

PREMIER Bankcard Keeps Pace with Dramatic Data Growth, Gains Over \$3.5M in Benefits with HP Storage Area Network

IN BRIEF

- **Goal:** For PREMIER Bankcard to significantly upgrade its storage capacity, provide unified data access, and simplify storage management to meet the data demands of its fast-growing credit card business.
- **Solution:** HP StorageWorks Enterprise Modular Arrays (EMA 12000s).
- **Results:** A five-year net benefit of \$3,577,000 driven by user productivity due to greater storage availability, improved disaster recovery, and quicker software revisions. An annual ROI of 592%, a payback period of four months, and a total five-year net benefit per user of \$1,555. An enhanced ability to service new and existing credit card accounts due to improved access to customer records and history.

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The success of credit card providers depends upon the quality and amount of the data they can access about existing and new customers – and that data must be always readily available. So when PREMIER Bankcard needed to keep pace with explosive growth in its customer base, and it faced an accompanying need for dramatically increased storage, it looked for a cost-effective solution that would allow it to grow storage capacity and move to a scalable product without incurring high costs. PREMIER Bankcard chose HP StorageWorks Enterprise Modular Arrays (EMAs) because they offered easy maintenance and installation, high-capacity storage, and scalability. The solution has yielded over \$3.5 million in benefits, as well as greater data access to its customer records so that the credit card provider can continue on its projected growth path.

Benefits

Objective	Benefits Achieved
Scalability	PREMIER Bankcard is able to much more quickly add storage on an as-needed basis. Previously, it took 45 days to add new storage capacity; now it can be added in four hours.
Grow storage capacity without significant increases in server and maintenance costs	PREMIER Bankcard reduced the number of servers it would have required to support the storage by six, and saved in network infrastructure costs. A single person is now managing 40 terabytes of data.
Faster data backups	Reduced the number of hours it takes to back up PREMIER Bankcard's SQL database from 26 hours to five hours.
Improved data availability	With the Hewlett-Packard Storage Area Network (SAN) solution, there is no single point-of-failure. Additionally, failover is improved because the storage is insulated from CPU or server failures.
Centralize data access	The Hewlett-Packard SAN allows the SQL server to access data from a central point rather than from multiple locations.

NOTE: This case study was authored by the Case Study Forum. The Case Study Forum is dedicated to writing and publishing case studies for the IT community. The financial analysis that appears in this case study was performed by ITCentrix, the premier software and services company for measuring and managing the business value of information technology investments. Results shown are not a guarantee of equivalent performance.

About PREMIER Bankcard

PREMIER Bankcard, headquartered in Sioux Falls, South Dakota, is one of the nation's leading credit card providers to the underserved, yet creditworthy market. Since its founding in 1989, it has offered credit cards to customers who in the past have had a poor-performing credit history, and has helped millions of individuals and families establish or re-establish their credit.

PREMIER Bankcard is now among the top 20 credit providers in both VISA® and MasterCard®, with approximately 2.5 million active credit card accounts. It is the eleventh largest Microsoft data warehouse in the world. It has 2,200 employees located in four locations in South Dakota and is the sister organization to First PREMIER Bank, also located in South Dakota.

The Challenge: Keep up with Dramatic Storage Growth

PREMIER Bankcard has grown dramatically since its founding and its data needs have grown dramatically as well. It has grown from 1,000 credit card accounts in 1989 to approximately 2.5 million today, and is growing by 140,000 active accounts each month. Its number of employees has similarly expanded over the past 14 years, from a single employee to 2,200 today.

"The growth in the size of our databases and data has been astonishing. There have been days when the database has grown by 30 gigabytes from one morning to the next."

SCOTT ERKONEN
MANAGING OFFICER OF NETWORKING
PREMIER BANKCARD

Where there is business growth there is data growth. In order to service existing customers and gain new ones, information about each existing customer, former customer, and potential customer needs to be readily available. To accomplish this, an in-house application provides data access that aids in customer service, acquiring new customers, and making decisions about whether to offer credit to new customers.

