



UNIX-TO-LINUX MIGRATION PAYS BIG FOR INDUSTRIAS PEÑÓLES

FAST FACTS

Industry:	Retail
Geography:	Australia
Opportunity:	As a rapidly expanding business, Loyalty Pacific needed a future-proof technology platform that was secure, reliable and efficient with a low Total Cost of Ownership (TCO), ease of administration and minimal maintenance
Solution:	Software: Red Hat Enterprise Linux 4 and Fedora Hardware: 21 Intel Xeon servers
Benefits:	100 per cent system uptime. 80% less time required for set up. 70% less time required for maintenance. Strong support capabilities. Timely release cycles.

The world's largest producer of refined silver and other metals, Industrias Peñoles, S.A. is comprised of 50 companies with nearly 7,000 employees throughout Mexico. Traded on the Mexican Stock Exchange since 1968, Peñoles places great emphasis on increasing their value to shareholders, and one way they do so is to strictly control costs company-wide. This meticulous fiscal responsibility is increasingly important given the strong effect that the international market for silver and other non-ferrous metals has on prices Peñoles can charge for its products. Because they have little control over market fluctuations, Peñoles must keep its own operating costs to a minimum in order to maintain profitability.

CHALLENGES

One of the biggest concerns of the Information Technology division is containing overhead and operating costs. The high cost of hardware for their UNIX-based infrastructure combined with increasing maintenance costs made aligning with Peñoles' corporate-wide goal of minimizing expenses difficult, if not impossible.

Data security is also a top priority. 85% of Peñoles' business comes from a small number of customers, meaning that those transactions involve large sums of money. As the IT team investigated cost-saving alternatives, the security of each transaction and the systems themselves could not be compromised.

Because mining operations are often located in remote areas of the country, traditional data transfer can be unreliable, so Peñoles views maintaining the most current technology as extremely important. As part of this, they maintain 24-month lease arrangements for hardware with both HP and IBM. Any solution Peñoles considers must operate with the latest hardware, emphasize new features, and allow an easy upgrade path.

SOLUTION

Peñoles looked to Intel-based hardware solutions as a way to significantly and quickly cut costs. Because their IT employees had a UNIX background, Linux quickly emerged as the most viable solution.

Peñoles ran several performance tests with multiple Linux distributions, but, according to Pedro Luis Sanchez Armas, IT Research Manager for the mining division, none matched the results they achieved with Red Hat. "It simply tested better," says Sanchez Armas. "We knew after our testing that it would meet our needs of cutting costs while maintaining high levels of security and reliability."

After six months of testing, Peñoles migrated a DNS server from UNIX to Linux, followed by their security firewall and external email application. Pleased with the results, the IT staff looked at more mission-critical applications as candidates for migration. Portions of Sybase, the database used by Peñoles for a number of different applications, were also migrated to Linux. In fact, Sanchez Armas says, "The UNIX-to-Linux migration was the easiest large-scale migration we have ever done. It was almost transparent."

"The company was originally interested in the cost savings we could achieve," acknowledges Sanchez Armas. On average, Peñoles recognized a cost savings in excess of 70% per server when they migrated from proprietary UNIX to commodity Intel-based servers with Linux. "But when we started testing," Sanchez Armas says, "we found additional impressive performance benefits as well."

On average, server performance increased by a factor of 4, though certain tasks improved even more. For example, processing time for one of Peñoles' most processor-intensive reports was reduced from 27 minutes to 7 minutes, a 74% time savings. And with the performance improvements they were getting, Peñoles could anticipate better overall system reliability and more uptime.

Additionally, the Linux environment proved to be more secure because Peñoles could control more of the functionality of their network in-house rather than depend on third party providers. Early on, Sanchez Armas realized that the flexibility of Linux, combined with the fact that the source code was freely available for modifications, would let him run the DNS server outside of the DNL network.

FUTURE

Currently Peñoles' mining division utilizes Linux for the majority of its infrastructure, which is distributed throughout Mexico. They are now evaluating the further use of the Red Hat Enterprise Linux family in multiple instances across the corporation, including Red Hat Desktop. Recent tests have shown that migrating some core applications could result in a cost savings of up to \$2.5 million. Additionally they're evaluating Intel's Itanium processor and are seeing strong indications that Red Hat Enterprise Linux on Itanium will offer higher performance at a lower cost than UNIX on the same platform.

"Soon, our equipment leases will be up for renewal," explains Sanchez Armas, "and if current tests are successful, we will begin migrating more of our operations. We look forward to the cost and performance benefits that further use of Red Hat Enterprise Linux will bring to Peñoles and our shareholders."

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