



EDS' agile infrastructure, the data backbone of world-class e-travel

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>> Award-winning use of open-source technology drives savings and adds value

Sabre Holdings

Sabre Holdings drives business through its database – especially for consumer air travelers looking for the lowest fares and most convenient schedules. To help reduce the enormous cost of running the system, EDS helped the company transition from its mainframe-based system to a more agile, cost-efficient solution.

Through our collaboration on projects like the new air shopping and pricing platform, EDS has enabled Sabre Holdings to move its technical strategy forward, to lower total cost of ownership and to bring even greater value to its customers through technology.

David Benners
Enterprise Client Delivery Executive
EDS - Sabre Holdings Account

The business issue

Born out of the same organization that developed the world's first electronic reservations system for American Airlines in the 1960s, Sabre Holdings today is a travel industry world leader. Through its multiple lines of business, which include Travelocity, Sabre Travel Network and Sabre Airline Solutions brands, the S&P 500 company retails travel products and provides distribution and technology solutions for travelers, corporations, travel agents and suppliers. Driving all of these lines of business is Sabre Holdings' innovative database application and supporting infrastructure. The database powers the company's Air Shopping products, which require powerful search and data management capabilities. It calculates millions of schedule changes, availability, rules, routes and fares being updated throughout the day, and it provides dynamic access to Structured Query Language (SQL) tables within the application. Given a significantly rising volume of data and query activity, the company needed to move the system to the lowest-cost platform that could guarantee reliable, 24/7 access while reducing maintenance costs.

As Sabre Holdings reviewed options for a new platform, the company focused on the queries that allowed users to search for the lowest fares. Low-fare searches require enormous amounts of processing capacity due to multiple flight options, fare schemes, and constant fare and schedule updates. So, while easier Internet access has increased demand for low-fare searching, comparatively fewer bookings have driven up the cost of supporting these searches.

Sabre Holdings recognized that fare shopping fits a very horizontally scalable model and recognized that commodity hardware, software and databases are key components to reducing cost in this space. So the company turned to technology partner EDS to help move data to a more efficient and agile environment.



Methodology and technology

An Open System Services interface into the HP NonStop server farm was used for development. Initially, the new environment was deployed on HP NonStop and then on HP NonStop with a UNIX operating system. However, the company wanted to exploit lower-cost technologies and skills that could easily be migrated to other systems. So after a few months of processing, the team decided to move from UNIX to Linux.

Services featured

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Our approach

A joint team from Sabre Holdings, EDS and Golden Gate Technology – a start-up specializing in electronic data access – worked together to produce a low-cost, open-source database application and server farm solution for Sabre Holdings.

The team migrated low-fare search functions and data from a mainframe legacy platform to an HP NonStop complex. It took less than a month to implement the application, operating system and database; further upgrades to the operating system have made it even faster and more cost-efficient.

Today, this “server farm” configuration keeps the mission-critical Air Travel Shopping Engine (ATSE) environment up and running 24/7 by intelligently managing and balancing the load of database queries. In addition, the new MySQL relational database allows data to be maintained and searched much more easily than was possible in the legacy environment.

The results

Migrating ATSE from the mainframe legacy system to a new, more agile infrastructure has enabled significant cost reductions throughout Sabre Holdings. Further, by implementing the upgraded solution on the low-cost Linux operating system and open-source MySQL database, the team reduced total cost of ownership by at least 40 percent.

The new system is the data-management backbone supporting the memory-intensive searches performed on the company’s Air Shopping products. The open-system platform continuously updates 20 million fare and rule records and 1.5 million schedules with virtually no downtime, delivering online schedules, availability, itinerary pricing and low-fare searches for Sabre Holdings’ global network of partner and customer companies.

So successful was the ATSE project that, in April 2004, Sabre Holdings and EDS received the “MySQL Application of the Year” and “Partner of the Year” awards at the MySQL Users Conference & Expo. These awards recognize MySQL users and partners whose applications, products or services are models for how the open-source MySQL database technology can be used in major computing systems to bring dramatic cost savings, performance and reliability benefits to organizations and end users.