New Zealand's Largest Telecom Infrastructure Provider Selects Vertiv in Data Center Expansion
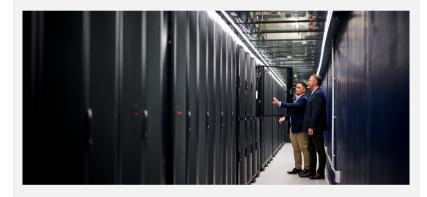
A Vertiv Case Study

BACKGROUND

Formed in 2011, Chorus is New Zealand's largest telecommunications infrastructure company. They build and maintain a network predominantly made up of local telephone exchanges, cabinets and copper and fiber cables. Chorus' mission is to build and manage an open-access internet network, rolling out ultra-fast broadband connections to residents and businesses across New Zealand.

Amidst a rapidly evolving landscape, Chorus entered the data center services business in 2016, transforming some of its legacy telephone exchange networks into edge data centers, also called EdgeCentres, to cater to retail service providers (RSPs). The Chorus EdgeCentres are state-of-the-art facilities that offer world-class solutions when it comes to rack configuration, real-time control, and access protocols, as well as power and cooling backup systems.

As they sit at the heart of the largest fiber network in New Zealand, Chorus EdgeCentres reduce latency thereby improving performance and providing operational and cost efficiencies to Chorus' enterprise customers. To date, Chorus has repurposed four of its existing metro-based telephone exchange facilities into EdgeCentre modular data center sites, including Mt. Eden near Auckland, Otumoetai near Tauranga, Courtenay Place near Wellington, and Avonhead near Christchurch.

Challenge: A modular data center system with hot aisle containment to support Chorus' expansion in its existing colocation facility.

Solutions:

- Vertiv™ SmartAisle with hot aisle containment system.
- Vertiv™ Liebert® APM250 kVA UPS in 2N arrangement (scalable form 50-250kW).
- Vertiv™ Liebert® CRV4 precision row-based cooling modules.
- Vertiv™ Liebert® power distribution units.
- Vertiv™ Liebert® RDU501 environment monitoring system.

Results:

- Efficient modular data center design enables quick deployment and scalability.
- System can accommodate up between 7.5kW to 21KW per rack.
- Sustainable data center design offers greater efficiency and savings to Chorus' customers.

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CHALLENGE

Since its opening in 2016, Chorus' Mt. Eden EdgeCenter site, has seen an immense interest from the market, and every rack space in the facility has since been sold out. Therefore, to increase capacity and accommodate the growing demand, Chorus needed to free up space in the facility to fit more racks. This was achieved by switching legacy copper equipment with a more sustainable fiber network, which freed enough space to add 23 new racks.
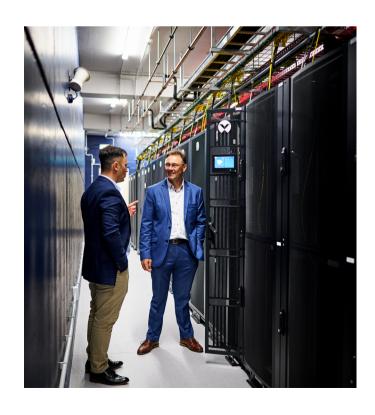
"New Zealand RSPs are increasingly determined to offer wraparounds of cloud-managed services, and we want to keep being the wholesaler for their network and hosting service requirements in that relationship," said Mohammad Hadi, colocation product manager at Chorus. "Mt. Eden was our pilot build in 2016, and every rack in that facility has since sold out. To give our customers room to play in today's digital ecosystem, we needed to expand our capacity in Auckland where customers needed it. This demand led to the significant expansion of the Mt. Eden site."

Chorus needed a flexible solution to utilize existing space without building a new data center from the ground up. As a longtime Vertiv customer, Chorus re-engaged the Vertiv New Zealand team for a modular data center infrastructure integrating power protection, precision cooling, racking, and monitoring solutions, able to scale as the needs grow.

SOLUTION

Vertiv worked with Chorus on the concept, design and installation of the Vertiv™ SmartAisle™ modular data center system for its Mt. Eden expansion. The 23-rack hot aisle containment system comes with a scalable power range of 50kW to 250 kW thanks to the Vertiv™ Liebert® APM uninterruptible power supply (UPS) system with 2N arrangement. Moreover, the SmartAisle containment also utilizes refrigerant-based air-cooling modules and leverages the Vertiv™ Liebert® RDU501 state-of-the-art environmental monitoring unit, which tracks energy consumption, alerts teams to potential failures, and rapidly diagnoses problems.

"Our 23 racks of new capacity live in a single row on a back wall – an efficient use of space," said Hadi. "That's relevant because sites such as Mt. Eden used to be occupied by large, legacy copper telco equipment. They're now being replaced with smaller, more sustainable fiber alternatives, and Vertiv is helping us free up new space to put it to other uses."

RESULTS

Chorus successfully expanded its Auckland data center capacity – where demand is highest – thanks to Vertiv's modular data center solution.

In addition, four of the 23 racks deployed in the Mt Eden site are of 'split' design, which means each compartment is physically and electrically isolated from the other with separate door locks, inter-compartment separation and independent PDUs. This enables Chorus to better accommodate clients that do not require a full rack, maximizing space within the data center while tailoring cost against demand.

Hadi said this would benefit their customers looking for a redundant and resilient data center infrastructure, especially in the event of natural disasters.

"With a combined fiber network and distributed data centers offering, Chorus is helping to transform the digitalization of New Zealand," said Mark Langford, head of New Zealand at Vertiv. "We're proud to offer Chorus confidence throughout its colocation journey. Enabled by robust edge solutions, Chorus are delivering innovation within existing real estate and trusts our leading design in facilitating scalability alongside the colocation demand curve."

Learn more about Vertiv and Chorus' long-standing partnership here.

To learn more about Vertiv's power and cooling solutions, visit Vertiv.com

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