

Oxigen integrates Vertiv's free cooling and energy-saving technology into its new high-performance data center



A Vertiv Case Study



Background

Oxigen is a colocation data center and private cloud services platform located in Barcelona, Spain. Its Sant Cugat and HQ center has more than 6000 m² of technical spaces, offices, warehouses and transition rooms, and is supplied with 100% renewable energy, which comes from two different substations, providing the highest level of electrical security.

Recently honored with a DCM (Data Center Market) Award in the Sustainability category, Oxigen has made sustainability a core value. In collaboration with Vertiv, it has implemented innovative free cooling technology, setting a new industry benchmark for responsible data center operations.

In addition to its energy efficiency efforts, Oxigen excels in providing data hosting, processing, and distribution services that meet client expectations for three main reasons:

- Expansive installations: Two 6,000 m² data centers with more than 700 racks, offering multiple options to suit the diverse client's needs.
- Growth potential: With two sites in Barcelona, Oxigen is poised for expansion and a growth roadmap across Southern Europe.
- Advanced systems: The main data center has advanced technology with a total capacity of 6MW (expandable to 12MW) and a maximum capacity of 20 kW per rack (expandable by demand), all powered by 100% renewable energy.

Challenge

Oxigen faced a critical challenge of finding a cooling solution that could keep pace with its rapid growth. It needed a system that was not only scalable and reliable but also highly energy efficient. With power demands set to surge as AI and new technologies accelerate, Oxigen sought a partner who could meet its high standards.

Benjamin Rovira, CEO of Oxigen, commented, "When we needed to choose a supplier and reliable technology for our new project, we selected Vertiv as our trusted partner. With a strong partnership spanning over 20 years, Vertiv's solutions have consistently proven reliable. The success of our past projects has strengthened our trust in Vertiv's critical infrastructure and their dedicated support team."



Company profile

Oxigen is a high-performance data center platform offering energy-efficient, renewable energy private cloud services and colocation services.

Industry:

Data center

Region:

Barcelona, Spain

Milestones:

September 2022: Vertiv starts to work on the Oxigen project.

December 2022: The solution is defined.

January 2023: The order is processed.

Q2 2023: Vertiv ships all the products to Oxigen's data center location.

September 2023: Commissioning of the system.

Solution

After carefully evaluating various options, Oxigen confirmed that Vertiv's energy-efficient and free cooling solutions aligned with its needs better than any other solution in the market.

Vertiv's technology supports the smooth operation of Oxigen's data center. The high-performance Vertiv™ Liebert® AFC chiller, which can scale as the data center load increases, maintains efficient cooling. Additionally, the Vertiv™ Liebert® CRV row-based cooling units are strategically placed near the most demanding racks to precisely control humidity and temperature. These units also provide direct expansion cooling for the UPS rooms for optimal performance and reliability.

To enhance power distribution and enable flexibility and scalability, Oxigen installed Vertiv™ Powerbar iMPB systems. Additionally, Vertiv™ Geist™ rPDUs (rack power distribution units) were deployed to provide reliable power distribution to critical IT equipment. These units offer individual outlet-level control through remote network access and include environmental monitoring features for real-time tracking of key metrics.

Finally, Oxigen implemented Vertiv™ Critical Insight, a comprehensive monitoring system designed to optimize the performance and reliability of critical infrastructure. This solution provides real-time visibility into each piece of equipment powering data centers, edge environments, and telecom networks – regardless of the provider. It enables proactive maintenance, rapid issue resolution, and data-driven decision-making to ensure continuous operational efficiency.

Outcome

Vertiv's scalable solutions, provided via partners and directly by Vertiv, enabled Oxigen to efficiently meet its current capacity requirements while planning for future growth.

With additional orders placed for the PDU orders and PowerBar IMPb solutions, the expansions are structured into three phases: the first one is complete, the second is ongoing, and the third is projected to conclude by March 2025.

Oxigen and Vertiv will extend their collaboration, with plans to install up to 5 additional high-performance Vertiv™ Liebert® AFC chillers to support the data center's anticipated growth.

“We have been working together with the Vertiv team for over 20 years and in this time, they have shown us their great professionalism and the capacity of their technology. Knowing both their products and their team well and having always achieved satisfactory results, we feel comfortable in trusting their ability to adapt to our needs. We believe they are the ideal partner.”

Benjamin Rovira
Oxigen CEO



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