

C A S E S T U D Y



Heterogeneous Server/SAN Data Migration



Summary

Customer Requirements

- *Migrate 10 terabytes on enterprise and mid-size SAN storage arrays to a new NetApp FAS6000 system.*
- *Migrate data from 20 servers and 5 different OS platforms within limited maintenance windows, without interruption of services to commercial users.*

Results

- *Data was migrated problem-free during three separate monthly maintenance windows.*
- *One migration was performed locally, while the other two were accomplished remotely from 2,300 miles away.*
- *Servers were brought up under NetApp 6000 following three problem-free cutovers.*

Introduction

A fast-growing, multi-billion dollar IT outsourcing company and NetApp customer provides solutions and services to major corporations around the world. The company currently operates more than 70 data centers, supports half a million SAP users, and provides a variety of IT services to large industrial and service companies throughout the world, including its Global 2000 parent.

In late 2008, the company faced lease expiration on two of its enterprise and mid-size SAN storage arrays. After evaluating a number of alternatives, the company decided to consolidate the leased system data onto a single NetApp FAS6000 system, simplifying operations and achieving administrative cost savings.

Challenges

As with nearly all new storage systems put into service, existing data would first need to be migrated from old to new system, usually involving painstaking effort and substantial labor. For the customer, the task would require data migration and cutover for 20 servers, five different operating systems, and both clustered and non-clustered configurations. Further complicating the undertaking, each of the customer's service users have unique requirements, creating more configuration variation than an organization with a single IT operation. Moreover, because business-critical IT services are being provided to major corporations, any migration would have to be performed without risk or interruption of these services.

The specific requirements for this data migration included:

- Non-disruptive migration of 10 terabytes of data in 230 LUNs.
- Data migration from AIX, Linux, HP-UX, Solaris, and Windows 2000/2003 servers.
- Performance of data migrations only during monthly maintenance windows of fixed duration.
- Selected consolidation of LUNs under the new storage system.

In order to meet these requirements, the customer considered using internal staff and host-based software tools to perform the migration, which was balanced by concerns over the time and management it would involve.

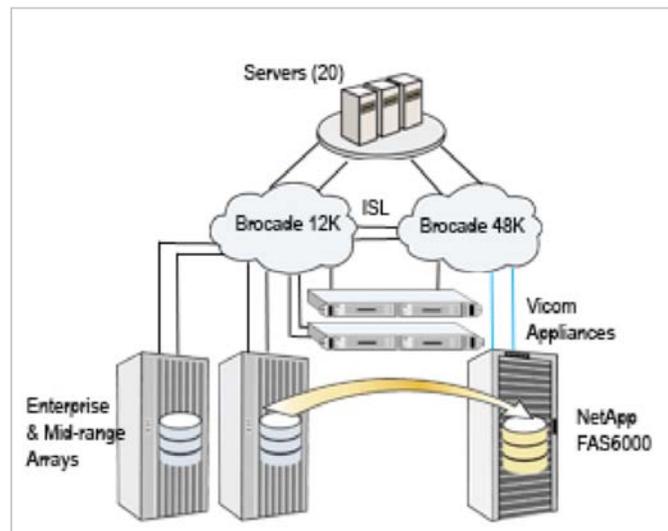
Solution: Simple, Fast, Guaranteed Data Migration

NetApp suggested an alternative to the customer's do-it-yourself approach: use Vicom Systems, a NetApp Contract Delivery Partner for data migration. Under Vicom's turnkey DMS (Data Migration Service), Vicom migration specialists handle the entire migration process from planning to server cutover, and back each engagement with a money-back guarantee of on-time completion. Nearly all of the migration requirements could be handled under Vicom's standard, turnkey migration service, while LUN consolidation was available under Vicom's custom migration services.

Vicom is able to guarantee migrations because company specialists use Vicom's migration appliance and automated discovery tools that dramatically simplify the migration task. The appliance is a SAN-based, block-level data migration hardware tool that has been used in the delivery of hundreds of enterprise SAN migrations. SAN virtualization and software automation eliminate much of the manual labor involved in setup and configuration of host software-based migrations, while the Vicom appliance moves data at a fast, up to 1 terabyte per hour, performing block-by-block replication between the source and new storage. All data written to the new storage system is error-checked from end-to-end.

Seasoned Vicom specialists oversee each of the migrations, which are typically delivered during weekend or planned maintenance windows. A proven process, developed in the delivery of over 500 enterprise data migrations and a 100-percent success record, maps and verifies the migration plan and provides customer checkpoints at key steps in the operation.

Figure 1. Data Migration Configuration



Migration Operation. The customer elected to use Vicom for all but the LUN consolidation service, for which the company felt it was reasonably equipped and motivated to tackle because of budget limitations. On the other hand, the customer felt Vicom would offer significant time and cost advantages in the larger like-to-like LUN migration effort. To ensure adherence to allowable maintenance windows, Vicom and the customer decided to perform the migration to the NetApp system in three separate weekend migrations.

Following a pre-migration planning session and installation of the data migration appliances as shown above, an onsite Vicom migration specialist initiated the process on by first mapping and checking the customer's SAN connections against plans. Upon receiving approval from IT management, the first migration was initiated on a Friday and completed in less than 12 hours. The specialist then verified the migration data and a NetApp professional services engineer then cut over the initial set of servers to the

NetApp system. Systems were brought online Sunday, well within the planned migration window. By Monday, all IT services resumed without incident.

With the Vicom appliances installed, the next two migrations were performed remotely from Vicom headquarters in Redwood City, California located 2,300 miles away. Because the migration monitoring software runs on a network-attached client, the entire migration can be managed from either local or remote network station. In conjunction with NetApp professional services assistance, the process was repeated during the next two weekend maintenance windows, completing the process according to plan, eight weeks after start.

Results

The Vicom data migration went flawlessly and was completed on time, precisely as promised. "The migration more than met all of our expectations," said the company's network services manager. "Vicom brought a lot of expertise, which we could see contributed a lot to the migration," the manager said. "We found the entire process was beneficial, from the pre-planning and preparation to the work that it saved our team. We'll definitely use Vicom again for our next migration," he added.