James Cook University Singapore powers learning with an AI-driven network

JAMES COOK UNIVERSITY SINGAPORE

James Cook University Singapore (JCU Singapore), the first international campus of James Cook University Australia, is seeing enrollment grow as more students seek academically rigorous degrees in business, tourism and hospitality, aquaculture, information technology, and education.

JCU Singapore upgraded its campus network with AI-driven networking from Juniper to support blended learning and better digital experiences on campus.

OVERVIEW

Company	James Cook University Singapore
Industry	Education
Products Used	AP43, AP63, EX4400, Wireless (Wi-Fi) Assurance, Wired Assurance
Region	APAC

CUSTOMER SUCCESS AT-A-GLANCE

3,200

Wireless devices connected to the JCU Singapore network

Significant

Reduction in network-related troubleshooting time since deploying Juniper Mist

1 minute

To upgrade Juniper Mist AP firmware

CHALLENGE

Support a flexible learning environment

With students expressing a preference for a flexible learning environment that blends face-to-face and digital instruction, IT leaders wanted to modernize the university's campus network.

"We wanted the best network solution to support our students' learning and research," says Abdul Samathu, Assistant Manager of Information and Communications Technology at JCU Singapore. "We determined that a cloud-managed, AI-driven network would deliver the best digital experience on campus."

JCU Singapore invested in both campus technology and facility improvements, including a new student center and building renovations, to adapt to students' post-pandemic learning styles and its growing enrollment, and to improve sustainability and offer more amenities to students, faculty, and staff.

SOLUTION

A smarter campus network

JCU Singapore refreshed the network at its five-block, high-rise campus with a Juniper Mist AI-driven network.

"Juniper satisfied our criteria for setting up a university-wide wireless network with a hierarchical management and operations structure. Additionally, its outstanding visualization capabilities redefine the user experience," says Abdul. "We anticipate that this advanced network operation will set the benchmark for future ICT infrastructures."

JCU Singapore deployed Juniper AP43 and AP63 wireless access points for indoor and outdoor Wi-Fi 6 connectivity across its campus as well as Juniper Networks EX4400 Switches for the campus core and access networks. Juniper access points and switches work in conjunction with the Juniper Mist cloud platform, driven by Mist AI™, to deliver optimized network user experiences.

Juniper Mist Wi-Fi Assurance and Wired Assurance cloud services make connectivity predictable, reliable, and measurable. Juniper Marvis Virtual Network Assistant, purpose-built for Mist AI, simplifies everyday troubleshooting by providing instant answers to plain-conversation queries, network insights, and automated actions.

OUTCOME

Transformative blended learning

The Juniper Mist network delivers a strong digital experience on the JCU Singapore campus as more students seek the academic rigor, a supportive learning environment, and the opportunity to earn a degree from the prestigious James Cook University, which is one of the top 400 universities in the world.

Increased network visibility and AI-driven operations reduce the network support workload. "We can see the quality of the user experience and proactively address issues like Wi-Fi coverage or client disconnections while roaming," says Abdul. "With Mist AI and automation, we spend less time managing the network."

Abdul sees a bright future for AI-driven networking. "In light of the swift advancements in AI, universities should strategize on optimizing school network management to minimize costs and reduce manpower requirements," he adds.

As time progresses, the requirements of a university can evolve, and Juniper networks provide adaptable solutions for accommodating growth, Abdul notes. For example, the university is developing a wayfinding application to help visitors and new students navigate the campus, and the mobile app will tap into Juniper Mist Indoor Location Services and Juniper-patented virtual Bluetooth® LE (vBLE) technology in Juniper access points to deliver optimal location accuracy across the campus.

"With Juniper Mist, we're not just connecting. We're elevating the future of our ICT infrastructure – making complexity simple and every connection impactful."

Abdul Samathu
Assistant Manager of ICT, James Cook University Singapore