



## Overview

### Customer name

Kulkarriya Community School  
in Australia

### System Integrator

SOE Software Pty Ltd.

### Customer industry

Education sector

### Solution

NWA3560-N Wireless Access Point



### SMS eTechnologies

Distributor of ZyXEL's Business  
Networking Solutions  
Australia & New Zealand

## Success Story

## Reliable and High-Quality Network Available for Kulkarriya Community School, Western Australia

### Background

Benefit from the continuing development of Internet technologies and digital triple-play (data, audio and video) different from traditional applications, now academic institutions and schools can not only design classes and curriculum featuring more diversified contents with digital technologies applied, but also conduct the courses with more interactivity between students and tutors to achieve better results for mutual success on both teaching and learning.



Founded in 1978 and operated independently by Yungngora Association in Western Australia, the Kulkarriya Community School provides academic studies and education for indigenous Australians to sustain the most important value as a vital element in the process of social and cultural reproduction.

The school has constructed a well-functioning networking system based on the fundamental wired backbone that allows the school staff, teachers and students to get connected with the Internet for up-to-date information, knowledge and resources on all aspects. In view of a growing population utilizing various types of mobile devices and particularly in consideration of the school staff and teachers living in neighboring accommodations, the school decided to upgrade the existing wired networking with wireless connectivity.

With ZyXEL's feature-rich, high-performance and high-reliability wireless access points, the Kulkarriya Community School was able to successfully complete the wireless expansion to offer improved studying and teaching experience.

### Challenge

With the increasing amount of Internet applications incorporating digital technologies, a high-performance network is critical with capability of not only speedy transmission but also uncompromising integrity in streaming bandwidth-intensive audio and video multimedia contents.

In fact, the network system architects had faced serious challenges when extending the network for wireless connection. In addition to speed, stability and reliability are additional imperatives when streaming digital multimedia contents over the wireless network; and the challenges even level up when the wireless connectivity extends from one point to multiple points for a large landscape extending from the campus to remote accommodations for the staff and teachers when cables are not suitable for such lengths or deployment scenarios.

Manageability of "guest access control" is also critical when access privileges for different identities are necessary to prevent network breaching; weather condition is also an exceptional challenge for the device in addition to functional and performance requirements. The sustainable design against harsh temperatures, high humidity in the wet seasons and lightning strike has been taken into consideration for the final decision as well.

*\*note: Photos by courtesy of the Aboriginal Independent Community Schools*

## Solution

As the result of an on-site diagnosis performed in collaboration with SOE Software Pty Ltd., a system integrator and local partner, the ZyXEL NWA3560-N 802.11n WLAN Dual-Band Access Point was chosen for the final deployment.

Designed with state-of-the-art IEEE 802.11n wireless technology and dual-radio implementation, the wireless AP meets deployment needs the best for multi-user mobile connectivity, while the Dual-Radio design with concurrent 2.4 GHz and 5 GHz bands through the internal and external antennas provides high availability of transmission.

The exceptional 3-in-1 hybrid design with AP controller mode, managed AP mode and standalone AP mode provides IT administrators with configuration flexibility to optimize the AP functionality according to the actual deployment scenarios. It enables both high expandability and controllability as multiple remote connections are configured. With the graphic interface for comprehensive configuration management, administrators are able to set privileges for guest access easily to ensure that the Internet connection is properly authorized and monitored.

Lightning arrestors are integrated into the design in consideration of particular natural phenomenon on the grand continent. Moreover, the additional ZyAIR EXT-300 Surge Arrestor and Jumper Cables allow the detachable antenna to be extended for outdoor reception. To ensure public health and safety during emergency situations such as fire accidents, LSOH (Low-Smoke, Zero-Halogen) material has been applied in the product design to assure the least amount of toxic or corrosive smoke.

## Benefits for Customers

With wireless connectivity, the school staff and teachers are able to provide improved quality of courses in a more dynamic structure for students. When preparing for the courses, teachers can access the school network for campus resources from home to plan and design contents easily with comfort. This improves not only the teaching quality but also the retention rate.

In classrooms, the school can implement new technologies and teaching aids such as Smartboards, iPads and other devices to create a more interactive and effective teaching-learning experience enabled by the fast, reliable and secure wireless network.

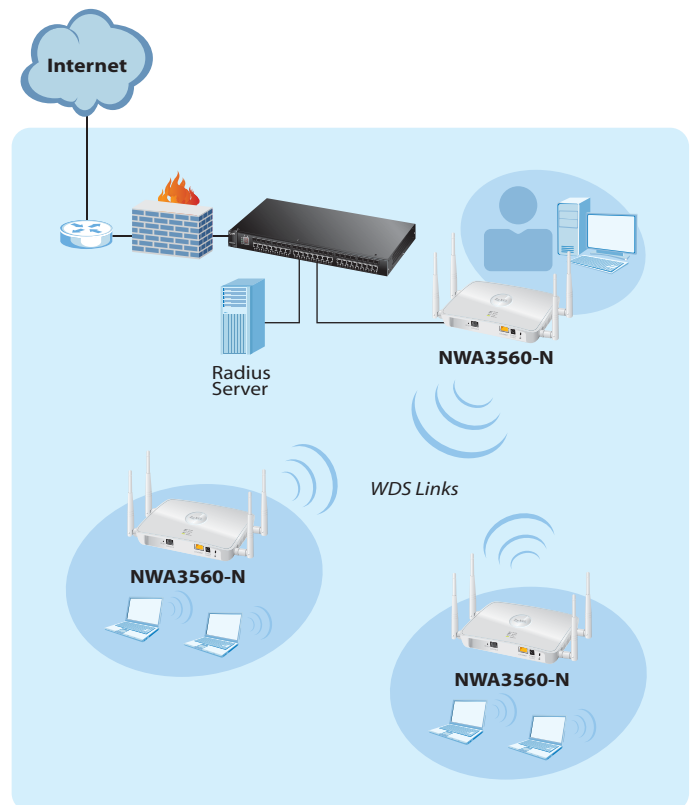
## Product Used



**ZyXEL NWA3560-N  
802.11 a/b/g/n Wireless Business Access Point**

## Application Diagram

**Kulkarriya Community School, Noonkanbah Station  
(AISWA—Aboriginal Independent School Western Australia)**



### About ZyXEL Communications

ZyXEL Communications Corp., founded in 1989 and headquartered in Taiwan, is the leading provider of complete broadband access solutions. As one of the early modem manufacturers, ZyXEL has undergone many transformations in the fast-paced networking industry. Today, ZyXEL is one of the few companies in the world capable of offering complete networking solutions of Telco, SME/Enterprise, and Digital Home for a wide range of deployment scenarios. Telco solutions include wired and wireless access network equipments, networking customer premises equipments, and Carrier Switches. SME and Enterprise solutions include Unified Security Gateway, LAN Switches, WLAN, and IP telephony. Digital Home solutions include network connectivity devices and multimedia solutions.

The company has 3200 employees and distributors in 70 countries, reaching more than 150 regional markets. The ZyXEL Communications Corp. includes 33 subsidiaries and sales offices and two research and development centers worldwide. For more information, visit the company's Website, <http://www.zyxel.com>.

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