



## ▶ Banking on Reliability

*Emtec helps regional bank ensure systems availability with server and storage migration.*

Downtime is never a good thing, but it can be particularly painful for those in the banking and financial-services industry. When a person can't access an online store it can be inconvenient and somewhat frustrating. If the same person is unable to access his or her bank account or make financial transactions, it can be potentially devastating.

Customer dissatisfaction, reputation damage and revenue loss are all consequences of unreliable IT systems in the banking industry. Ensuring the availability of critical systems, data and applications is essential for compliance with an array of regulatory requirements.

With an eye toward avoiding such downtime misfortunes, a regional banking institution recently asked the experts at Emtec for guidance when the main server housing its essential banking applications was nearing end-of-life status. Rather than recommending a straightforward server upgrade, Emtec engineers showed the bank how it could dramatically enhance system performance by upgrading both its server and storage network, while also repurposing the old hardware to create a failover cluster for high availability and redundancy.

### Time for Change:

*"Their equipment was close to end of life, and they were starting to realize some performance issues. That was the catalyst,"* said Chris Mallazzo, director of project engineering for Emtec.

*"They did have periodic situations where they experienced downtime. In the banking world, that's just not acceptable.*

*"They essentially came to us with a clean slate, saying: 'We want to upgrade; we want better performance. Tell us what to do.' We did a capacity assessment and a performance assessment, and with the*

*information we gathered we were able to develop a configuration that gives them a lot more than what they were expecting."*

Bank officials did ask Emtec to craft a solution using HP gear. In their existing environment, all banking applications and the database were housed on an eight-processor HP RP8400 server running HP-UX, and the storage network was attached to a an HP VA disk array. Although the gear was showing its age, the bank was sold on HP's service and responsiveness.

Emtec was happy to oblige, recommending an upgrade to a newer HP RP8420 server with 10 processors and swapping the old SAN for an HP Enterprise Virtual Array (EVA) 4000 SAN. With newer, faster processor boards, the EVA 4000 offers significant performance improvement over the old SAN. Other welcome additions include new snapshot tools, brushed-up management features and deeper virtualization capabilities.

*"The EVA is a higher-performing array, purely based on it being a newer technology,"* said Mallazzo.

*"An important consideration was that the additional software components give them data replication and snapshot capabilities that the VA doesn't provide."*

## Protecting the Investment:

Perhaps the key element of the project was Emtec's proposal to use HP Serviceguard software to repurpose the old server to provide redundancy and failover capabilities, ensuring that the bank can continue operations without skipping a beat if the new server were to experience any problems.

HP Serviceguard is specialized software for protecting mission-critical applications from a wide variety of hardware and software failures. With Serviceguard, multiple servers (nodes) and/or server partitions can be organized into a cluster that delivers highly available application services to LAN attached clients. HP Serviceguard monitors the health of each node and rapidly responds to failures in a way that minimizes or eliminates application downtime.

Beyond designing and configuring the new system, Emtec made sure the actual installation went off without a hitch. That can be a bit tricky when dealing with banking applications and critical customer data.

*"Working with a bank is a bit more complicated than working with, say, a retail outlet," said Mallazzo.*

*"You're dealing with financial information, which is very sensitive. Plus, they have 24-hour banking capabilities. In addition to the typical over-the-counter banking, they have Internet banking and voice-response banking. That meant we had only very short windows of downtime to perform the migration."*

*"Timing was everything with this project. We had to do a lot of preparation up front and put a lot of redundancies in place so that in the event of any problems, we'd have a fallback plan."*

## On the Money:

The migration went smoothly. The initial cutover of the banking applications and the database took place midweek after normal business hours. The job of creating the failover cluster with the old server was accomplished over the span of two weekends.

In retrospect, the weekend work on the failover cluster probably provided the bank with benefits it didn't expect when it first went to Emtec to discuss a server upgrade.

*"In addition to putting them on the latest and better-performing technology, the repurposing of their old system is probably the most significant difference in their new environment now," said Mallazzo.*

*"By creating a two-node high availability cluster, their uptime and availability has increased many times over. The way the system is currently set up, if they took a hard failure on their production banking server, they would see no downtime. It would automatically cut over to the old server."*

*"The project went smoothly, and the client is very happy. Their system performance is far better than it was before."*

**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.