

## Travel Leader Centralizes IT, Speeds Applications, and Lowers Risk

EDS Easily Handles Sabre Holdings' Storage Centralization and WAN Optimization Project with Cisco Wide Area Application Services (WAAS)

### EXECUTIVE SUMMARY

#### SABRE HOLDINGS CORPORATION

- Travel
- Headquarters in Southlake, Texas; offices in 45 countries
- 9,000 employees

#### BUSINESS CHALLENGE

- Improve compliance procedures and integrity of data accessed by global employees
- Maintain employee productivity through transparent increases in application performance
- Reduce capital and operating IT expenses for remote offices

#### SOLUTION

- Cisco Wide Area Application Services for application acceleration and WAN optimization

#### BUSINESS RESULTS

- Adherence to internal compliance standards
- 10 times increase in file access and 20% reduction in bandwidth utilization
- Remote and acquisition office IT cost avoidance
- Increased company-wide homogenous server environment

### Business Challenge

Sabre Holdings Corporation (NYSE: TSG) history dates back to the 1960s and includes a long list of innovations for the travel industry including the first automated flight reservations process. Besides being a part of inventing e-commerce for travel agencies through Sabre Travel Network, Sabre Holdings' Travelocity.com and lastminute.com have led the way for travel Web sites, and Sabre Airline Solutions has driven the industry forward with a comprehensive portfolio of decision-support tools for transportation companies.

With a noteworthy record of industry firsts and unprecedented solutions, as well as acquisitions, Sabre Holdings has grown into a multibillion dollar company with approximately 9000 employees. But this impressive, albeit decentralized, growth has introduced a number of challenges for the company's IT organization including the risk of protecting critical business information on email, file,

and print servers, and employee desktop and laptop computers, in over 100 remote locations across 45 countries.

**“Cisco WAAS has played a critical role in our server and storage centralization, delivering increased data integrity, steady employee productivity, and reduced remote office costs, while helping avoid costly WAN upgrades.”**

—David Smith, VP of Corporate Systems, Sabre Holdings Corporation

Another challenge was mounting as the increased use of communications and collaboration to remote locations was taxing Sabre's WAN, causing critical business applications to slow down, and thus decreasing employee productivity. Specifically, engineers collaborating with FTP, remote users of Microsoft Outlook, and contact center agents accessing customer relationship management (CRM) applications were impeded by application performance.

Given these challenges, Sabre, with their strategic technology-outsourcing partner, Plano, Texas-based EDS, initiated a storage centralization and WAN optimization project to reduce complexity and risk from decentralized growth, and to speed application performance to end users, all while reducing IT costs.

## Network Solution

The project included storage centralization for locations on five continents around the globe—including Bangalore, Bussum (The Netherlands), Montevideo (Uruguay), New York, and Sydney—back to two primary datacenters in Tulsa, Oklahoma in the United States, and London, England. However, this centralization was sure to further encumber the WAN performance; hence the project also called for a comprehensive network-based WAN optimization solution.

“Clearly WAN utilization was going to go up as we moved Sabre’s file servers and storage back to the two data centers, and user performance would suffer due to their distance from Tulsa or London,” says Geoff Wills, senior program manager for desktop systems delivery at EDS.

“As we were planning with Sabre to centralize storage, we talked to Cisco about solutions that might support our efforts as Sabre was very happy with their Cisco routers, switches, and IP phone solutions and hoped that they could contribute to the storage centralization and WAN optimization project,” says Wills.

Through comprehensive evaluations of many WAN acceleration solutions, Cisco Wide Area Application Service (WAAS) was selected for the following reasons:

- WAN optimization technology—accelerates any TCP-based application with best-in-class compression, redundancy elimination, transport optimizations, caching, and content distribution
- Deployment flexibility—WAAS Network Module plus three WAAS appliance sizes can be deployed to accommodate small, medium, or large remote offices
- Deployment simplicity—end user transparency and easy web-based system management
- Global service and support—Cisco’s global presence and technical expertise

“It is clear that Cisco has the market-leading technology in the WAN optimization area, and my end users love the results,” says David Gula, manager of telephony and data services within the global Sabre Holdings’ IT organization. “With the Cisco WAAS, 20 people in one remote office could access a single Webpage, but the page would only cross the WAN once.”

