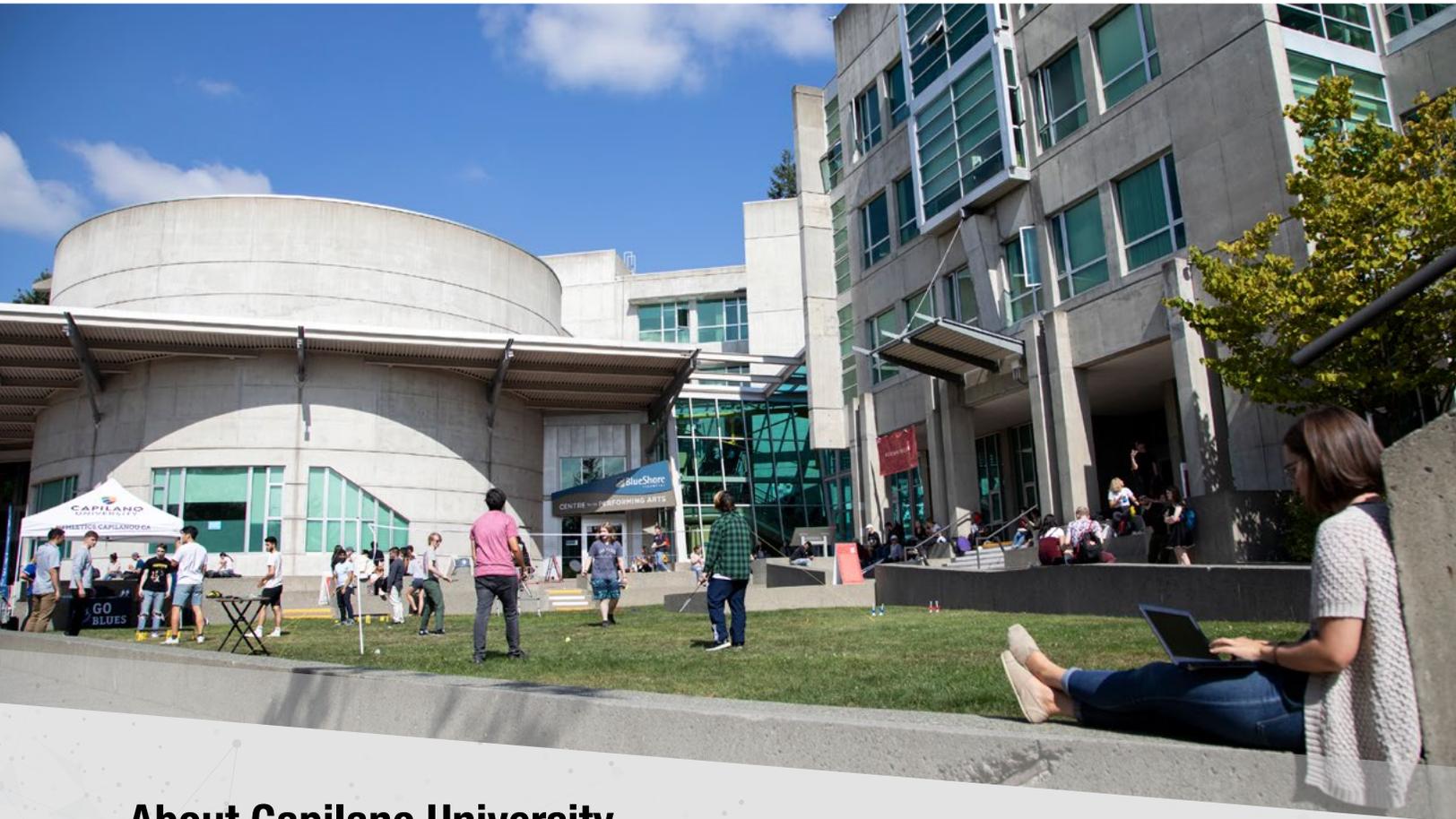


# Capilano University Case Study



## About Capilano University

Capilano University, also known as CapU, is a teaching-focused university based in North Vancouver, British Columbia, Canada with additional programming serving the Sunshine Coast and the Sea-to-Sky corridor of the province. With industry-leading instructors, small classes, and over 100 programs across five distinctive faculties, CapU is a unique place where students are encouraged to make their mark, in and out of the classroom. With nearly 9,000 students and 1,200 employees, the university is known for its animation, early childhood care, motion picture arts, tourism management, jazz, legal studies, and music therapy programs. Capilano University is named after Sa7plek (Chief Joe Capilano), an important leader of the Skwxwú7mesh (Squamish) Nation of the Coast Salish Peoples. The university campuses are located on the territories of the Lílwat, xʷməθkʷəy̓əm (Musqueam), shíshálh (Sechelt), Skwxwú7mesh (Squamish), and Səlílwətaʔ/Selilwitulh (Tseil-Waututh) Nations.

