

# AIL SA

EMC infrastructure is underpinning the IT renewal of two datacenters: active/active mode, high performance, disaster recovery, and business continuity for SAP



## ESSENTIALS

### Business Challenges

- Renew the storage infrastructure to increase performance
- Optimize the activity and use of the server and storage resources of the two data centers
- Have business continuity under any conditions
- Create a fast, easy, and safe disaster recovery solution for critical applications such as SAP

### Solutions

- EMC VNX unified storage
- EMC VPLEX
- VMware

## OVERVIEW

AIL (Aziende Industriali di Lugano SA) [Industrial Companies of Lugano] is the main distributor of electricity, water, and gas in the Canton of Ticino.

The company's story begins in 1972, when the decision was made to combine, under a single management team, two municipal companies that had operated separately for over 100 years: the OECL (Officina elettrica comunale di Lugano) [the power company of Lugano] and the Azienda comunale dell'Acqua e Gas [Municipal Water and Gas Company]. In 2000, AIL became a limited company, in which the City of Lugano holds the entire share capital.

The company, in addition to producing and distributing drinking and industrial water, electricity, and gas, builds and manages the necessary electrical and plumbing networks required to transport its products from the point of purchase or delivery to more than 100,000 customers in the Sottoceneri region. The products are sold wholesale to other companies, which in turn deal with distribution in their respective districts.

AIL SA employs approximately 330 people, and its turnover is over 310 million francs.

### IT IS A CORE ASPECT IN THE BUSINESS OF AIL SA

The company's evolution in recent years, with a growing number of customers, investing in qualified staff and advanced technologies for the production and delivery of products and services, and expanding networks for the transport of energy, water, and gas, has required more advanced and efficient tools to ensure a constant and reliable control of the entire distribution infrastructure and to accelerate and ensure the collection, management, processing, and storage of large amounts of data coming in.

A decisive role in this evolution has been played by computer systems, which have become even more crucial for providing customers with better products and services and enhancing the position of AIL as the market leader in the Canton of Ticino.



# REDEFINE

CUSTOMER PROFILE

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## Results

- Simple and flexible storage Management
- High reliability and performance
- True active/active solutions
- User-friendly infrastructure management
- Zero downtime: “no single point of failure” for critical applications like SAP
- Fast, simple and efficient disaster recovery procedure for SAP

“The computer systems are the pivot around which AIL’s business revolves,” explains Michele Rusconi, Head of IT Delivery and Support. “The unavailability of systems or applications, even for a short time, could create serious problems for our clients, with possible negative consequences on the perception of quality of service and of the business itself. IT efficiency is therefore the subject of particular attention by all. It is essential to adapt it to the business needs and goals. This is the reason that recently led us to review the entire information and data management infrastructure to make it more efficient and secure.”

AIL’s information systems are based on two data centers approximately nine miles apart and connected by fiber optics, in order to ensure maximum speed and complete redundancy.

## **CRITICALITY AND EVOLUTION OF THE INFORMATION SYSTEMS**

The previous IT infrastructure, in place for five years, was no longer suitable to support the needs of the company. There were obvious weaknesses in performance; as well as the sheer length and complexity of the disaster recovery procedures for critical applications such as SAP and a limited guarantee regarding business continuity.

“Having very good knowledge about the business dynamics, and bearing in mind the selection criteria for the new infrastructure, we examined the main market solutions with support from 4IT Solutions. We then chose the EMC infrastructure, composed of VNX unified storage systems and the VPLEX storage federation solution, which had features that were better suited to our needs. Compared with the other architectures, EMC was the only one that guaranteed better performance, high data reliability and security, active/active mode between both data centers, and simpler and more secure disaster recovery management of SAP applications. An IT architecture that is able to guarantee business continuity under any conditions to the company management, even in the event of the unavailability, scheduled or unscheduled, of one of the two datacenters. And after several months, we are absolutely satisfied with the choice we made.”

Michele Rusconi  
Head of IT Delivery and Support at AIL SA

Therefore, the company decided to go on a path of renewal by replacing the current systems in the two data centers with others that respond better to greater requirements of efficiency and performance as well as data and application security.

In particular:

- Having two mirrored data centers with automated, efficient load balancing, allowing the company to attain a great ROI from the investment made.
- Each data center has the capacity to absorb, if necessary and in real time, the entire workload without disruption to users and with minimal performance degradation. That is, the goals of high availability and zero downtime.
- Implement a solution that simplifies disaster recovery procedures, which were previously long and complex, with the guarantee of immediate recovery for critical applications such as SAP.

