

Providing Better Aged Care Services Through Innovative Wi-Fi

Over 200 patients and 400 staff benefit from Lyndoch Living Aged Care and Ruckus Wireless partnership

For Lyndoch Living Aged Care, a new facility-wide Wi-Fi solution presented several challenges. Not only should the system provide ubiquitous coverage across the 13 acre site which consists of multiple brick and steel buildings, it should support advanced applications such as RFID and voice over Wi-Fi whilst dealing with the interference generated by a large quantity of electrical medical equipment.

Technology was viewed by Lyndoch's Living's Director of Nursing, Steve Demeye, as a vital element of the facility's infrastructure along with traditional components such as bricks and mortar. It was with this perspective in mind that Demeye first considered upgrading the IT&C at the facility to incorporate a WLAN.

Having identified a raft of technological applications that together could form an innovative new system, Demeye's plans promised to improve quality of care at Lyndoch whilst delivering services with greater efficiency and increased productivity. Robust Wi-Fi was paramount to achieving this goal as the technology backbone.

"We had big plans for new technology, but if the Wi-Fi couldn't cope the whole strategy would fall apart," advises Demeye.

For Lyndoch Living Aged Care, this required a Wi-Fi network that would not only cope with the high bandwidth traffic that would be generated, but also prioritise the traffic into voice, data and multimedia streams.

"And there was no point in haphazard accessibility," Demeye adds, "Wi-Fi signal needed to be facility-wide, blackspot free, and strong enough to run each of the wireless applications fully." After building a business case and receiving funding approval, Lyndoch Living released an open tender for the provision of a WLAN. Amongst the submissions from more well-known wireless vendors was a Ruckus solution proposal from Victoria-based wireless experts, DyCom Wireless Solutions.

Demeye also states that even though he was unfamiliar with the Ruckus name at this stage, the proposal put forward immediately sparked his interest.

"When we looked at the Ruckus proposal I was struck by how much you seemed to get for your dollar. There were better-known brands presented but their total outlay was significantly higher. Although Ruckus wasn't the cheapest, it certainly wasn't the most expensive and



Lyndoch Living's Smart Wi-Fi, Pen and paper will soon become a thing of the past for many staff.

OVERVIEW

Lyndoch Living currently has a total of 198 residential care beds in the city of Warrnambool in Australia's Victorian state, offering nursing home and hostel care predominantly to an aged client group. From the same Warrnambool site, Lyndoch Living also operates a 44 unit Retirement Village which is in the process of significant transformation and growth. With over 400 staff employed, Lyndoch Living focuses on evolving to meet the changing needs of the community, and is proud to take an innovative approach to their model of operation.

REQUIREMENTS

- Ubiquitous Wi-Fi coverage within 13-acre multi-building complex
- Consistent and reliable connectivity within a hostile RF environment
- QoS features to prioritise data, voice and multimedia traffic streams
- Centralised management and ease of administration

SOLUTION

- (65) ZoneFlex 7363 Dual-band 802.11n Wi-Fi Access Points
- (2) ZoneDirector 3000 WLAN Controllers

BENEFITS

- Complete Wi-Fi coverage across the complex that is consistent in performance and stability
- Patented adaptive antenna directs Wi-Fi signals over best performing path and mitigates RF interference
- SmartCast QoS automatically detects and prioritises data, voice and multimedia streams, optimising delivery and throughput of traffic
- Directional, high-gain antennas minimised number of APs required over other brands to deliver blackspot free Wi-Fi coverage
- Fewer APs kept CAPEX requirements to a minimum
- Ease of administration allows WLAN management to be kept in-house, reducing OPEX



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Steve Demeye
Director of Nursing
Lyndoch Living

their solution represented better value for money,” Demeye states.

Demeye and his team were also interested by the technical specifications of the solution from Ruckus, particularly with Ruckus’ adaptive antenna which Demeye describes as ‘revolutionary’. The patented smart antenna technology supports multiple signal paths, adjusting on-the-fly to the best performing route to deliver the strongest Wi-Fi connection available.

With a loan kit of two Ruckus ZoneFlex 7363 Access-Points (APs) and a ZoneDirector WLAN Controller, Ruckus solution provider DyCom Wireless Solutions presented an onsite demonstration of the system, wowing Lyndoch Living’s IT Support team with the apparent ease of setting up and managing a WLAN.

By testing the Ruckus system onsite for a week-long period, the team also had an opportunity to see Ruckus’ patented adaptive antenna in action. According to Demeye, Ruckus exceeded performance expectations and alleviated concerns about possible RF signal interference caused by the sheer volume of electrical equipment at the facility.

“Ruckus’ performance was as good in situ as it was on paper,” advises Demeye. “We even spoke to other Ruckus customers who had similar environmental conditions to ours, and every one we spoke to mentioned the ease of installation and the consistent reliability. Technically and commercially, we were confident that Ruckus and DyCom Wireless Solutions would meet our needs and was the right choice to make.”

Lyndoch Living have since rolled out a Ruckus ZoneFlex 7363 Smart Wi-Fi solution comprising of sixty-five access-points plus two Ruckus ZoneDirector 3000 controllers in High Availability mode. The solution was deployed following a thorough site survey and network design by DyCom Wireless Solutions.

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Lyndoch Living’s Ruckus ZoneFlex system delivers consistent high performance and excellent coverage, even under the challenging environment created by the undulating 13-acre site and multiple steel and concrete building structures. Lyndoch Living recently completed a post implementation site survey which identified that every part of the site had sufficient signal strength to enable all of their wireless applications to run simultaneously.

The first phase of wireless applications to be rolled out was piloted by an electronic medication system, allowing Lyndoch Living to move from paper based medication charts to wireless tablet devices mounted on medication trolleys. The benefits of the new system will not only aid efficiency and error-free handling, but also assist with the auditing process and reduce administrative resourcing requirements.

Other wireless applications that form the first phase of the technology upgrade include a Radio Frequency Identification (RFID) system and Realtime Location System (RTLS) for asset tracking of equipment and patient-locating ID tags. Rather than walking through the facility on foot to search for equipment or locate patients, staff will be able to pinpoint their exact location on a computer screen in realtime.

Tablet devices will also soon replace conventional pen and paper for many employees, and staff will be able to enjoy the convenience and added safety of voice/data communication badges. The badges will be linked to Lyndoch Living’s internal telephony system via VoIP, with which staff can contact colleagues and trigger alarms instantly.

With future plans for Phase 2 of the technology upgrade to include an incontinence management system via RFID and a revamp of the nurse call system, Lyndoch Living are seizing on the many opportunities made available by wireless technologies to increase efficiency and reduce costs.

Lyndoch’s Director of Nursing, Steve Demeye, states “The Wi-Fi we have from Ruckus means we now have the capacity to select from a wide range of wireless applications, whereas previously we were limited to wired or paper based methods only.” In fact, according to Demeye it is the combination of these new technologies that will increase productivity at the facility by allowing staff to work “smarter” instead of having to “work harder”.