## Company

Capilano University

## Country

Canada

## Industry

Education

## Business Challenges

Organizing on-campus network infrastructure to efficiently troubleshoot outages and keep students and faculty connected

## Panduit Solution

Copper and Fiber Patch Cords  
NetKey® Keystone Patch Panels  
2-Post Racks (R2P)  
NetRunner® Vertical Cable Manager

## Business Benefits

Minimized downtime and faster troubleshooting when outages occur

# Connecting to Something New

## Copper Connectivity Solutions enable Capilano University to optimize campus operations to improve student and staff experiences.

### Business Challenges

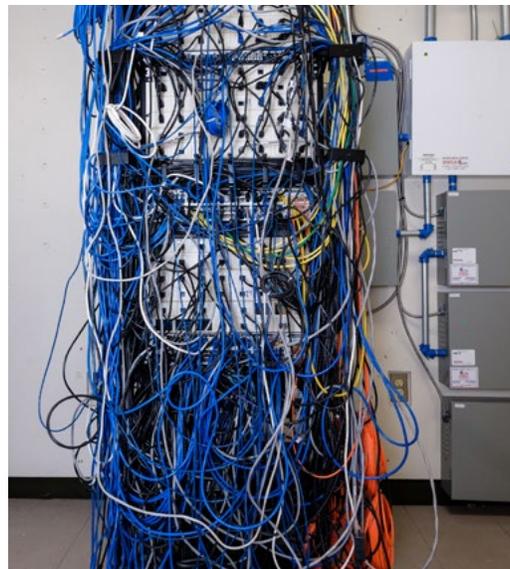
Connectivity is a critical part of modern learning, and never has that been made more apparent than during the global COVID-19 Pandemic. The majority of academia has shifted to online platforms in some capacity. Universities which aim to provide top notch education must use top-of-the-line technology to continuously connect students and faculty to each other and more. When technology and resources are unreliable, the academic experiences of students, workplace contentment, and the reputation of the institution can suffer. Outages and errors are unfortunately inevitable in businesses which rely heavily on technology. The best way to quickly and easily trace, troubleshoot, and reestablish stable connections is to build a dependable network infrastructure.

Capilano University is ranked among the top animation and digital design programs in Canada. As is the case in any high-tech environment, reliable equipment is essential.

It was determined that the patch infrastructure and tangled mess of cable in the communications rooms presented several challenges. Maintenance and troubleshooting took longer to complete because of the state of this cabling infrastructure. Effective troubleshooting required a lot more staff and resources, so Panduit stepped in.

“The com-racks had, in some cases, become an impenetrable mass of patch cables. Tracing, identifying, and patching were generally laborious and, in some cases, truly painful and time consuming.”

- DARIN FEIST,  
NETWORK ANALYST  
IT INFRASTRUCTURE  
CAPILANO UNIVERSITY



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## Strategic Objectives

Maintaining a reliable network infrastructure at CapU keeps the campus running and gives IT Infrastructure time to focus on more rewarding initiatives than troubleshooting outages. Darin Feist shared that the university is focusing on infrastructure improvements for operational efficiency gained by the communication room refit.

The scope of this project addressed refitting all 28 telecommunication rooms at Capilano University with a new layout that utilizes Copper Patch Cords, NetKey Keystone Jack Modules, 2-Post Racks, and NetRunner Vertical Cable Managers. The Cedar Building 300 room was a pilot project for CapU to test a new design that was used to upgrade other areas on the campus thereafter.

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## Panduit Solutions and Customer Care

A new layout improves functionality.