Initially, the in-house application was written in FoxPro, but the application was not flexible or powerful enough to meet the increasing data demands. To solve the problem, four years ago PREMIER Bankcard switched to a Microsoft SQL database. That change in applications accompanied exponential data growth. When the SQL database re-indexed, for example, it could grow by 30 gigabytes overnight. Data was growing so quickly that PREMIER Bankcard was finding it difficult to deploy servers rapidly or efficiently enough using a direct attached storage solution.

The Need for a New Storage Solution

PREMIER Bankcard needed to update its storage solution for a variety of reasons, most notably the following:

PREMIER Bankcard's data growth has been explosive. In 2003, projected data growth will be 10 terabytes, and in 2004, the growth is projected at 25 terabytes.

- **Improve Customer Service.** The SQL database contains records of every contact that PREMIER Bankcard has with every one of its customers, including phone calls, correspondence, fees charged and similar information. It needed to make that information immediately available at all times to its customer service representatives so that customer issues could be more quickly resolved – which would lead to higher customer retention.
- **Manage data growth.** Storage capacity needs were growing at a dramatic rate, and the existing direct attached storage system could not keep up with the growth. Customers have grown from 1,000 cards in 1989 to 2.5 million in 2003, and is growing at a rate of 140,000 new active accounts a month. In 2003, projected data growth is 10 terabytes, and in 2004, the growth is projected at 25 terabytes.
- **Improve backup speed and reliability.** With direct attached storage, it took 26 hours to do data backups – and this would only increase with database growth. PREMIER Bankcard also wanted to be able to secure its data better. With direct attached storage, data was at risk when there was a CPU or server failure.
- **Centralize data access.** Direct attached storage did not support centralized access for “cradle-to-grave” customer information because it was not scalable enough to provide access to all the data in a single location. Application changes would have been required in order to address this limitation of direct attached storage.
- **Grow storage while controlling management costs.** PREMIER Bankcard wanted to be able to continue to grow its business, and its volume of data, without having to incur high network, storage, infrastructure, maintenance and staffing costs.

PREMIER Bankcard Chooses HP SAN Technology

PREMIER Bankcard was faced with the choice of growing its direct attached storage system, or moving to a new solution. It decided that a SAN would be the ideal solution because of the technology's scalability, ability to rapidly deploy new storage, centralized data access capabilities, and for holding down network, maintenance and staff costs.

PREMIER Bankcard chose a Hewlett-Packard SAN solution because it provided centralized data access, security, rapid deployment of new storage, and was able to hold down network, maintenance, and staff costs.

The company considered several SAN solutions, and chose HP Enterprise Modular Arrays (EMA 12000s). PREMIER Bankcard had previously standardized on Compaq and Hewlett-Packard PCs, laptops, and servers, and had found the hardware to be reliable, error-free, and easy to maintain. Based on its positive experience, "comfort level" and relationship with Hewlett-Packard, it chose the HP SAN solution. Implementation went smoothly. The initial installation took a week, including hardware installation as well as data migration.

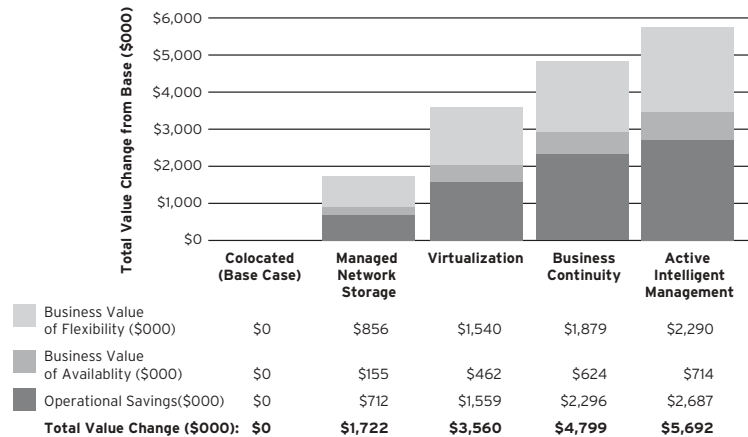
"We have a high level of confidence in the security of the HP solution. Its uptime and reliability have been an extremely tangible benefit to us. There is no single point of failure, and when we need to do a replacement, we can do it at our own leisure rather than having to work overnight in order to do a replacement."

