

# Visa EU Uses Sun and DB2 to Harness the Power of its Credit Card Transaction Data



## Key Highlights

### Company:

Visa

### Industry/Market

Financial services

### Products:

- Sun Fire™ 6800 server
- Sun Fire 4800 server
- Sun StorEdge™ T3 disk arrays
- Sun StorEdge L700 tape library
- Solaris™ 8 Operating Environment
- IBM DB2® Universal Database

### Key Business Challenges:

- Help member banks improve understanding of customer behavior
- Build transaction business
- Conserve budget

### Key Business Results:

- Data warehouse built to harness 3 billion transactions worth of data annually
- Information harvested that provides better understanding of customers and their behavior
- Uninterrupted processing, storage, archiving, and speedy retrieval of all credit card transactions

*“The Sun Fire 6800 server is very well suited for our data warehouse. The fact that we were using DB2 was not a negative issue, but a positive one, as the 6800 has been proven in tests to be one of the best, if not the best, servers running that software.”*

*—Rose Coyle, senior Vice President, Visa EU*

Visa EU has created one of Europe’s largest data warehouses to store details of the three billion credit and debit card transactions it processes every year across 26 countries. Built on servers and storage from Sun Microsystems and the DB2 database from IBM, this warehouse helps Visa’s member banks understand consumer behavior much better than ever before.

## Major Engine of Europe’s Economy Turns its Vast Quantities of Data into Intelligence

Visa is one of the world’s leading payment brands. Visa-branded cards generate more than \$2 trillion in annual volume and are accepted at more than 24 million physical locations around the world, including more than 750,000 ATMs. The Visa organization plays a pivotal role in developing innovative payment products and technologies to benefit its 21,000 member financial institutions and their cardholders.

Visa EU plays a central role in the economy of Europe, with 194 million credit cards in circulation that account for expenditures of over \$1 trillion per year. Visa EU processes the vast majority of the 10 billion transactions annually that account for those expenditures, which uniquely positions the company to harness information of immense value to its member banks and merchants that accept Visa cards. Visa EU conceived its data warehouse initiative to provide more value to these constituents, making sure it had the capacity and power to perform analysis of customer behavior and trends on a continent-wide scale.

## Sun and DB2 Provide End-to-End Solution

Visa EU chose Sun to provide the end-to-end platform solution for the data warehouse. At the heart of this architecture is a Sun Fire™ 6800 server running IBM DB2 for the data management system. “The 6800 is very well suited for our data warehouse,” said Rose Coyle, senior Vice President for Visa EU. “It came out on top when we benchmarked it against two other servers in that class. It had a higher memory-to-CPU capacity than any of the other machines, and that’s a crucial element in handling the high volumes of data for this particular warehouse. We were also impressed by

the fact that its architecture had been built from the ground up to be suitable precisely for major tasks such as data warehousing. Finally, the fact that we were using DB2 was not a negative issue, but a positive one, as the 6800 has been proven in tests to be one of the best, if not the best, servers running that software.”

Visa EU began by working very closely with the team at Sun labs to show proof of concept. There they were able to jointly perform proper stress testing using high volumes of data to replicate real-life conditions. “From that point onwards, it became very clear that Visa would choose a complete Sun hardware solution as the strategic platform for the Visa EU data warehouse,” said Coyle. Visa EU proceeded to purchase Sun StorEdge™ T3 disk arrays for hard storage of data, Sun StorEdge L700 tape libraries for offline storage, and a Sun Fire 4800 server for development and testing.

As its implementation partner the company chose Accenture, whose strong recommendation of the Sun Fire 6800 server confirmed Visa EU’s decision. The project was extraordinarily complex, with many challenges arising from the sheer volume of transactions, exacting throughput requirements, and complexity of data. Throughout the design and implementation of the data warehouse, Sun remained closely involved with Visa EU and Accenture. Now Sun is continuing its involvement by providing ongoing support.

This total Sun solution meant significant cost savings for Visa EU, especially in the area of offline storage. Rather than maintaining all the data on hard T3 storage, at the end of every week all Visa data is uploaded to the L700 tape library in a ten-hour session. Once there, it can be interrogated by the Sun Fire 6800 server with the same performance, reliability and availability as the rest of the system.

#### Sun, Visa’s Strategic Technology Partner for the Long Term

Visa EU sees the data warehouse as a strategic tool for building its transaction business. “The data warehouse is pivotal to Visa’s information strategy,” explained John Chaplin, Executive Vice President for Visa EU. “Visa is essentially an information and technology business, and now we can offer our member banks information which has always been there, but which no one has been able to easily access before. This wealth of real-time data allows them the very valuable ability to benchmark themselves against the rest of the market on any number of key business drivers. In what way do your customers’ spending patterns differ from everyone else’s as an aggregate? Do they make more international purchases than everyone else? Do they use more cash machines? These are just a few of the questions we can answer. Merchants will also be able to use our data to test themselves against the competition.”

*“With the ability to analyze trends from the many hundreds of millions of Visa transactions made in the EU every year, I am confident that the new data warehouse will prove its worth many times over,” concluded Chaplin.*

*“If you think of Visa as one of the engines of the economy, for the first time we have succeeded in capturing all the data from that engine and putting it to work. This is a long-term project for us that is going to develop significantly over several years. That’s why it’s important for us to have a strategic technology partner like Sun who will be able to work closely with us as we move to each new stage.”*



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