



Parish National Bank

Parish National Bank increases protection with recovery management from EMC and VMware

BUSINESS VALUE HIGHLIGHTS

SOLUTION SNAPSHOT

- **Software:** VMware ESX Server, EMC RepliStor, and EMC AutoStart
- **Primary Applications:** Microsoft Exchange e-mail; Microsoft SQL server running website, bank statements, trust departments, fixed assets; general-purpose file shares for Excel, Word and other applications; loan handling and tracking; and check imaging
- **Storage Infrastructure:** EMC CLARiiON CX300 Fibre Channel and ATA disks, CLARiiON AX150 SATA disks, McData switches
- **Processing Environment:** Windows Server 2003 on Dell Servers

Profile: Parish National Bank, a community bank with over \$750 million in assets, has offered a wide array of banking services to the New Orleans metropolitan area for nearly forty years. With headquarters in Covington, LA, the bank provides mortgage lending, trust services, estate planning, insurance, and investment products, in addition to traditional community banking.

Challenge: Parish National Bank needed to replace a tape backup infrastructure that was delivering application recovery times ranging from two days to a full week. As the bank was readying to deploy a new, multi-site EMC recovery management solution, Hurricane Katrina hit. In the wake of Katrina, the physical structure of Parish National's data center was damaged and there was longer-term disruption to basic infrastructure services, such as electricity and telephone service, in the region.

Business value: In only five months, Parish National and EMC Services were able to plan, design, and roll out a sophisticated, multi-site recovery management solution using EMC[®] CLARiiON[®] networked storage and EMC RepliStor[®], EMC AutoStart[®], and VMware[®] software. With the new solution, Parish National Bank was able to:

- Consolidate its storage and server environment from 23 servers each with its own disk capacity to five servers running 31 virtual machines and three storage systems providing centralized information management
- Compress recovery times of up to one week to a recovery time objective (RTO) of four to eight hours for the bank's medium-critical applications, and one to four hours for the bank's most critical applications—Exchange and SQL
- Achieve near real-time replication of the virtual machine data, minimizing data loss exposure to one hour and as little as five seconds, depending on the criticality of the application and location of the failover site
- Lower costs and improve information availability through a vastly consolidated server and storage environment, tiered protection levels, and multi-purposing of the remote site for both production and disaster recovery

Business overview

Parish National Bank, a community bank with over \$750 million in assets, offers a wide array of banking services to New Orleans and its surrounding areas. Because of its Gulf Coast location, the bank is subject to extreme environmental conditions—wind, rain, flooding, tropical storms, and hurricanes. In August 2005, Parish National was about to implement a multi-site, state-of-the-art EMC recovery management solution when Hurricane Katrina hit New Orleans. Although the bank's primary data center was not in a flood zone and core systems remained operational, the building was damaged by the hurricane's rain and high winds. Soon after Katrina, Parish National turned again to EMC to accelerate its business continuity initiative despite the infrastructure challenges faced by the region.

“Time to recover our most critical application data has shrunk from as much as one week to one hour and with a data loss exposure of mere seconds. RepliStor, VMware, and AutoStart are a very powerful combination that meets our diverse recovery management goals and enables an ILM strategy that matches the costs of protection to the value of our data.”

Jeff Van Houten, Parish National Bank Senior Vice President and Advanced Technology Manager

Jeff Van Houten, senior vice president and advanced technology manager for Parish National, said, “Few organizations will ever experience the challenges we've faced since Hurricane Katrina. Even now, we're dealing with interruptions to electrical power and telephone service. Those things pose special challenges, and that's why we turned to EMC. Even as we faced some significant obstacles, EMC became a core member of our team and helped us deploy a sophisticated and cost-efficient recovery management solution in only five months.”

Parish National achieved cost efficiencies in their business continuity plan by using VMware ESX Server™ virtualization software to consolidate 23 Dell Windows servers to five servers that run 31 VMware virtual machines. All of the bank's core applications, including Microsoft Exchange, SQL Server, and loan processing, run on the virtual machines. Data for the virtual machines is stored on EMC CLARiON storage area networks (SANs), which replaced the bank's dispersed server-based storage. For rapid data recovery during a failure, Parish National uses EMC RepliStor software to replicate VMware virtual machine data from a primary data center in Covington, LA to a nearby site and a remote site in Florida 250 miles away. For its most critical applications, the bank uses RepliStor with EMC AutoStart software, which provides continual monitoring and fast, automated failover.

