KIO Networks Data Center Expansion Completed in Record Time

A Vertiv Case Study

VERTIV™

Background

As a Mexican company that offers a broad portfolio of IT infrastructure and services to organization of any type or size, KIO Networks has a keen understanding of the importance of availability, and therefore, insists on the highest levels of quality. With 29 campus-based and 11 edge data centers distributed in Mexico, Central America, the Caribbean, and Spain, KIO Networks also ensures its operations are in line with international processes.

The company is part of KIO Networks Group, which is comprised of six lines of business that are organized to effectively meet the connectivity needs of its multinational customers. As an internet exchange point, KIO Networks delivers integrated information and communication technology (ICT) solutions including hosting, colocation, disaster recovery and business continuity planning, proximity hosting, mobile data centers, cloud services, backup as a service (BaaS), and e-commerce.

Because of its commitment to provide greater access to services that benefit society through digital platforms, KIO Networks must expand as its customers' computing needs expand.

Challenge

To continue to help customers meet their business objectives, KIO Networks needed to expand its MEX5 data center by 1,000 square meters, adding 1.2 megawatts (MW) of power to the Tultitlán, Mexico, location. Not only did KIO Networks seek a supplier that met the company's high standards, but it also needed a partner with the resources and capabilities to complete this fourth phase of its expansion project in record time.

The Vertiv team of experts fit the bill. Along with having solutions that met the technical specification, Vertiv topped the list of suppliers evaluated due to its local resources that enable superior response times. KIO Networks also gave careful consideration to the cost-benefit ratio for the solutions being deployed.

KIO Networks®

Challenge:

Completing the 1,000 square meter expansion for Phase 4 of KIO Networks MEX5 data center in five months — four months faster than the original timeline

Vertiv Solution:

- Liebert® EXL S1 UPS with lithium-ion batteries
- Liebert® FPC PDUs
- Liebert® RX remote power distribution cabinets
- Netsure™ 8200 Series DC power system
- Liebert® HPC freecooling chiller with "Supersaver" functionality
- Liebert® CW chilled water cooling system

Results:

- Timely project completion
- Support for 24x7 critical operations
- Improved sustainability with high-efficiency solutions that drove a 60% savings in energy consumption
- Market differentiation with first freecooling system and first lithium-ion backup power system to be installed in Mexico

Solution

Different technologies were analyzed, and in the end, Vertiv met all the specifications with its latest generation of power, cooling, and electrical distribution equipment. Additionally, KIO Networks appreciated having a single supplier capable of addressing the data center's energy and environmental conditioning needs. The alliance between KIO Networks and Vertiv has been around for 18 years, so continuing to effectively meet and exceed expectations was of vital importance for the Vertiv team.

With Vertiv's guidance, KIO Networks decided to install four 600-kilowatt Liebert® EXL S1 UPS units along with lithium-ion batteries. This monolithic, transformerless UPS features three-level insulated-gate bipolar transistor (IGBT) topology; double conversion mode efficiency of up to 97%; and smart parallel connection to optimize efficiency with partial loads, helping to reduce carbon dioxide emissions.

Ten Liebert® FPC PDUs, each having 300 kilovolt-ampere (kVA) capacity, were also selected because they are optimized to occupy a smaller area of white space with a high power density per square meter. They also offer robust power supply protection and smart paralleling to optimize partial-load performance and increase cost savings.

Eight Liebert® RX remote power distribution cabinets were also installed. These 225-amp cabinets were chosen for their small footprint as KIO Networks wanted a power distribution solution that would occupy the least amount of space possible in the production area. Additionally, four NetSure™ 8200 series DC power systems were installed to meet the efficiency, availability, and support needs of KIO Networks' largest and most complex data center environments.

Finally, the first of its kind for Mexico, the Liebert® HPC freecooling chiller with "Supersaver" functionality was chosen by KIO Networks for its very high-efficiency, high-capacity thermal management. And by having the chiller work in conjunction with the Liebert® CW system, KIO Networks further drove energy savings by capitalizing on longer, year-round freecooling.

Results

As KIO Networks assesses the return on investment for these types of expansion projects, it does so with the assumption of hosting its customer's infrastructure for at least 10 years. In this scenario, KIO Networks stands to realize significant benefits due to the first-rate equipment used in its installed based. However, even in the short-term, the company has realized the following benefits:

- **Time savings** – As time is often money, completing Phase 4 of the expansion in five months instead of nine was financially beneficial for KIO Networks and its customers. Internal IT resources were able to remain focused on business priorities rather than just the expansion project and the customer to be hosted in the MEX5 data center was operational sooner than originally expected. For both, quick completion of the expansion meant having the ability to support business-critical applications that are likely revenue generating.

- **Sustainable operations** – The use of Vertiv's highly energy efficient solutions ensure KIO Networks maintained an environmentally friendly operation. In fact, the power and cooling infrastructure deployed drove 60% savings in energy consumption, helping to reduce the company's carbon footprint.

- **Competitive advantage** – KIO Networks was able to create market differentiation that would appeal to existing customers and prospects alike who want their ICT providers to embrace cutting-edge technology and innovation. By deploying the first freecooling system and the first lithium-ion backup power system in the country, KIO Networks is now seen as a pioneer and leader in the data center space.

Go online to learn more about Vertiv colocation solutions or for more about KIO Networks.

Vertiv.com | **Vertiv Headquarters,** 1050 Dearborn Drive, Columbus, OH, 43085, USA