C A S E S T U D Y

Timken Company

Heterogeneous SAN Data Migration

Introduction

Timken Company is a leading international manufacturer of highly engineered bearings, alloy, specialty steels and components, and a provider of related products and services. The company employs 27,000 people in 27 countries. In 2005, company sales were $5.2 billion.

To ensure its data center keeps pace with the industry, Timken replaces expiring leased storage every 18 months. Replacing leased storage is often practiced by enterprise data centers that lack the time and the resources to perform the data migration with internal resources. Rather than perform this internally, Timken requires storage vendors provide it as part of the equipment package. However, this is no small task. To lease storage on a regular basis, migration approaches must minimize system downtime and minimize incompatibilities between old and new storage, move the data quickly, and deliver results in a predictable manner.

Challenges

Like most data centers, any downtime is critical. Timken has over 40 plants worldwide, and each plant must have access to the corporate data center at differing times of the day, 7x24. This leaves the system administrators extremely small downtime windows. Explains the Timken storage administrator, “a lot of the servers could only be down for a couple of hours because they are used by France and Eastern Europe, and we had big time constraints.”

On top of this, the Hitachi storage lease would expire in just a few months. With over 20 servers (9 NT, 9 HP-UX 11, two AIX and one Sun Solaris) and 2.5 TB of data to migrate, the migration had to be fast, predictable, and heterogeneous while migrating between Hitachi, IBM, and Cisco.

Solution: Vicom Data Migration Appliance

Migrations often take place during off-hours in order to minimize business system outages. To move one terabyte of the data over 100 Based Ethernet takes approximately 50 hours. To move data to tape and then restore data to new storage takes about 30 hours, providing that you can keep the tape streaming at 20MBps. Using these methods to migrate one terabyte of data requires the System Administrator to break the process across multiple nights. During these times, production data will spread on both old and new storage. That imposes technical complication and business risk.

Vicom migration appliances had the throughput necessary to move a terabyte of data in less than one hour — enough to complete the migration and verify the data within a single night.

Results

Timken's project manager for leased storage summed up the effectiveness of Vicom's data migration appliance succinctly:

"Our only other solution would have been backing data up to tape, then doing tape restore. Because some of these databases were around 100GB, this would have gone on forever. I calculated it at roughly 12-15 hours per server. Vicom's ability to move 100 GB/hour per LUN was remarkable. When I heard we could move 100G an hour with multiple servers at the same time, I was sold. Because the Vicom's appliance was so fast, we decided to do the migration offline rather than online. By the time our system administrator had installed the new HBAs, drivers, and software in the server to attach it to the new storage, the migration appliance had moved the data. I was very impressed."