

CASE STUDY



OVERVIEW:

The Beca group is an employee-owned engineering and related consultancy service company in the Asia-Pacific. Beca has almost 3,000 employees in total, in its 20 offices around the world and runs a network connecting all the branches.

REQUIREMENTS:

- Upgrade the network to meet all business demands
- A flexible and Future proof network to grow as the business grows

SOLUTION:

- Deployed Ruckus' ICX 7750 switches as the core and Ruckus' ICX 7450s for connection to desktops, cameras, wireless access points and other access devices

BENEFITS:

- Provided a flexible network infrastructure capable of scaling to support rapid business growth
- Campus Fabric simplified management and improved uptime and network availability
- High performing network to service all engineering projects

USERS EXPERIENCE ENORMOUS NETWORK GROWTH

The Beca group is an employee-owned engineering and related consultancy service company in the Asia-Pacific. While it is headquartered in Auckland, New Zealand, Beca operates from three main hubs: Australia, New Zealand and Singapore. Beca has almost 3,000 employees in total, in its 20 offices around the world and runs a network connecting all the branches. Because of severe office damage due to an earthquake years ago, the Christchurch office was forced to relocate. With a new office in the horizon, Beca decided to update where their networking solution was concerned.

CHALLENGE

The challenge Beca was facing is the same one all companies around the world are facing—more devices hitting the network, enormous amounts of applications being used and an aging network infrastructure, making it a struggle to continuously meet business demands.

Being a civil engineering group, there are a lot of different kinds of software requirements. Mark Taylor, senior network engineer at Beca explains, "One software is a point-cloud-based technology for 3D imaging which deals with extremely large files, which can currently get to 20-40 Gb in size and have multiple people working on it at once from many branches across the network. High bandwidth and good QoS (Quality of Service) are required because if something goes wrong, the whole file becomes corrupted and a lot of work can be lost should the file need to be restored."

SOLUTION

As part of the office relocation, Beca chose to completely refresh the network infrastructure at the Christchurch location. As a happy Ruckus customer, there was no need to look at any other vendors—it was simply time to update. The network supports up to 400 users with some ESX hosts that run multiple services for the users. With over 1,000 applications just in that one branch, the need for good links between the switches, the local core and the data center in Auckland is a must.

Beca chose to use the Ruckus ICX 7750 switches as the core and Ruckus ICX 7450s for connection to desktops, cameras, wireless access points and other access devices. Going with the ICX 7450 switches allowed Beca to have 40GbE backbone connectivity for the price of 10GbE to deliver the performance for user productivity. Beca was also impressed that the ICX 7450 switch could deliver the performance, reliability and PoE power to connect 30 wireless APs into a single switch.



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MARK TAYLOR
Beca, Senior Network Engineer

Initially, Beca planned on having two separate stacks—one with Ruckus’ ICX 7750 switches as the core and the other with ICX 7450s. After learning about the Ruckus Campus Fabric technology, however, the focus turned toward the single management, simple deployment and no need for Spanning Tree Protocol (STP). Beca decided on Ruckus’ Campus Fabric for its solution.

“Campus Fabric was a nice happy medium between the stack model and the data center fabric model,” states Taylor.

Ruckus’ high performing products was another key factor in the decision making. With a pair of the ICX 7750 switches stacked, not only does it serve as the control bridge managing the access switches in the Campus Fabric but it also serves as the core switch for servers and high-speed Internet access. Expanding the network for new users and devices will be as simple as plugging in new switches into the Fabric, with no additional configuration or incremental management effort.

“File sizes seem to be getting exponentially larger as time goes on, virtual reality technology becomes more important in the business, and we need to be continually agile to take advantage of the next amazing engineering technology which will keep us on the bleeding edge,” claims Taylor.

Going with Ruckus’ zero touch provisioning, the deployment was easy. By simply plugging in the ICX 7450s into the ICX 7750s—they automatically connected.

“We wanted to test it out and do the installation ourselves to confirm that it was really that easy—and it was,” states Taylor. “That was the beauty of Campus Fabric—there wasn’t a lot to set up.”

In addition to performance, high availability of the network was of the utmost importance. All the ICX switches selected included dual, redundant hot-swappable power supplies and fans. The Campus Fabric design takes advantage of the ring topology that includes dual loops to avoid having a single point of failure and load-balancing over active-active links to optimize performance.

The Ruckus Campus Fabric solution has provided Beca not only improved uptime and network availability but allows them to be prepared for future growth of the network.

“I like the way fabric works. I’m a big fan of it from my experience on the data center side of the world,” concludes Mark Taylor.

Ruckus’ campus fabric has provided Beca with a platform that will facilitate the integration of applications. It’s a future-proof and high performing network needed to service all of its engineering projects with the flexibility needed to grow as its business grows.