

CASE STUDY

WESTERN SYDNEY UNIVERSITY



OVERVIEW

Western Sydney University is located in the western part of Sydney, Australia. It has eight campuses that are situated over 18 square kilometers with over 550 buildings, and 10,000 rooms. The university is serving 43,000 students and 5,000 staff.

REQUIREMENTS

- WLAN infrastructure that is scalable and innovative
- Reliable network that meets the high density needs of students and faculty
- Campus-wide mobility
- Secure and simple onboarding
- Easy deployment and network maintenance

SOLUTION

- High performance network solution that meets current and future Wi-Fi needs with superior connectivity and coverage
- Deployed Ruckus' 802.11ac R710 and R510 indoor access points, T710 outdoor access points with P300s for point-to-point bridging to provide campus wide coverage
- Ease of management of virtual SmartZone (vSZ)
- Improved density capabilities and overall throughput



FUTURE-PROOF NETWORK ELEVATES STUDENT EXPERIENCE

The surge in smart devices, digitized teaching, changes in student learning and IT consumerization are all driving the demand for better campus Wi-Fi. Schools must rise to meet this demand to attract and retain students else risk losing out to better-equipped campuses. As students and teachers work together to drive learning and achievement in the classroom, they need a technology infrastructure that is simple, reliable and offers hassle-free access to digital engagement in campus life.

CHALLENGE

Western Sydney University has eight major campuses located in the western part of Sydney, Australia. The eight campuses are situated over 18 square kilometers with over 550 buildings, 10,000 rooms with the university serving 43,000 students and 5,000 staff.

To take full advantage of everything that the university has to offer, all stakeholders need access to a reliable Wi-Fi network. Western Sydney needed to upgrade its legacy infrastructure to ensure that the IT department didn't start receiving complaints from students and staff.

"We had an increasingly unreliable wireless infrastructure that had been installed a number of years ago, therefore we decided to look at all the options available to find a vendor that could handle the complex demands of our requirements," states Kerry Holling, Chief Information and Digital Officer at Western Sydney University.

SOLUTION

In order to overcome the challenges relating to the increasing demands being placed on the legacy network, Western Sydney turned to partner BigAir for help. BigAir has a big presence in the higher education market with technical strength in WLAN site surveys. WSU wanted to move to 802.11ac so students and faculty would experience a bigger performance boost. The requirements needed to satisfy the various wireless demands ranging from Central Business District like locations such as the new 14 story campus that opened in early-2017, through to the semi-rural areas where they even have a small farm. At any one time—there are 12-15K users on the network. WSU needed a solution that could provide both the capacity and capability in the wireless access points themselves and also the management tools to ensure that all the users get the best experience.

"At the same time, our strategy has required that we deliver more and more media-rich content to our students and faculty wirelessly (e.g. A/V and remote classroom experience). These necessitated a look at ensuring that our wireless infrastructure could satisfy these needs."



“Since the Ruckus deployment, we have higher capacity and capability and the students are now enjoying the service we are providing.”

KERRY HOLLING

Chief Information & Digital Officer, Western Sydney University

“To cater for this, we have scoped our environment to allow for over 100,000 concurrently connected devices,” Holling said.

A strong proof-of-concept platform was demonstrated and Ruckus outperformed all the other vendors and met the diverse needs of the university, especially in the newly designed and technology-rich learning and teaching studios. Western U was impressed with the Ruckus portfolio because of the high RF performance and the superior products including the built-in BeamFlex technology. BeamFlex provides extended range and adaptive signal steering for the most reliable Wi-Fi.

“BeamFlex gives us the kind of saturation that we need to support the students whose demands are increasingly insatiable,” states Holling.

WSU deployed Ruckus’ R710 access points in most of the teaching spaces, R510s in some of the smaller spaces, T710s for outdoor needs and P300s for point-to-point bridging. These access points provide seamless coverage across the entire campus. Managing these access points is the virtual SmartZone (vSZ) controller. The vSZ provides a huge amount of flexibility, scaling up to 300,000 devices and the capability to expand with and adapt to the changing needs of the university.

“We are seeing a significant growth in the prevalence of wireless devices, with a typical user having two to three devices that are connected whenever they are on campus,” states Holling.

To top it off, WSU is using SPoT and SmartCell Insight to drive the analytics needs of the university.

“We have SPoT and SmartCell insight which we will increasingly use to drive the analytic needs that we have. We have the need to understand how our buildings are being utilized and whether the teaching spaces are used as effectively as possible, where students congregate and what routes the students take through the campuses which will help us tailor the wireless network so that it meets their needs,” comments Holling.

Since the deployment, WSU has seen over 30-40% increase in the number of connections. There has also been a huge improvement in reliability and coverage. With students declaring that Wi-Fi is the most important infrastructure service, WSU is happy with the Ruckus technology.

“Since the Ruckus deployment, we have higher capacity and capability and the students are now enjoying the service we are providing,” states Holling.

WSU will continue to strengthen their infrastructure with the addition of Cloudpath (scheduled to be deployed later in the year) to secure its network.

“We’re very happy with the Ruckus technology—both the wireless access points and the management tools, but we’re also very happy with the relationship we built with Ruckus and their partner BigAir who have helped us both in the design and the deployment of the service but also in terms of helping us look at opportunities to use the service more broadly,” concludes Holling.

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