Once the selection criteria were established, the company turned to 4IT Solutions, the reliable partner that has worked with it for many years in key ICT issues, in order to select the systems and design the new infrastructure.

In each data center, in the VMware® environment (except for SAP, still hosted on physical servers) an EMC® VNX® system was introduced with SAS and Fast Cache disks to improve performance, especially for data intensive applications such as SAP.

Installing EMC VPLEX® Metro in both data centers has created a storage federation between VNX systems and an active/active operating mode, increasing the operating efficiency, simplicity, and flexibility of the entire information infrastructure. For example, VPLEX enables simple, fast, and absolutely transparent movement of virtual machines, resulting in better load balancing on server and storage resources, eliminating the need to stop applications and log out users during system maintenance or upgrades (a rather obvious problem with previous infrastructure).

Through VPLEX, all data are written synchronously on each VNX, keeping a mirror image between both systems, which guarantee almost immediate recovery.

The migration from the previous to the new EMC infrastructure was quick, requiring only a few days to complete all stages of installation, data migration, and testing, until full operation. All activities were carried out with negligible impact on users.

## **IMMEDIATE, TANGIBLE BENEFITS**

Implementing the VNX and VPLEX infrastructure has proven to be the correct choice to attain the objectives of AIL. The benefits were immediate and tangible:

- **Flexibility and high performance.** Storage performance and throughput are not comparable with the previous infrastructure, resulting in improved service levels for users. A VNX and VPLEX architecture in a VMware environment allows for the simple and flexible management of the two data center resources with fast configuration and maintenance interventions that have no impact on operating activities.
- **True active/active solutions.** An operating mode that allows attaining load balancing as well as automated application and data mobility between the two data centers; high levels of high availability; business continuity is ensured under any unexpected conditions.

- **Ease of storage infrastructure management.** With the help of EMC Unisphere®, the EMC storage management platform, the unified management of the VNX and VPLEX systems is now truly simplified thanks to an intuitive graphical user interface wizard that does not require specialized technical personnel. A significant improvement for AIL compared to the complexity of its previous infrastructure.
- **Fast, simple, and efficient disaster recovery procedure for SAP.** For AIL this was one of the most critical elements, given the importance that SAP has is for its business and the inadequacy of the previous procedure due to: long and complex passages, pages of code to drive the process, need for adequately trained staff to run the different steps, and difficulty in keeping it updated and tested.

The VNX and VPLEX architecture has made it possible to greatly simplify disaster recovery procedures for SAP: few steps and fast, risk-free execution of the process, facilitated by the availability of VPLEX's graphical user interface (GUI).

The planned migration of SAP on VMware virtual machines will further increase the ease of management.

- **Zero downtime.** With the VPLEX/VNX combination there is "no single point of failure" and "zero RTO," guaranteeing the operational continuity of SAP and other critical business applications.
- **Simple and transparent maintenance and upgrades.** Any system maintenance or upgrades in both data centers can be planned and executed without causing any disruption to the users.

## CONTRIBUTION BY 4IT

4IT Solutions has played a significant role in the renewal of AIL's information infrastructure, supporting the customer from the initial stages of study and architecture design and then during the activities of system implementation and start-up.

"4IT Solutions is the partner that has supported us for several years in all IT issues. A collaboration that has always met our needs, which was once again reconfirmed during this important project. We value the skills, capabilities, and expertise of the professionals from 4IT Solutions, which are difficult to find in other outfits in the canton of Ticino" Rusconi said.

## 4IT SOLUTIONS

4IT Solutions is the most established player engaged in IT consulting in the canton of Ticino. Born as a spinoff of a company with thirty year's experience in the industry, 4IT Solutions provides high-profile information technology solutions for customers of every size and in every sector.

Consulting, training, and partnerships with leading global technology players, all these constitute competitive advantages for the company. These characteristics are integrated into our ability to hear and correctly interpret the needs and objectives of our customers, to suggest, design, and implement IT infrastructure solutions that meet their actual needs, ensuring their operation and providing full support.

With its strong, mature technological and commercial knowhow, 4IT Solutions also provides remote consulting services in Italian, English, French, and German, a unique case in the Canton of Ticino.

## CONTACT US

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