“Cisco’s caching, compression, and transport optimization features within the WAAS solution make this possible with total transparency to the end user,” says Gula. “In one case, a large file was accessed at 16 Mbps, seemingly over a 1.5 Mbps E1 connection. Thus, we were able to increase the network performance without having to actually increase the network bandwidth.”

Flexibility of deployments offered Sabre the ability to economically deploy WAAS at remote offices of all sizes. With the WAAS Network Module that is deployed within the Cisco Integrated Service Routers (ISRs), Cisco’s WAN optimization can be deployed in offices with fewer than 15 employees. Further, the Network Module lowers total cost of ownership (TCO), because it is covered under Cisco maintenance service for the router, and it saves space and power.

“The implementation was straightforward,” says Wills. “Cisco gives us a clean solution that is very simple to deploy and manage going forward.”

Already the Cisco WAAS solution is deployed at over 15 remote offices including Boston, Denver, and San Francisco in the United States, and major offices in Argentina, Australia, Brazil, Colombia, Ireland, Italy, the Netherlands, Japan, and Poland, and in redundant pairs at the data centers in Tulsa and London. In the first half of 2007, Sabre has plans for 15-20 more locations, where remote servers will be centralized.

## Business Results

The key benefits of the Cisco WAAS for Sabre were:

- increased data integrity
- improved application performance
- operation cost avoidance—bandwidth and server administration
- capital cost avoidance—server upgrades

“The project clearly met our key drivers to simplify our data support model and increase application performance,” says Gula.

### Increased Data Integrity

Today, standard, centralized servers and storage are subject to backup and recovery procedures with enhanced integrity and efficiency by the Tulsa and London IT teams, which lessens reliance on staff at remote offices. This also strengthens the company’s compliance efforts and ability to respond to audits.

Further, data stored on users’ computers are subject to stronger backup procedures to centralized storage as PC back-up application usage has increased with the introduction of WAN optimization. Additionally, future acquisitions can be integrated more easily as remote office servers can be removed and WAAS deployed.

### Improved Application Performance

Application performance has seen substantial improvements with the deployment of WAAS. Without WAN optimization, it was taking 20 seconds to download a 10 MB file from Tulsa to New York. But after WAAS was deployed, the download was reduced to 2 seconds, a 10 times improvement. Thus WAAS essentially restored downloads to LAN-like speeds.

Noticeable application performance improvements were realized, as well, in Sabre’s global deployment of CRM solutions for its customer care application between the Tulsa data center and the Montevideo, Uruguay facility that houses 750 call center agents. In the days following the deployment, WAN utilization graphs, with unusually low results, were presented to the Sabre operations team. “We had to prove to them it was not a holiday there,” says Gula.

“When you have people in the office walking up to you saying that the performance is great, then you know that you have succeeded,” says Craig Skinner, Sabre Director of Call Center Technology. “Our agents around the globe were not sure what caused the change, but they definitely noticed CRM performance improvements.”

WAAS has improved other TCP-based applications including Microsoft Outlook, Web portals, and backup applications, as well as desktop and FTP file access, and printing via remote print servers. And Sabre continues to identify new opportunities to use the solution.

### Cost Avoidances

By centralizing and increasing server and storage utilization, remote equipment, including non-standard configurations from acquisitions, was retired creating a more homogeneous IT environment which has significantly reduced total operational and capital server expenses.

Further, bandwidth cost avoidance is being realized, as upgrades were not necessary even though the centralized environment has increased dependence on the WAN. This benefit was especially important in Sabre's Latin America operations, where bandwidth costs are very high. In fact, on average, Sabre is seeing a 20 percent utilization reduction in all bandwidth connections where WAAS is deployed due to local caching and elimination of redundant transmissions. This offers the flexibility to add additional network based services, such as expansion of VoIP, to remote offices.

"Cisco WAAS has played a critical role in our server and storage centralization, delivering increased data integrity, steady employee productivity, and reduced remote office costs, while helping avoid costly WAN upgrades," says David Smith, VP of Corporate Systems of Sabre.

"With solutions like WAAS, Cisco has again proven to be a very effective technology partner. They give us opportunities to keep ahead of the technology curve and deliver the best value to our customers," says Wills.

### For More Information

To find out more about the Cisco WAAS and Cisco Application Networking Services, go to:  
<http://www.cisco.com/en/US/products/hw/contnetw/index.html>.

#### PRODUCT LIST

##### Cisco Application Networking Services:

- Cisco Wide Area Application Engine (WAE) Appliances
- Cisco Wide Area Application Services (WAAS) Software

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