

Migration Made Easy: A Case Study of Improved Performance and TCO



A large division of a Fortune 500 company searched for an answer to an age-old IT question: How can we migrate our core business applications to a new platform while staying within a set budget and timeline? IBM and Datatrend Technologies provided a solid answer for this company with a solution that leveraged a superior knowledge base and UNIX servers from IBM.

Situation Analysis

A leading hospitality and travel business decided to migrate from their PICK database to a newer version of UniVerse (U2). They found their current platform inadequate for the upgrade, requiring new hardware in three key environments: production, development, and testing. Adding geographic complexities to the equation, the corporate datacenter, where the production environment is housed, is thousands of miles from the test/development site where the user community is centered. Meanwhile, in order to not disrupt business, the project plan compressed installation and deployment into a very tight two-week timeframe.

The company presented their four primary needs to competing vendors in order to compare and evaluate their options.

1. A complete and thorough PICK-to-U2 migration
2. Highly reliable and manageable servers:
 - able to support up to 14 server environments at the test and development site
 - able to support 2500 users in a single application at the production site
3. No disruption of business performance
4. A solution in accordance with the company's budget and timeline while still maintaining the highest possible quality

After reviewing configurations and proposals across platforms, they found the solution proposed by Datatrend and IBM as the best possible answer.

The Solution

Prior to the migration of the database, the company desperately needed to consolidate their servers. The test/development site was currently running on 16 separate servers. The customer sought to reduce administration/management costs by simplifying the architecture into a simpler and more cost-effective design. By revamping the hardware infrastructure, the workload of the 16 servers was easily and exceptionally covered by only two.

The key to the new infrastructure lays within the IBM eServer pSeries p650. A machine still at the beginning of the product's life cycle, the p650 not only meets this company's requirements but also acts as an investment due to enhancements and upgrades in the product roadmap's future.



Affordable yet powerful, it contains vital attributes which this project required. The POWER 4+ microprocessor technology gives the p650 incredible system performance with an L3 cache, available with either 1.2 or 1.45 GHz processors. For this solution, 1.45 GHz processors were utilized, one machine for production and two combined for testing and development. Though usually a constrained product with a lead time of almost nine weeks, Datatrend supplied and installed the machines within nine days, five short of the two-week deadline.

The p650's high platform flexibility plays an important role at the testing and development site. Each machine's resources allow up to eight dynamic partitions due to LPAR capabilities, making it easily able to support the requirement of a maximum of 14 unique server environments. Each environment can be treated completely independent of the others, supporting differing levels of software for each.

On the other hand, at the production site, the single p650 is configured to allocate all memory, disk, and processor space to running the company's U2 database. Between the increased bandwidth and the autonomic computing features of AIX 5.2 (the ability to self-detect, self-diagnose, and self-heal potential problems), the solution reduces the fear of downtime and loss of production.



After reviewing the price points and total cost of ownership, this solution fit the bill. The powerful processors equate to requiring fewer to handle the same workload. This dramatically lowers the overall solution cost compared to HP and Sun which require

more processors, particularly when factoring in the per processor pricing of most database packages. Meanwhile, the processors are made of copper and silicon-on-insulator (SOI), lowering the power required to run the machine and lessening the heat generated. Between the savings on the machine purchase, the power to run the machines and the air conditioning of the data center, and an extremely short learning curve to train the company's employees, the price point fit the budgetary allotment perfectly.

With the infrastructure in place, the migration had the basis necessary for testing and deployment. To ensure the complete success of the migration, experts in the UniVerse database program performed extensive testing with the company's own IT staff working alongside. By conducting "dry runs" and "walkthroughs," benefits were apparent in not only ensuring a complete, problem-solved migration but also by providing hands-on training for the IT department.

Through a solution combining hardware and services, aligned with the purpose of achieving important business objectives, the needs of the company were met. By choosing a value-added solution to complete their migration and accomplish a needed server consolidation, the company realized the benefits delivered by a team of qualified, experienced experts who delivered a winning solution within the time frame and budget required.

The power and technology is unbelievable
The reliability, availability, and scalability is unquestionable
The affordability and the total cost of ownership is unbeatable

Key Benefits

This solution provided the hospitality company these key benefits:

- Through the use of LPAR technology, memory, disk, and processors are allocated where needed between server environments.
- By using the same make and model of machine, the company ensures fewer complications through the migration of databases.
- In the purchase of three p650s, affordability is found in not only through the purchase of the machines but also in the lowered total cost of ownership.
- High capacity reduces the risk of fail-over in production and through migration
- The solution provides high availability.
- LPAR capabilities allow Capacity Upgrade on Demand—a key feature that allows system administrators to increase the memory capacities by activating additional dormant processors once they require the memory
- The small learning curve makes it an easy migration, exemplified through the training of a Sun administrator to run the system on his own after one week training and two days hands-on.