“Our dramatic server and storage consolidation with VMware and EMC was an important first step in creating a secure, easy-to-manage, and cost-efficient business continuity infrastructure,” explained Van Houten. “By adding EMC recovery management, our customer and financial data is secure and our banking services will continue to be available even if a data center is knocked out. We've been able to deliver tiered protection

levels according to the criticality of the application. Time to recover our most critical application data has shrunk from as much as one week to one hour and with a data loss exposure of mere seconds. RepliStor, VMware, and AutoStart are a very powerful combination that meets our diverse recovery management goals and enables an information lifecycle management (ILM) strategy that matches the costs of protection to the value of our data.”

In-depth expertise in recovery management makes for a smooth deployment

Prior to EMC, Parish National’s infrastructure comprised 23 physical servers with 23 separate disk drives. For disaster recovery, the bank relied on tape backup—necessitating anywhere from two days to a full week, depending upon the severity of the outage and the amount of damage sustained.

Realizing these long recovery times put the bank at risk, Parish National decided to work with EMC Services to plan, design, and roll out a comprehensive recovery solution. To launch the project, EMC Services worked with its partner, Dell Inc., to implement EMC SANs that comprise CLARiiON CX300 and AX150 storage systems at both the primary data center and remote data center. EMC Services also helped implement the VMware, RepliStor, and AutoStart software.

“Until I worked with EMC Services, I was somewhat skeptical about the worth of technical service offerings,” said Van Houten. “But as we worked with EMC Services during the planning and design phases, we were extremely impressed with their deep domain expertise in recovery management and virtualization. Our deployment was fast and painless because they understood our business priorities, technology requirements, and the unique challenges we faced in a region that was ravaged by Katrina.”

Soon after implementing the new EMC solution, Parish National realized that the significant electrical problems brought about by hurricane damage were going to remain an issue for a while. In fact, Parish National spent over \$100,000 during one three-month period on electrical issues.

The turning point came when the electrical problems caused a fire in the bank’s primary data center. Fortunately, the Florida recovery site was already operational, so Parish National was up and running in a little over an hour. But performing remote recovery for every data center problem didn’t make sense, so Parish National and EMC Services extended the original plan to allow recovery from a third data center located across the street from the main data center. The local alternate site, which includes a CLARiiON AX150 SAN in a VMware server environment, enables Parish National to recover from any small outages—like a power failure or the recent fire—that impact only the primary data center. The Florida site is reserved for recovering from major failures that bring the primary and local remote data center down for at least four hours.

Virtualized infrastructure provides more resilience and lower costs

The new consolidated infrastructure across the three sites—with only five Dell servers and three CLARiiON storage devices—not only does everything the old configuration did, but adds world-class recovery capabilities and more cost-efficient and centralized data management with RepliStor, AutoStart, and VMware. Using VMware, Parish National is able to create 31 virtual machines that run independently of the five servers and provides the bank's first and most basic level of data protection for all applications.

“Did we save money by being able to consolidate 23 servers down to five and centralize our storage onto EMC?” asked Van Houten. “We sure did and a lot of it. But even if we saved nothing in hardware costs, virtual machines and SANs are still a better alternative because they're easier to manage and more resilient than a larger, more distributed server and storage environment. With fewer servers and centralized storage, we can perform maintenance or upgrade software without subjecting our customers to any planned downtime, which also has a cost.”

“We also achieved cost savings through increased uptime and the reduced cost to maintain and manage less physical equipment. And then we take those savings and pour them back into development projects that help us create more revenue-generating services and improve customer satisfaction.”

Recovery timeframes for critical applications shrink from up to one week to one hour or less

Parish National added RepliStor to the VMware environment to provide a higher level of protection for its critical applications, which include Exchange, SQL Server, general-purpose file shares, loan document management, loan tracking, spreadsheets, and check imaging. While VMware can replicate and provide portability of the virtual machines to different servers in the same location, RepliStor provides continuous replication of the application data over long distances. With RepliStor, changes made at the primary data center are automatically mirrored to the recovery sites, ensuring that the application data at all three sites remains consistent.

