrade or software patch, the customer must manually update the recovery server to match the production server," explained Rhodes. "With vReplicator, none of that duplicate maintenance is necessary because you're simply replicating your virtual machines 100 percent to the disaster recovery site; everything is always up to date because it's a pure, complete replica. Therefore, the City will see a time savings of three days per year in ongoing maintenance."

Finally, the Quest solution enables the City to failover to the standby server quickly and easily in case of a disaster. "The value of ease of operation is hard to quantify, but it was critical to the city, given their lack of on-site IT staff," said Rhodes. "With the Quest solution, someone can switch over to the standby server in just minutes. That failover process would be much more difficult and time-consuming with any of the other approaches."

Rhodes does not hesitate to recommend Quest vReplicator and vRanger to organizations with needs similar to Oakbrook Terrace: "For customers who are running a dozen or less machines and who don't want to invest in the SAN, the Quest tools are a very good solution at a fraction of the cost."

About the City of Oakbrook Terrace

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<http://www.oakbrookterrace.net>.

About Current Technologies Corporation (CTC)

Formed in 1997 from the strategic merger of two independent companies with combined experience of over fifty years in the information systems and technologies industry, CTC works closely with clients to provide strategic guidance and deliver quality solutions tailored to each client's needs. For more information, visit <http://www.currenttech.net>.

About Quest Software, Inc.

Quest Software (Nasdaq: QSFT) simplifies and reduces the cost of managing IT for more than 100,000 customers worldwide. Our innovative solutions make solving the toughest IT management problems easier, enabling customers to save time and money across physical, virtual and cloud environments. For more information about Quest solutions for application management, database management, Windows management, virtualization management, and IT management, go to www.quest.com.



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