



Commerzbank North America

Security and Simplicity through Data Center Virtualization

Business Value

- Servers consolidated from 140 to 48
- Reports from three hours to one hour
- Configuration from two days to one hour
- Floor space reduced by 60 percent
- Runs on UNIX or Windows on demand
- Lower costs
- Reduced cooling
- Better uptime

Executive Summary

After the 9/11 terrorist attacks, Commerzbank NA launched an initiative to enhance its disaster-recovery strategy. The goal was to deploy a pool of virtualized servers that could run UNIX® or Microsoft® Windows® on demand, to complement the flexibility already achieved with virtualization on the storage and network sides.

Today, thanks to Egenera, their DR site not only ensures business continuity, it plays an active role in daily computing requirements—notably improving utilization. Moreover, Commerzbank NA has consolidated 140 legacy servers into just 48, slashed server-configuration time from two days to one hour, and reduced floor-space requirements by 60 percent.

Business Challenge

Established in 1971, Commerzbank North America—a subsidiary of Commerzbank AG, Germany's third-largest private-sector bank with assets of more than € 600bn—provides wholesale banking for Fortune 250 companies. Along with other New York City-based financial institutions, Commerzbank NA was dealt a blow by the terrorist attacks of September 11, 2001.

As Commerzbank's vice president of Information Technology recalls, "The events of 9/11 exposed the weaknesses in our disaster-recovery strategy and made us realize we had a false sense of security. Although we were back online that evening in our DR site, the recovery process was slower than we had hoped, somewhat inflexible and required way too much human intervention. The problem was our servers."

Like most large data centers, Commerzbank NA had a heterogeneous server environment, with Windows and UNIX systems from multiple vendors. Faced with an emergency, the bank learned how inflexible those proprietary platforms could be. The failover servers at the DR site were not the same type as those running at the production site, nor were they configured with the correct mix of operating systems.

Adding to the frustration, as part of its disaster-recovery plan the bank's storage and networking assets had previously been virtualized and pooled, making them accessible to any application at both sites. Meanwhile, processing was still stuck in a "one application/one server" model, creating static resource silos. All the data needed to get the mission-critical applications back online was available at the DR site, but they didn't have correctly configured hosts at the ready.

As a result of this experience, Commerzbank set out to create a pool of servers that could run UNIX or Windows on demand to complement the flexibility achieved with virtualization on the storage and network sides.

A New Approach to Processing

In light of the shortcomings revealed by 9/11, Commerzbank sought a solution that could complete the vision of a fully virtualized data center. The company's IT team evaluated offerings from the world's largest vendors but found that none could toggle between operating systems. In every case, each server required a local disk, network interface card, and storage interface that gave it a fixed and permanent identity.

"We live every day in the recovery portion of the DR mode. Having the assets active takes the mystery out of continuity. We're not praying that it works, not planning that it works—we know it works because it's an active part of the process."

*Vice President of Information Technology
Commerzbank NA*

Finance

Commerzbank North America

When the industry stalwarts couldn't meet their requirements, Commerzbank turned to PAN Manager® Software by Egenera®. The evaluation team immediately grasped the importance of PAN Manager's ability to create a processing area network (PAN) using stateless servers that can boot any operating system and application in minutes.

Virtualization in Action

With Egenera's PAN complementing the SAN and WAN already in place, Commerzbank NA was ready to deploy its fully virtualized disaster-recovery strategy. But they went even further, dramatically reducing server count and boosting utilization by making the DR location an active participant in daily computing requirements.