The bank also uses AutoStart with RepliStor and VMware to deliver additional protection for its two most critical environments: SQL Server—which provides the database for its website, customer bank statements, trust department, fixed asset accounting, and other applications—and Exchange. AutoStart continuously monitors the Windows-based SQL Server and Exchange applications running on the virtual machines in the main data center. If the application fails or is interrupted, AutoStart automatically restarts the application at a remote data center and enables failover.

“Before EMC, it often took days or even a full week to get our applications back up and running if a major failure or interruption occurred in our data center,” explained Van Houten. “And, because of inconsistent data and time lags between current and backed up data, reconstructing the data took large blocks of time. Sometimes it resulted in the loss of the data altogether. The ramifications are simply scary. We’re talking about potential revenue loss, damage to our hard-earned reputation for excellent customer service, or even customers leaving us for another bank.”

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Now, depending on the site to which the primary data center is replicating, RepliStor has enabled Parish National to achieve a recovery time objective (RTO) of four to eight hours and a recovery point objective—or data loss exposure—of approximately one hour for critical applications. When AutoStart is combined with RepliStor for the bank’s even more critical applications, RTO shrinks further to one to four hours with an RPO of five seconds to five minutes.

Said Van Houten, “The steps to bring our applications back up need to be performed in a certain sequence, so AutoStart’s automated and orderly shutdown and restart both simplify the recovery process and shorten the restoration interval. Using RepliStor and AutoStart together allows us to restart those services immediately at another site using the data that RepliStor has already replicated and helps to ensure we suffer no service interruption or data loss. The whole process is completely transparent to our customers and employees, allowing ‘business as usual’ to chug along.”

Tiered protection delivers more targeted levels of information availability

Together, VMware, RepliStor, and AutoStart have enabled Parish National to address its distinct requirements for information availability across a diverse and rich application environment.

Van Houten explained, “For Exchange and SQL, our most critical applications, we use AutoStart and RepliStor together because we can’t afford even five minutes of downtime. We’ve failed over our SQL and Exchange servers, and within two to three minutes the applications are moved over and we’re up and running again.”

“Downtime in these customer-facing environments would affect our ability to be responsive and provide critical banking services. For example, our customers now access many of our services via our website, which is managed by SQL. And we do so much over e-mail now with Exchange, including the sending of mortgage appraisals and flood certifications—documents our customers need quickly.”

“For our general-purpose file shares that provide access to back-office applications such as Microsoft Word and Excel, we’re a little more forgiving. While employees are impacted, our customers are not, so we can live with up to a one-hour data loss exposure during a local failover. All in all, the flexibility of the different EMC solutions really allows us to customize our recovery management in a very cost-efficient way.”

In addition to tiered recovery, Parish National uses tiered storage to manage specialized application requirements and reduce costs. For example, the bank stores VMware applications on higher-end CLARiiON Fibre Channel for maximum performance and availability, and keeps less frequently accessed check images on lower-cost CLARiiON ATA disks.

Prepared for Mother Nature

With its cutting-edge recovery management solution, Parish National is now ready for whatever Mother Nature throws its way.

“Because we’re responsible for our customer’s financial assets, we have to make sure we’re ready for worst-case scenarios. The question isn’t whether a hurricane will strike our region again—the question is when. The first time our primary data center is out for even a few hours, our EMC solutions will more than pay for themselves in a single usage. And that gives both our bank and customers great confidence. We also gain a competitive advantage because we no longer have to be reactive to outages and instead can focus on financial services and better serving our customers.”

“We’ve learned over the last year that in EMC we’ve found a partner that is going to be a major part of our recovery management initiatives as we grow our infrastructure. Because of the solid foundation we’ve already built with EMC, we’re confident that whatever challenges we face in the future, we can count on EMC—not just for their technology vision, but also for the quality and breadth of their services. But most of all, we appreciate having a partner that understands our business and knows how to help us achieve our strategic business and technology goals.”



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Customer Focus
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