RED LION HOTELS CORPORATION

STORAGE AREA NETWORK

Faster, Easier Enterprise Data Migration

EXECUTIVE SUMMARY

Technology Challenge

Migrate 1.6 terabytes of business-critical data, including metadata such as access permissions and timestamps, to a new storage array over a weekend

Solution

- Brocade® Professional Services
- Brocade Data Migration Manager (DMM)

Benefits

- Extremely accurate block-level migrations in multivendor environments
- Fast deployment of production systems for improved storage capacity and performance
- Minimal downtime of key business applications
- Simplified administration

Although some IT tasks should be simple, they can be anything but simple without the right tools. Red Lion Hotels Corporation (RLH), a leading hospitality and leisure company, discovered this when it needed to move key data between storage arrays. Both storage systems were located in the Spokane, Washington-based company's data center, seemingly eliminating any complications.

However, what appeared to be an undemanding operation soon became a time-consuming headache for the firm, which has over 3,000 employees and owns, manages, and franchises over 50 midscale and upscale hotels under its Red Lion® brand in nine states and one Canadian province.

RLH maintains a sophisticated IT infrastructure that captures and analyzes data from every transaction with each customer. It also has a Brocade Storage Area Network (SAN) fabric that saves transactional data, business records, property-management files, and e-mails as required by Sarbanes-Oxley and RLH's own corporate governance requirements.

Due to rising volumes of transactional data flowing into RLH's data center, the firm's storage solutions were nearing capacity. Consequently, at the end of 2006, RLH rebuilt its storage infrastructure with new solutions from Dell that improved scalability. To get these systems into production, RLH needed to transfer 1.6 terabytes of transactional and business data—including Windows files and SQL and Oracle databases—from its legacy storage array to a Dell/EMC CX3-40 platform.

THE NEED FOR A FAST MIGRATION

The company imposed several requirements for the migration. First, it could not disrupt business operations. As a result, the transfer had to be completed in a routine maintenance window over one weekend to avoid unplanned downtime of transactional applications. Second, it had to include all ancillary data, such as security permissions. Recreating permissions and other metadata on the new storage platform would have substantially increased the migration's costs and administrative efforts.

BROCADE

"We assumed the migration would be straightforward," says David Barbieri, CIO, Red Lion Hotels Corporation, "especially since both storage systems were in close proximity at our data center, and we didn't want or expect it to take long."

RLH initially investigated a data replication software approach, but it was unable to interoperate smoothly with the heterogeneous storage devices. Additionally, the solution was unable to migrate metadata-like permissions.

"We were frustrated that we couldn't get our new platform into production due to the lack of an effective migration solution," explains Barbieri. "After exploring, and subsequently disqualifying, a number of different options, Dell suggested that we try the data storage and management professionals at Brocade."

BROCADE PROFESSIONAL SERVICES DELIVERS A SOLUTION

RLH contacted Brocade Professional Services, which interviewed the IT administrators about their needs and the configuration of the firm's SAN. Brocade consultants arrived at RLH's data center on a Friday in March 2007, bringing several Brocade Data Migration Manager (DMM) appliances for performing high-speed, fabric-centric migrations within multivendor environments. These systems transfer data at the block level, much deeper than at the file level, ensuring that every byte from the source array is accurately replicated on the target device, or Logical Unit Number (LUN).

The Brocade consultants installed the appliances by simply linking them to RLH's SAN fabric. They then validated the environment, ensuring that the target LUN was large enough to store the data. In addition, they conducted a test migration, using a small amount of non-critical data to make sure the SAN was performing properly. Next, they calculated the performance of the entire system to determine the estimated outage window for the migration.

On Saturday, the Brocade consultants began the migration. Although source systems are usually the bottleneck in migrations because they are older and slower technologies, administrators were able to dedicate two ports on the legacy storage array for the migration, effectively doubling the data transfer speed.

EXCEEDED EXPECTATIONS

Over the course of Saturday, Brocade DMM effectively performed a block-level migration of all 1.6 terabytes of RLH's data. When the task was completed, the Brocade consultants simply removed the Brocade DMM appliances from the SAN fabric. The entire operation was well within the maintenance window, and the company's business groups never noticed anything other than routine upkeep.

One of the key advantages of Brocade DMM is that it is a hardware solution operating within the Fibre Channel SAN fabric. Most software-based solutions try to create logical links between source and target platforms, which can be unreliable if not impossible among heterogeneous devices.

"Brocade DMM captured all of our metadata as well as the files, which made our data available for use on our new storage platform immediately after the migration," states Barbieri. "Whereas other vendors struggled with issues like capturing permissions or migrating certain types of databases, the Brocade solution functions on the level of ones and zeros. It copied every byte, including even the blank spaces from the source array."

According to Barbieri, Brocade DMM actually exceeded the performance anticipated by the test migration calculations. "We were told to expect a migration rate of 100 to 150 gigabytes per hour. In reality, we saw sustained rates of 200 gigabytes per hour with peaks of 300. The throughput was spectacular and exceeded our expectations."

"We were most impressed with the expertise and thoroughness of Brocade Professional Services and with the superiority of the company's technologies," he concludes. "Had we turned to Brocade in the first place, we would have sliced two to three months off the time the entire process took. In the beginning, we thought migrations should be simple, fast, and error-free. With Brocade Professional Services and Brocade DMM, they are."

For more information, visit www.brocade.com.

WHY BROCADE

- Industry-leading expertise in data storage, management, and services
- Seamless performance in heterogeneous environments
- Fastest, most non-disruptive data migration approach
- Dedicated migration solutions

Corporate Headquarters
San Jose, CA USA
T: (408) 333-8000
info@brocade.com

European Headquarters
Geneva, Switzerland
T: +41 22 799 56 40
emea-info@brocade.com

Asia Pacific Headquarters
Singapore
T: +65-6538-4700
apac-info@brocade.com

BROCADE