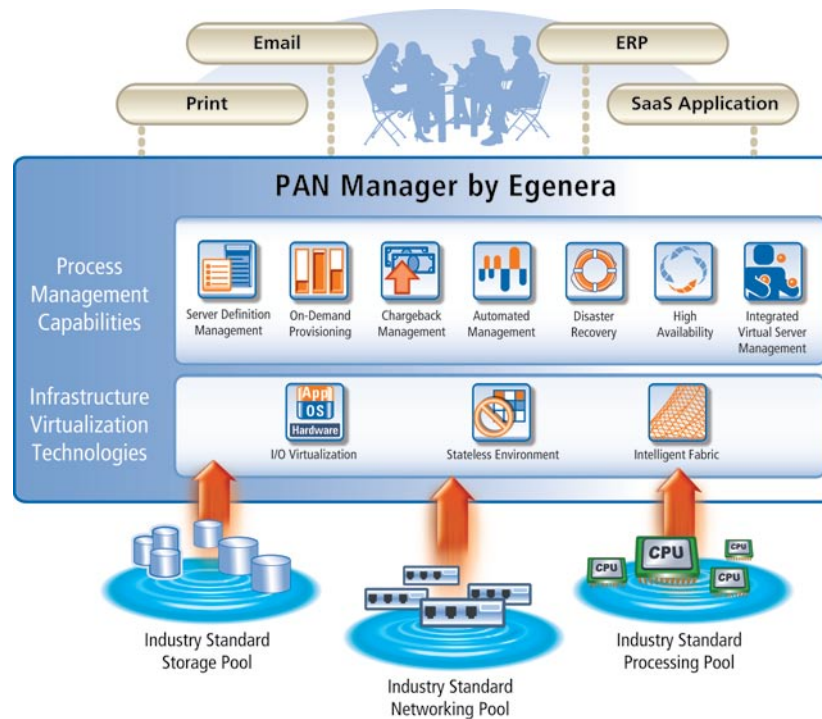
Today, production is split between the primary and backup sites on a 60/40 basis. This active/active architecture leverages bi-directional synchronous replication across EMC® Symmetrix® DMX™ systems at the high end and NetAPP® FAS units at the mid tier. Every application boots from a SAN and all data are replicated in real time between locations. As a result, applications and services can be transitioned from one site to the other in minutes, with no impact to users.

One example of how PAN Manager's processing pool adds to available capacity is in test and development, considered as crucial as production for certain applications. Because these services are developed and launched very

quickly, the development environment needs to mirror production systems. Initially, Commerzbank NA assigned specific servers to these mission-critical test/dev projects. However, as the team grew confident in the speed with which they could provision servers with PAN Manager, they established a pool for development, test, failover, and additional capacity.

Depending on the requirements, it regularly took Commerzbank's IT staff two days to configure a legacy server. Since using PAN Manager, that time has been reduced to well under an hour. Now they are able to maintain a library of images that can be deployed at any time to any server in the resource pool at either site. Not even their nightly reporting application has dedicated servers.

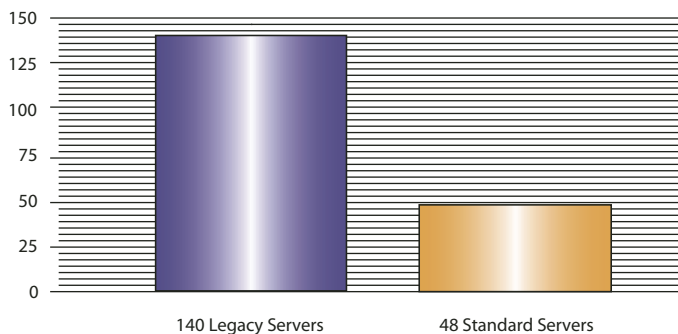
Summing up PAN Manager's impact on Commerzbank's operations, the vice president said, "We live every day in the recovery portion of the DR mode. Having the assets active takes the mystery out of continuity. We're not praying that it works, not planning that it works—we know it works because it's an active part of the process."



Finance

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Server Consolidation
(number of servers*)



*Legacy machines running Windows 2000 vs. standard servers running Windows 2003 and powered by AMD Opteron processors.

PAN Manager was designed to minimize complexity and optimize IT responsiveness through flexible, secure resource sharing. The approach combines stateless servers with I/O virtualization to pool resources and make them available to any application at any time based on business priorities. Proven in mission-critical environments like the one at Commerzbank NA, PAN Manager enables data centers to scale, increase performance, virtually provision workloads, and ensure availability.

Commerzbank's vice president of IT concludes, "We're looking for a vendor that understands what we're trying to accomplish technically and how that aligns to the business, and has designed a solution to meet those requirements. This is what Egenera gives us, and no other supplier can provide."

The Value Proposition for Commerzbank NA

PAN Manager has allowed Commerzbank to consolidate 140 legacy servers into just 48 while gaining more computing capacity than they previously had. Additionally, each of the new servers is capable of running either UNIX or Windows on demand. This new infrastructure has not only allowed them to recapture 60 percent of the data center, but has yielded quantifiable reductions in space, cooling, cabling, and management requirements.

Commerzbank's IT staff has also reported that provisioning is quicker and it's easy to add, remove and reallocate capacity. Training and knowledge transfer were effortless owing to PAN Manager's intuitive interface.

As Commerzbank NA has seen, data center complexity is the result of legacy architectures that require multiple components to connect a server to storage networks, IP networks, management consoles, and other systems. Each of these components must be purchased, maintained, upgraded, and managed. Moreover, those that reside on the server itself—the disk, network interface card and storage interface—give that server a fixed identity.



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