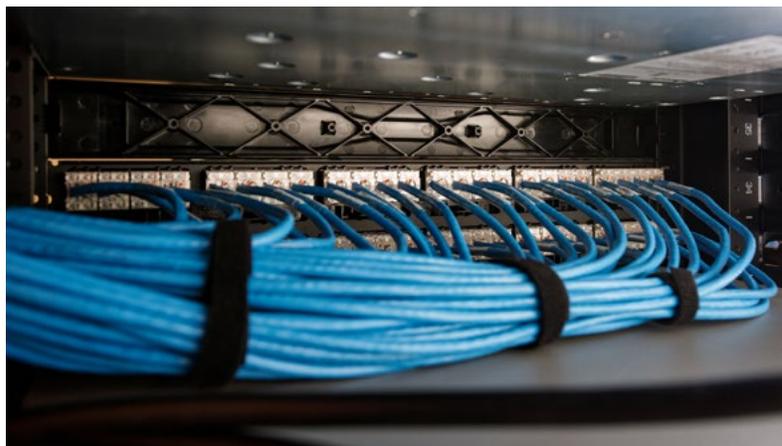
The old layouts for the Cedar 300 Room consisted of 600+ Ethernet connections, where rack layouts previously held switches at the bottom and patch panels at the top. The two were connected by almost 1200 meters of three- and four-meter patch cables.

Elaine Wilson, Panduit Sales Manager for British Columbia, leveraged her expertise to enable university partners to change this room layout using 48 ports of Keystone Patch Panels followed by 48 ports of switch capacity directly below. NetKey is configurable for tight space and the RJ45 interface provides a quick plug-and-play connection to patch cords with traceability. This was connected by 200 meters of 28 AWG copper patch cords at standard lengths of 30 cm, which cleaned up the layout by quite a lot.

Darin shared, “Elaine is a great listener and problem solver. She saw our com-rooms and listened to us describe what we needed to make them more ‘serviceable’. She used experiences from other projects to suggest a green-field installation using the short 28 AWG patch cords. Things sort of bloomed from there.”

After the Cedar 300 room was completed, the design was updated with color-coded patch cables in other space to identify VLANs. This allows engineers to visually trace connections from patch panel to switchport. Now, IT staff can walk into a com-room and immediately identify which cables are for a particular VLAN. For example, blue is for students/staff and green means door access.

Creating this bullet-proof method for reliably tracking all VLAN assignments was the most important and challenging component. It condensed the amount of rack-space required for the connections, and the colored patch cords provided a visual map of what



was connected to each switch. The team disconnected each patch cable from the switchport, traced them to the patch panel, and swapped in an appropriately colored cable according to the color-coding method for the associated VLAN. They populated the patch panel jacks one at a time using the color-coding method for the associated VLAN, then reconnected each cord and documented the connection.

The team at Capilano University shared that working with Elaine made this project more enjoyable and manageable. “Her knowledge and attention to detail was most impressive. On top of that, Panduit delivered quality manufacturing, R&D, and impressive innovation for even the smallest details... details that some manufacturers might overlook,” said Darin Feist.

This project started in December 2020 and was completed in only nine-months. The Panduit team worked tirelessly to procure supplies and labor resources during the height of the COVID-19 Pandemic to take advantage of a student-free campus. Darin says, “The success of this project was based in large part to our relationship with committed industry partners. Elaine deserves many thanks for her commitment and tireless work.”



## Business Benefits

Now, Capilano University IT staff can quickly and easily identify connections from the patch panel to the switch, decreasing the time to troubleshoot, trace, identify, and correct cabling issues.

One month after all existing server rooms were reconfigured, an engineering lab was moved to a different building. The work to configure the communications room to accommodate the changes needed for the lab was completed in only one hour, by one staff member. With the old system, half of a workday may have been spent for such a project.

Upon completion, Capilano University refocused on new projects in which Panduit will bring this new layout, woven with new fiber optic solutions, to the Center for Childhood Studies: a 2,137 square meters, two-story building that will house the School of Education and Childhood Studies. Construction for this space started in Fall 2022. Additionally, the on-site student housing complex will be outfitted with fiber optics. This is a six-story, 8,250-meter complex that can accommodate up to 362 students. Upgrades to this layout will include the *RapidID™* Network Mapping System, an autonomous network documentation solution that takes the guess work out of labeling, tracing, and documenting network maps.

# PANDUIT®

Panduit Corp  
World Headquarters  
Tinley Park, IL 60487

[cs@panduit.com](mailto:cs@panduit.com)

US and Canada: 800.777.3300

Europe, Middle East, and Africa: 44.20.8601.7200

Latin America: 52.33.3777.6000

Asia Pacific: 65.6305.7575

[www.panduit.com](http://www.panduit.com)