



► Stylish Solution

Upscale retailer gets a network makeover with help from the experts at Emtec.

Retailers must stay ahead of the curve to remain relevant in the fast-changing world of high-end fashion. However, staying competitive in today's global marketplace requires more than a well-stocked inventory of Armani suits, Balenciaga handbags and Natalia Brilli accessories — it requires an underlying technology infrastructure that is equally avant-garde.

Faced with networking issues arising from rapid expansion, a New York based chain of luxury department stores recently went in search of a technology partner to design a network that would be stable, available and scalable to meet future growth plans. After sizing up several solutions providers, the company found a perfect fit in Emtec, Inc.

"The design, the plan and the migration approach Emtec put together — at a very competitive price point — made a lot of sense to us," said the company's IT director. *"Emtec obviously did their due diligence on our existing state of affairs."*

Retro Look

Although the retailer has a reputation as a style mecca for an A-list clientele of the wealthy, famous and fashionable, what the fashionistas couldn't see behind the scenes was a data network and communications infrastructure that had become increasingly shabby. The company's infrastructure comprised five separate network domains running on antiquated gear. There was no central administration, domain access was spotty due to DNS issues and backup procedures were fragmented.

"Their pain point was that they didn't have a true working DNS environment. That's what allows computers on a network to find and authenticate each other," said Al Villar, the Senior Systems Engineer who served as Emtec's on-site technical lead for the project. *"That made it difficult to reach resources located in the different domains, which sometimes affected the customer's ability to conduct normal business activities."*

The retailer's IT staff was supporting more than 60 physical servers, and their Exchange servers had to be rebooted every 10 days to ensure against any major outages caused by server crashes.

Perhaps most critical was the company's e-mail platform. There were two e-mail servers, one running Microsoft Exchange 2003 and the other Exchange 2000. Both were running an older version of Active Directory — the network directory services feature in Exchange that allows administrators to centrally manage users, clients, servers and other network components. This mixture was causing incompatibility issues.

E-mail was problematic because it was not reliable and not stable. That was a huge issue because in the retail industry, e-mail isn't just a resource — it is a critical application. Numerous business transactions take place using email, including global purchases from manufacturers in Europe and Asia.

"In a customer service business like this, uptime is everything," said Villar. *"E-mail and network connectivity is their lifeblood, so we had to make sure there was no downtime and no impact to the customer. With stores in different time zones, they're essentially open around the clock, so the window of opportunity we had to work within was tight."*

Fashioning a Solution

To ensure there would be no downtime during the project, Emtec set up a “proof of concept” lab so that all elements of the total solution could be fully tested before being implemented in the production environment. The first step was to stabilize and upgrade the e-mail environment on a virtual server using VMware for high availability and automatic failover.

“We upgraded them to Exchange 2007, but there’s a migration path you have to follow,” said Villar. “First we had to complete the migration from Exchange 2000 to Exchange 2003, and then upgrade them to Active Directory 2003. Once we had them solidified on that platform, we could go ahead and do the migration to 2007.”

With that piece in place, the next step was to consolidate the separate network domains through the implementation of domain controllers, which are the centerpieces of Active Directory. They store user account information, authenticate users and enforce security policies for a Windows domain. Once the domain consolidation occurred, Emtec started building out new hardware to replace and consolidate the retailer’s existing gear.

The new hardware included Dell servers with redundant domain controllers, VMware ESX servers for mission-critical applications as well as development and testing, and two Citrix servers.

In addition, Emtec stabilized the backup environment by installing an iSCSI SAN to handle all the e-mail storage requirements, along with two IBM tape libraries. Symantec Backup Exec 12 software enables a tiered backup environment by delivering disk-to-disk-to-tape backup and fast, efficient recovery.

Wearing Well

Consolidating the customer’s exchange servers from nine to five virtual systems and adding six new virtual enterprise application servers within a single domain provides dramatically improved manageability and better failover capabilities while also delivering other benefits that are becoming increasingly critical.

For instance, the new infrastructure has greatly improved the customer’s ability to respond to regulatory audit requirements for Sarbanes-Oxley and the Payment Card Industry Data Security Standard by making it much easier to set global parameters with a single domain. The customer also gets some “green IT” benefits by using virtual servers to consolidate and retire the older systems that had higher power, cooling and real estate requirements. This delivers cost savings in addition to reducing the IT environmental footprint.

With the customer poised to continue its domestic growth in 2009 and possibly expand internationally at some point, Emtec has helped create a network that will grow with the company. That is of critical importance, because while fashion trends can change with the seasons, a robust technology infrastructure that ensures the delivery of essential services will never go out of style.

About Emtec: Established in 1964, Emtec, Inc. is a systems integrator that provides IT services and products to the federal, state, local, education and commercial markets. Our market leading value-based management methods, coupled with best-in-class IT technology, consulting and development services, address a wide range of specific client needs, as well as support broader IT transformation initiatives. Emtec’s service capabilities span the United States, Canada and countries around the globe.