SCOTT ERKONEN

MANAGING OFFICER OF NETWORKING\

PREMIER BANKCARD

VALUE OF HP STORAGEWORKS SOLUTION FOR PREMIER BANKCARD



Proposed: Managed Network Storage
 Array Type: EVA
 Platform: NT
 Workload: Open VMS Mix
 Depreciation Period: 5 Years

The value metrics represented here were generated using HP's NSS Business Value Model, developed by ITCentrix. This modeling tool combines value measurement software, industry benchmark data, and specific HP product information to demonstrate the business value contribution of a change in storage infrastructure.

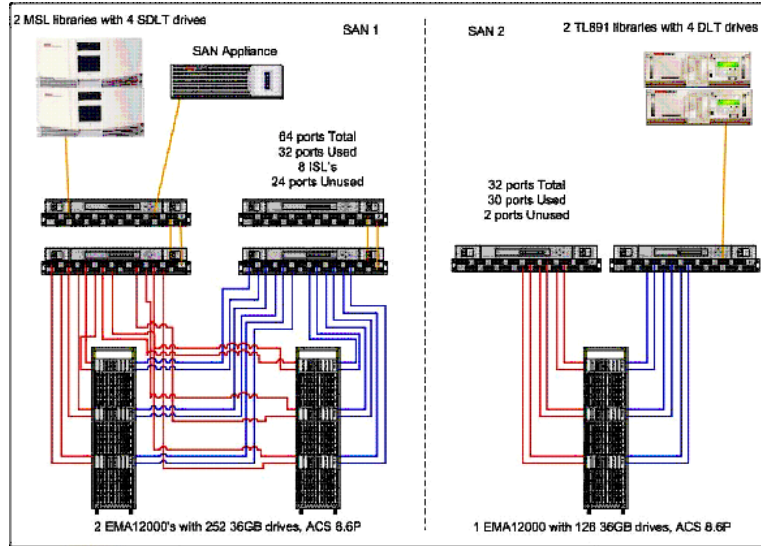
An Inside Look at the Hewlett-Packard Solution

The figure below shows the HP SAN implementation at PREMIER Bankcard. The EMAs support the SQL production, file shares, and SQL data reports. PREMIER Bankcard has also purchased two EVA 5000 storage arrays and two HP CASA appliances, not shown here.

“We’ve seen dramatic decreases in our cost per account thanks to the HP solution. It’s allowed us to save in storage cost as well as in IT and infrastructure costs.”

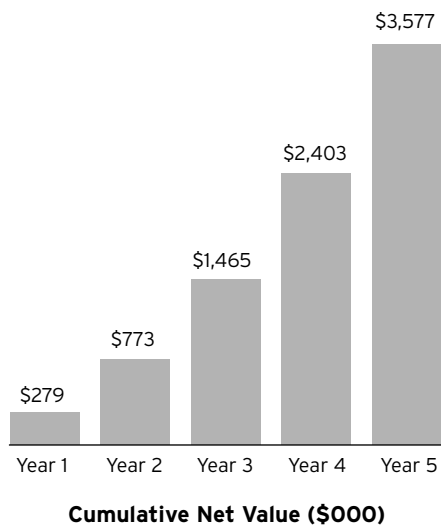
DAVID GEIVER
VICE PRESIDENT OF TECHNOLOGY
PREMIER BANKCARD

FIG 2. HP SAN IMPLEMENTATION AT PREMIER BANKCARD



The Bottom Line for PREMIER Bankcard

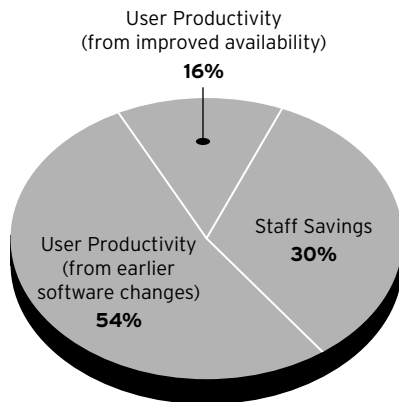
A detailed analysis of the implementation shows that PREMIER Bankcard will gain a cumulative five-year net benefit of \$3,577,000 from the project. It will yield an annual ROI of 592% and has a payback period of four months. The total five-year saving per user is \$1,555.



