Australian Colocation Provider Upgrades UPS Systems to Ensure Power Stability

A Vertiv Case Study

For colocation providers across the globe, competitiveness often relies on the ability to maintain consistent uptime regardless of circumstances. One leading Australian colocation provider with 20 years of experience attributes its success to the quality of its operation staff in maintaining reliable system performance.

In fact, with more than 100 NV1 (negative vetting level 1) trained and security-certified engineers, the company is one of the world's most certified data centre operators. Its customers include nearly half of all Australian federal government agencies, as well as private sector enterprise and wholesale clients. The company provides clients private spaces from a single rack to entire rooms to data halls, delivering environments that are well connected, highly secure, and energy efficient.

The colocation provider's five data centre campuses offer 43 megawatts (MW) of capacity for server hosting and/or hyperscale services, depending upon the location. In addition to offering customers high reliability data centre operations, this provider views service quality as a critical success factor in achieving growth and profitability business goals. Specifically, these goals include:

- Maximizing return on capital investment
- Minimizing operating expenses
- Providing clients with 100% data centre availability

Working within a narrow window of weekend hours and using only the passenger lifts to transfer new UPS units to the 17th floor of a Sydney high-rise, Vertiv technicians were able to remove legacy equipment and complete a backup power system upgrade without dropping a load or causing disruption to office workers — ensuring 100% availability for this colocation provider's customers.

Challenge

In order to achieve its goals, the colocation provider relies on an ecosystem of trusted key technologies partners. One of those partners, Vertiv, was engaged to manage the delicate operation of upgrading an older bank of uninterruptible power supply (UPS) units to new technology. These devices are critical to maintaining uptime within the company's Sydney facility. The challenge for Vertiv was to manage the upgrade within a very narrow window of several hours without having the site experience any downtime.

Business drivers for proceeding with the upgrade

The original UPS units that supported the Sydney facility had been on site for 15 years. These were legacy Liebert® UPS systems that had never failed, but the provider's operations team felt that, statistically, the risk of failure was growing. In addition, the high efficiencies of the newer technology would afford the provider more opportunities to reduce electrical consumption and lower the carbon footprint.

Solution

After issuing a request for competitive bids, the colocation provider made Vertiv its partner of choice for both removing the older UPS units and for installing three new Vertiv™ Liebert® EXL S1 UPS units, each having a 500 kVA power rating.

The Vertiv project team worked closely with colocation staff to identify business objectives and to collaborate on exactly how the UPS systems could quickly be swapped out without incurring any customer downtime. After those consultations, decision makers for the colocation provider were convinced of Vertiv's ability to meet and exceed its expectations.

Liebert® EXL S1 UPS

Results

Smooth transition maintains colocation centre uptime

The data centre site was located on the 17th floor of a high-rise office building in Sydney Central Business District (CBD). The Vertiv technicians could only use the passenger lifts to move equipment in and out of the building from the loading dock in the basement. Lift access was limited to weekends in order to limit the impact on office workers in the building. The old UPS units needed to be disassembled to fit into the lifts and quickly removed to make way for the new UPS units, which then needed to be installed and operational within hours. If the narrow time window was exceeded, the installation and cutover would have to be postponed for at least another week.

In addition to the aggressive timelines, the project team had to be very careful to cutover from the old systems to the new UPS without any downtime interruptions. The team did not have the luxury of simply switching off and removing equipment.

Thanks to the careful planning and coordination of both the Vertiv and the colocation provider teams, the UPS and power generator upgrade project was completed on time and without incident. Since installation, the UPS systems have continued to perform reliably.

Should any issues arise, data centre staff can immediately connect to the Vertiv help desk. Once the problem is communicated, and if that problem is acute, technicians are dispatched to be on site within two hours. This service is available to the colocation provider on a 24x7 basis.

Availability benefits for both the service provider and its clients

Tenants are pleased that the power infrastructure protecting their applications has been modernized and that the colocation provider was able to realize the following additional benefits:

- Space savings that can be redeployed for revenue generating IT equipment
- Current and highly efficient UPS technologies that help lower the carbon footprint
- Less energy consumption for lower energy costs

By validating Vertiv's ability to deploy technology swiftly, provide energy-efficient solutions, and deliver a high level of service and support, this colocation provider has decided to extend the relationship. Its newly expanded data centre location in Canberra is now scheduled to be populated with Vertiv™ Liebert® UPS and thermal management systems.

Features:

- Smallest footprint among competitor units with the same capacity
- Three modes of operation for up to 99% efficiency
- Touchscreen control panel
- Lithium-ion battery compatibility
- Ability to operate up to eight units in parallel
- High-impedance DC ground fault detection
- Dual asynchronous source/ dual input capability

Benefits:

- More space for revenue generating IT equipment
- Maximum active power capacity for more connected loads
- Reduced operating expenses
- Easy installation and service
- Zero impact on upstream infrastructure
- Compatible with electrical loads of modern mission-critical facilities
- Leverages embedded intelligence to enable proactive remote service

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CH-00093 (R12/20)