

# UTS Insearch

UTS Insearch rolls out network modernisation to deliver a seamless student experience



## OVERVIEW

UTS Insearch is the pathway provider for University Technology Sydney (UTS), the number 1 young University in Australia. UTS Insearch has locations across the world with their latest campus in Sri Lanka scheduled to open in late 2019. The main Sydney campus is located in Haymarket, Australia and is situated over a 2 km radius with five buildings and 70 classrooms. UTS Insearch is serving around 5,000 students, from across the world, and more than 300 staff.

## REQUIREMENTS

- Reliable, scalable Wi-Fi service
- Excellent high-density performance that meets the multi-device needs of students and teachers
- Improved range with no dead zones
- Solid and reliable Wired infrastructure
- Ability to publish the Eduroam federated authentication service
- Streamlined implementation and ease of maintenance

## SOLUTION

- High performance network solution that meets current and future Wi-Fi needs with superior connectivity and coverage
- Deployed CommScope Ruckus 802.11ac Access Points which incorporate Ruckus' BeamFlex+ patented antenna technology
- Deployed CommScope Ruckus ICX to enhance UTS Insearch's Wired network
- Easy upgrade path to Ruckus SPoT for room utilisation monitoring



Seamless Wi-Fi is no longer a 'nice-to-have' for educational institutions, but a core foundation on which digital curriculums and connected classrooms are built. Today's connected student uses multiple devices simultaneously including laptops, tablets, smartphones and e-readers and expects to do so with instant connectivity and consistent speeds.

However, behind every strong Wi-Fi deployment, having an equally strong, wired network is crucial. While students and educators alike are increasingly connected to networks via exclusively wireless means - mobile phones, tablets and laptops, educational institutions still heavily rely on direct wired connection to the network for desktops, VoIP devices and other IoT devices, which remain central to any higher education institutions' missions and is crucial to student satisfaction.



Education institutions must invest in Wi-Fi that powers high-speed connectivity, is easy to use and provides coverage throughout a campus, as well as ensure they have a strong wired network that reliably connects the various wireless endpoints to the outside world.

## Challenge

UTS Insearch is the pathway provider to the University of Technology Sydney (UTS), providing guaranteed entry to the corresponding UTS undergraduate degree upon successful completion of the course (subject to grade point average). It is an innovative and fast paced organisation providing award winning education which it achieves through leveraging new technologies and driving high quality curriculum. The UTS Insearch main Sydney campus is situated over five buildings, 70 classrooms with the organisation supporting over 5,000 students from 75 different countries.

In order to support the largely international student base who need seamless internet connectivity for study and to communicate with friends and family from their home countries, UTS Insearch needed to upgrade its legacy access points that delivered sub-par speed and could not support a high-density of concurrent connections.

“Our students and teachers were constantly complaining that they could not get a consistent, high-speed connection, with some parts of the campus offering no coverage at all. We needed to invest in new infrastructure that could handle our requirements and lay the foundation for further upgrades in the future,” said Sarah Chaloner, Head of IT and Digital Services at UTS Insearch.

## Solution

In order to overcome the existing connectivity issues, UTS Insearch employed a networking consultant organisation to upgrade the campus access points from the 802.11n to the 802.11ac standard boosting speeds by up to three times. This provided increased reliability with zero dead zones and the ability to publish the Eduroam federated authentication service to allow UTS Insearch’s students to access global education resources.

Chaloner, who has worked with Ruckus before, was impressed by the Ruckus portfolio due to its high RF performance, seamless upgrade path and excellent customer service, with ongoing expert consultation that was tailored to the needs of the project.

“I knew that when I engaged Ruckus that the team would be easy to work with, the end result would be positive and we would have a reliable wireless platform which could be iterated upon as our needs demanded,” said Chaloner.

Using intelligent heat mapping, Ruckus was able to determine the areas of heaviest Wi-Fi utilisation around the campus, as well as providing visibility into where the most drop-offs were likely to occur.

UTS Insearch deployed the Ruckus access points across the campus, focusing on high-user demand areas such as lecture theatres, high thoroughfare corridors and main common areas. CommScope Ruckus’ superior RF performance meant that the team were able to use about 30-40% fewer access points compared to the previous



“We are thoroughly pleased with the experience we have had with Ruckus. From consultation to implementation, we have worked closely with their on-the-ground representatives to change the way our organisation works, for the better. As a result, student complaints about connectivity have disappeared, and in terms of increased speed and on-the-go connectivity, the numbers really speak for themselves. But it is the strategic impact of the new Wi-Fi that is important for us. We have used it to create an innovative, flexible wireless learning space in our latest campus building.”

UTS Insearch’s wired network was coming to EOL in 2019 and so they issued their Wired RFP to replace their ALE switches and chose CommScope Ruckus ICX earlier this year.

hardware, while increasing speed and eliminating dead zones across the campus. The CommScope Ruckus SmartZone network controller manages not only the access points, but also the CommScope Ruckus ICX switches.

“Our students and teachers are now able to access Wi-Fi across the entire campus on all of their devices, with high-speed, consistent access that is ideal for digital learning. Case in point, our students now connect to the Wi-Fi from the café on the opposite side of the road,” states Chaloner.

The new CommScope Ruckus access points support multi-user MIMO, which improves spectral efficiency and allows data to be split into multiple packets, increasing speed and reliability in congested RF environments.

Since the deployment, UTS Insearch has seen a three times speed boost on average.

“Ruckus ICX was by far the best solution for us as we needed switches that deliver high performance, flexible scalability and simplified management for mid-to-large scale deployments to meet the demands of current and future network demands. The ICX deployment was completed a few months ago and it was a smooth and easy implementation.

Having a full Ruckus site with powerful and fast Wireless complete with a solid Wired infrastructure has helped to position UTS Insearch as one of the most innovative Higher Ed sites across the country,” added Chaloner.

Phases one (Wi-Fi) and two (ALE switches) of the implementation are now complete, with additional roll-outs to come. Specifically, UTS Insearch is looking to implement a management console with CommScope Ruckus SPOT technology that will be used for heat mapping and room utilisation. Implementation of Cloudpath for

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**“Since the Ruckus deployment, we have seen our students using Wi-Fi seamlessly across the campus and even in the nearby café. The Eduroam service is being successfully used across the world by our international students and staff traveling overseas.”**

**— Sarah Chaloner  
Head of IT and Digital Services at UTS Insearch**

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“With the management console, we will have far more control over how we are using the network and are looking at ways we can optimise our operations. We plan to use heat mapping to monitor room utilisation to ensure we can use our infrastructure most effectively and cut down on wasted space and energy costs which are a big expense. The upgraded Wi-Fi network has given us the platform to add new services over time and has kickstarted a new wave of learning innovation which will allow us to bring our world-class education to more people around the world,” concluded Chaloner.

In the near future, CommScope will also be assisting UTS Insearch to manage Campus Fabric using their Virtual SmartZone controller as well as increase the max number of ICX switches from 36 to 50+ over the next couple of months to support larger deployments.

certificate-based BYOD management is also on the roadmap. The implementation of IoT technology is being considered, as well as location-based services and increased depth of analytics – all part of the overarching strategy to provide a myriad of opportunities to provide better services to the UTS Insearch students.

“What has also been a great part of the process is that our key Network resource, Sung Moon who has worked tirelessly on the new technology as part of our team is himself a UTS Insearch Alumni and so the student experience has been front and centre of the whole deployment.

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