

One of the Largest Latin America IT Service Provider Reduces Carbon Footprint with Vertiv Solutions



A Vertiv Case Study



Background

One of the most outstanding companies in Chile, specializing in information technology services and considered a leader in digital transformation in Latin America, has been improving the businesses of its clients from multiple industries for 40 years by supporting them in their digital transformation process. Currently, as part of its commercial offer, the company provides data center, infrastructure, cloud, and cybersecurity services, as well as enterprise resource management (ERM), among others.

This company built its second data center with the purpose of maintaining service excellence and responding to new market demands. To do this, a specialized company was involved in the engineering and comprehensive design of this project. This is where Vertiv, after successfully passing a rigorous market evaluation, enters as a competitive supplier by standing out as the only company in this region that offered a solution with unique features and differentiated value that was aligned with business objectives. This technology with unique features included the free-cooling chiller equipment with adiabatic panels.

Energy efficiency was a requirement that the company had from the beginning of the project, and not only to reduce electricity costs, but also to reduce its carbon footprint.

Vertiv cooling and power backup systems contributed to achieving this objective. By providing highly available and efficient heavy-duty equipment, designed to work in highly demanding environments 24x7, Vertiv enabled savings of 20-40% on an average order.

Challenge

The construction of this second data center for the Chilean company required significant resources as it involved the implementation of more than 150 pieces of equipment for cooling and high-capacity power backup. The aim of this project was to make this data center one of the most competitive in the market, creating differentiation in the industry. During this large-scale project, Vertiv faced a unique challenge — the impact of the pandemic in the region.

During the mobility restrictions throughout the country due to COVID-19, Vertiv planned a strategy based on what it does best: innovation in technology. In this sense, Vertiv implemented an industrial platform with remote support and augmented reality tools. Thus, the specialists who could not carry out their activities in the field did so virtually from their computer in coordination with another trained professional working in the same operational area.

In this effort of virtual and field work among professionals, Vertiv complemented this service with simultaneous translation software that allowed communication in different languages both for technicians in the field and for the entire team of professionals who followed the project globally.

Another challenge that Vertiv had to manage during the implementation of this data center was ensuring effective collaboration between diverse teams, considering that the project called for a large number of specialists from different providers to lead complementary efforts. The Vertiv team sustained collaborative work in the same space while respecting the pandemic-driven protocols established during months of activities.

Solution

Vertiv assigned more than 100 professionals specializing in the construction of this large project who actively participated in each stage — from deploying and installing equipment while anchoring it to slabs with anti-seismic features, to startup service and service support during test phases.

In particular, Vertiv installed thermal management equipment like chillers with adiabatic panels, uninterruptible power supply (UPS) units with lithium-ion batteries, and static transfer switches (STS) in response to the client's needs and the demands of the business. Although these technologies already exist in the global market, in Chile, Vertiv was the stand-out supplier, especially for our free-cooling chiller solution with the adiabatic cooling panel.

This solution combines three key cooling technologies: adiabatic, free-cooling, and mechanical cooling. This equipment pre-cools the air, taking advantage of the ambient humidity and adiabatic panels, as well as variable management, to balance the temperature of the servers and maximize the hours of uniform and scheduled operation.

The UPS systems deployed have unmatched features including 98.5% average operating efficiency, up to 99.5% peak efficiency, and up to 400 kilovolt-amperes (kVA) per core. It is the only unit on the market that allows heat scaling up to 3 megawatts (MW) in a single UPS and up to 27 MW in parallel.

In addition, Vertiv deployed lithium-ion battery banks, which consume less energy, take up less space, and last longer than traditional valve-regulated lead-acid (VRLA) batteries. Thus, Vertiv helped ensure lower energy consumption and cyclic redundancy that benefited the client with the highest possible efficiency, and helped the company differentiate itself with more environmentally friendly technologies.

The specific solutions applied in the construction of this data center:

- Vertiv™ Liebert® Trinergy™ Cube UPS
- Vertiv™ Liebert® EXL S2 UPS
- Lithium-ion battery strings
- Vertiv™ Liebert® CROSS Cabinet STS
- Vertiv™ Liebert® AFC adiabatic free-cooling chiller
- Vertiv™ Liebert® PCW cooling solution

Results

This project represented a milestone for Vertiv due to the demand required, the resources assigned, the times and challenges overcome, and above all, the most innovative and advanced technology installed for the first time in the Chilean market for a leader provider of IT services.

Beyond offering innovative and unique technology and engineering in the market, Vertiv solutions stood out for the reliability, availability, and high efficiency of its equipment. Vertiv also stood out in its commitment to service and support throughout each stage of project development, helping the client achieve a power usage effectiveness (PUE) of 1.08.

Therefore, thanks to the design, construction, implementation, and installation of infrastructure for cooling and power backup, the client has obtained Tier IV Certification, the highest recognition granted by the Uptime Institute for data centers that meet high global availability, redundancy, and energy efficiency standards. With this achievement, the client obtains a competitive advantage, considering it is the second data center that exists in Chile with this type of certification.

Ultimately, this client gained a long-term partnership with Vertiv when considering that the solutions deployed have an average useful service life of 20 years, during which time Vertiv will offer the most rigorous maintenance and after-sales service so that the equipment can perform optimally.

Learn more about Vertiv™ data center solutions to help you scale with confidence.