The benefit of \$3,577,000 is made up of increased user productivity due to the improved availability of customer data for PREMIER Bankcard employees; applications being able to be installed and updated more quickly; faster backups and improved disaster recovery; a decrease in total IT costs per user; and staff savings because fewer technicians need to be hired in order to install new storage and maintain existing storage.

The SAN has been able to significantly reduce PREMIER Bankcard's cost per user account by reducing the cost per gigabyte of storage, and by holding down IT costs and infrastructure costs related to storage. PREMIER Bankcard is able to quickly add storage on an as-needed basis. Previously, it could take 45 days to add new storage capacity, which can now be added in only four hours.

PREMIER Bankcard's bottom line for the project: A cumulative five-year net benefit of \$3,577,200, an annual ROI of 592%, a payback period of four months, and a total five-year benefit per user of \$1,555.



Cumulative 5 Year Benefit = \$3,577,000

PREMIER Bankcard has also been able to hold down staffing costs while expanding storage. The company has not had to add staffing to handle managing the increased data storage – and a single person is managing 40 terabytes of data.

BUSINESS ANALYSIS OF THE SOLUTION

Project Summary	
Annual ROI	592%
Cumulative Five Year Net Benefit	\$3,577,000
Payback Period (months)	4
Total 5 Year Benefit/User	\$1,555

Project Costs (\$000)	Startup	Year 1	Year 2	Year 3	Year 4	Year 5
HP EVA Virtualization Hardware, Software & Implementation Services	\$518	\$288	\$828	\$1,214	\$1,593	\$1,607
Alternative Direct Attached Hardware, Software & Implementation Services	\$398	\$427	\$957	\$1,395	\$1,815	\$1,780
Net Project Cost	\$121	(\$139)	(\$129)	(\$182)	(\$222)	(\$173)

Benefits (\$000)	Year 1	Year 2	Year 3	Year 4	Year 5
Staff Savings	\$78	\$109	\$152	\$213	\$299
User Productivity (from improved Availability)	\$42	\$59	\$83	\$116	\$162
User Productivity (from earlier Software Changes)	\$141	\$197	\$276	\$386	\$540
Total Benefits	\$261	\$365	\$511	\$715	\$1,001

Financial Analysis (\$000)	Startup	Year 1	Year 2	Year 3	Year 4	Year 5
Net Value	(\$121)	\$400	\$494	\$692	\$938	\$1,174
Cumulative Value	(\$121)	\$279	\$773	\$1,465	\$2,403	\$3,577
Net Present Value	\$2,721					
Annual ROI	592%					
IRR	364%					
Payback Period(months)	4					

Key Performance Indicators (KPIs)	
Total 5 Year Benefit/User	\$1,555

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The SAN has also been able to ensure that accurate data is always available when needed. It allows there to be a single “cradle-to-grave” data warehouse with a unified set of data. That single source of information means that PREMIER Bankcard employees can easily get accurate, up-to-date information about customers without fear of query errors. Employees can more easily find relevant data by querying a single source, rather querying multiple sources of data.

PREMIER Bankcard Looks to the Future

“With the Hewlett-Packard platform in place, I know that we can support the company’s growth from the point where we are today to virtually any point on the horizon.”

DAVID GEIVER
VICE PRESIDENT OF TECHNOLOG,
PREMIER BANKCARD

PREMIER Bankcard is building on its initial EMA solution, and has purchased HP EVA 5000s and CASAs as part of a disaster recovery plan. It will have the ability to use the EVA's and CASA's for virtualization and data replication of critical business functions to a backup location.

“With the Hewlett-Packard solution, we’re comfortable that we have the right product and technology to take our business wherever we need to go,” says David Geiver, Vice President of Technology, PREMIER Bankcard. “The last two to three years provides a roadmap for us, and shows that we can go to 40 terabytes of data without slowing down our business growth. With the Hewlett-Packard platform in place, I know that we can support the company’s growth from the point where we are today to virtually any point on the horizon.”

Hewlett-Packard Company www.hp.com

For a customized Business Value assessment, including financial analysis, contact your HP storage sales specialist or send an email to BVMdel@hp.com.

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