



Alpura Dairy Products: Always Fresh and Available, Thanks to MIMIX®

Milk can't wait. Nor can milk producers. Dairy products that are stuck in plants or warehouses for too long because of unavailable production or logistics systems will spoil, triggering a tremendous cost for producers. Furthermore, while one or two hours of downtime may not always result in spoiled products, systems that are unavailable for even short periods of time can cause significant expense for any 24x7 business. Just ask The Alpura Group, Mexico's leading milk producer.

Alpura was founded in 1970 when a group of farmers from across the Mexican Republic formed a cooperative organization to improve the quality of milk production. Now, Alpura is a leader in its field. Headquartered near Mexico City, Alpura's operations include seven plants and 20 company-owned distribution centers, as well as 60 independent distributors spread across Mexico. Its subsidiary companies represent 160 dairy farms across the country. Total production of milk from Alpura's more than 82,000 cows is over two million liters per day.

Both Milk and Information Must Flow

But milk production volume alone does not explain Alpura's success. The company must also be able to process, package and deliver high quality dairy products to supermarkets across Mexico less than 24 hours after production and always under the strictest quality control. Anything that delays this continuous supply chain, even for a few hours, is a serious matter for Alpura.

Like all major companies today, Alpura depends on information technology to both

make its products and to get them to market. It uses custom-developed applications to handle everything from production and distribution logistics to accounting, payroll, and online analytical processing (OLAP) applications that enhance its business intelligence.



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These uses of information technology drive considerable value for Alpura. But the down side of its reliance on technology is that if the technology is unavailable, the value stream stops. That's why Alpura implemented MIMIX ha1™ and MIMIX for Windows® High Availability solutions from Lakeview Technology.

MIMIX®
The Power of Information Availability™



Server Integration for Power and Flexibility

Alpura and its partners need its centralized systems to be available 24 hours a day, seven days a week, without exception. Complicating matters is the fact that Alpura's infrastructure includes more than one computing platform. In addition to an IBM® eServer iSeries™ model 820 server, Alpura also uses six MicroSoft® Windows®-based servers to run its most critical business applications. Taking advantage of the iSeries' ability to host integrated Windows servers, three of the Windows servers are integrated into the iSeries server using Integrated xSeries™ Adapter (IXA) cards. The other three Windows servers are Integrated xSeries Servers (IXS) that are mounted inside the iSeries server.

'Reliability' is not 'Availability'

Alpura knows that the iSeries is the most reliable midrange platform available. But it also understands that reliability does not guarantee that its servers will always be available because all computers and databases still require regular maintenance. For example, the company's servers needed to be off-line for about two hours a day just to perform data backups. This and other server shutdowns associated with maintenance were very costly.

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Alpura needed a way to keep its data and applications available full-time, while still being able to perform all necessary maintenance.

To find a solution, Alpura turned to Dedomena, S.A. de C.V., a Lakeview Technology Business Partner. After reviewing all of Alpura's systems and understanding their availability issues, Dedomena recommended MIMIX ha1. MIMIX ha1 is the leading iSeries High Availability solution. It ensures continuous access to critical iSeries data and applications, reducing or eliminating all planned and

unplanned downtime. MIMIX ha1 provides real-time replication of DB2/400® databases and all other non-database iSeries objects including application, system, configuration and integrated file-system objects. Through its intuitive MIMIX Browser interface and Availability Co-Pilot features, MIMIX ha1 provides an automated framework for monitoring and switching.

Should an unexpected server outage occur, MIMIX ha1 can automatically fail systems over to a backup iSeries system, using TCP/IP address impersonation to ensure seamless transition. In addition, whenever the primary server requires downtime for maintenance, MIMIX ha1 allows administrators to manually switch operations to the backup server quickly and easily.

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IBM Servers... and Services

Alpura's road to High Availability began with a complete evaluation of its business applications to determine which applications were essential for business continuity. The company then purchased a backup iSeries model 820 server and had it installed in the IBM Business Recovery Center in Mexico City, about 15 miles away. Locating the backup server at IBM ensures that it will not likely suffer from any disaster or power failure at the same time as the production server at Alpura's data center. And letting the Business Recovery professionals at IBM host and manage the backup server also reduces Alpura's administration work and assures them of a reliable partner during any situation.

The MIMIX ha1 implementation process was completed by an expert from Dedomena. Now, should a disaster ever shut down its primary site, Alpura's employees and independent distributors may not even notice that a problem has occurred and that they are actually accessing the backup server.

Integrated High Availability

With its iSeries data and applications fully protected against both planned and unplanned downtime, Alpura turned its attention to the vulnerability of its Windows servers. Like iSeries, Windows servers are also subject to downtime from scheduled maintenance and unplanned events such as natural disasters and hardware failures. Since Alpura was very satisfied with its MIMIX ha1 solution, the natural choice for Windows server availability protection was MIMIX for Windows™, also from Lakeview Technology.

MIMIX for Windows provides real-time replication for Windows NT, 2000 and 2003 environments running on xSeries servers integrated into iSeries environments. Like MIMIX ha1, MIMIX for Windows continuously monitors changes made to open files and replicates them to one or more xSeries Windows servers over standard network communications.

A Windows-based GUI client facilitates easy configuration, control, monitoring and management of the MIMIX for Windows replication environment. MIMIX for Windows constantly monitors server health and, if any monitored server fails, it fully automates every aspect of the failover procedure. For maximum flexibility, MIMIX for Windows allows Alpura to switch its Windows environment independently or in tight coordination with iSeries server switching.


Real Returns, Proven Protection

While Alpura initially sought High Availability primarily for its disaster recovery protection, the company has already

achieved a high return on its investment without a disaster ever occurring. Without MIMIX ha1, Alpura's production server had to be shut down daily for two hours to backup its data to tape. Since those backups can now be taken from the backup server without affecting the production servers, that downtime has been eliminated.

Alpura estimates that each hour of downtime costs the company about US\$5,000. Thus, its MIMIX solutions save Alpura \$10,000 per day or \$3,600,000 per year just by avoiding the downtime normally associated with data backups. But because its MIMIX solutions enable Alpura to avoid the planned downtime normally caused by many other necessary maintenance and upgrade tasks, the total real savings are even greater.

Calculating the value of avoiding a business shutdown due to a disaster is difficult, if not impossible. Obviously, Alpura hopes that a disaster never shuts down its data center, but the company is well prepared if the worst ever happens. Once a month, Alpura conducts a system failure test to exercise its disaster recovery capabilities, including switchovers to the backup site. The tests work flawlessly.

So, in addition to significant and tangible savings from avoiding planned downtime, there is also the benefit of knowing that nothing will stop Alpura from delivering its dairy products, fresh and on time. "We now have the security of knowing that we can recover our business within a few minutes should a disaster occur," explained **Ismael Frias, Alpura's CIO**. "That provides us with peace of mind every day." 



Alpura Group

Core Business: *Milk and Dairy Products*

Headquarters: *Mexico City, Mexico*

Production: *Two million liters of milk per day*

Employees: *4,500*

Platforms:

- *IBM® eServer iSeries™ and Intel processor-based Windows® servers*

Key Applications:

- *Custom-developed distribution, accounting, inventory and other business applications.*

Information Availability Solution:

MIMIX® ha1™ and MIMIX for Windows™



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