

# FORTINET'S WIRELESS LAN SOLUTION PROVIDES MOUNT ST BENEDICT COLLEGE WITH COMPREHENSIVE, HIGH-DENSITY WIRELESS ACCESS USING FEWER ACCESS POINTS



*"Fortinet delivered cost efficiencies for the school by providing high-density access with a reduced number of APs. Unlike others on the market, the school does not need an AP in every classroom, reducing equipment and cabling costs."*

– Mark Sullivan,  
ICT Manager,  
Mount St Benedict College



Mount St Benedict College is a Catholic, independent, girls' high school in the Good Samaritan tradition, offering holistic education in Pennant Hills, Sydney.

The school has an extensive laptop program with all students from years 9-12 each having their own laptop. Students in years seven and eight are provided with 250 shared desktops and laptops spread throughout classrooms and learning spaces.

Mount St Benedict believes that laptop computers, used in integrated and meaningful ways within the curriculum, are the most powerful ICT tool for enhancing learning currently available. Using computers can enhance research, problem solving, collaboration, communication, written

expression, presentation, and publication. Students have the opportunity to use laptops within classes across all subjects.

## CHALLENGES

With technology playing such an important role in educating Mount St Benedict's students, it is important for the school to have a reliable wireless networking solution. The school's one-to-one laptop program means that 600 students and 100 teachers all have laptops, and there is an expectation that there will be 950 laptops in use at the school within the next two years.

The school's ICT Manager, Mark Sullivan, said, "Mount St Benedict needed to improve wireless connectivity and give

## DETAILS

**CUSTOMER:** Mount St Benedict College

**INDUSTRY:** Education

**LOCATION:** Sydney, Australia

## CHALLENGES

- Existing wireless LAN delivered poor performance.
- The existence of older clients degraded network performance for all users.
- Each access point was managed independently, which was time consuming.

## RESULTS

- Fortinet virtualized wireless LAN delivers superior performance for up to 700 simultaneous users.
- System is ready for simple future expansion.
- Centralized management and high reliability vastly reduces management time and cost.

## FORTINET PRODUCTS USED

- MC3000 Series Controllers
- Fortinet System Director
- Fortinet APs

students and teachers the flexibility to move around the school and stay connected, which was not possible with our legacy wireless system.

“The school needed a solution that could deliver full coverage to start off with, but also the ability to expand.”

A large number of subjects also use applications such as a learning management system, Moodle, to deliver course content online. This has been enhanced further through the use of a wide range of other tools such as the schools’ library catalogue system Oliver and Clickview video on demand system, a program that lets students download large video files. The use of these applications means network access with high throughput was essential.

Sullivan said, “Mount St Benedict was looking for a solution that was built to accommodate high-density environments, like schools. This led to the school reviewing Fortinet.

“Mount St Benedict chose Fortinet because of its ability to deliver in high-density environments. Fortinet also provided cost efficiencies through its ability to deliver seamless coverage in the same device density environment with a reduced number of access points (APs) compared with others in the market.”

## **SOLUTION**

Wavelink, through ASI Solutions, one of its leading Fortinet resellers, provided Mount St Benedict with Fortinet’s wireless LAN solution including implementation, maintenance, and support for three years.

Fortinet’s products are designed to deliver the industry’s most complete wireless LAN

solution from air to core, addressing the school’s needs for over-the-air coverage, high user density, and performance. The implementation included an MC 3000 series controller with a fully redundant back-up controller with automatic switchover and 40 access points.

## **BENEFITS**

Fortinet wireless LAN solution ensures uninterrupted wireless internet access on a consistent basis for students and teachers. Unlike most other wireless systems, which use micro-cells with alternating channels, Fortinet wireless LAN solution uses unique architecture that allows all APs to operate off a single, seamless channel, virtually eliminating the need for complex coverage surveys, channel planning, and constant management.

Essentially Fortinet’s WLAN controls how the client devices access the network which looks like a single cell to the mobile device, so the ICT department does not have to worry about channel planning when adding or moving APs.

Sullivan said, “Fortinet provides the flexibility to move APs from one place to the other without channel overlap because of Fortinet’s single channel architecture and channel stacking capabilities.

“Fortinet lets the ICT department set and forget – it just works. The solution also encourages teachers to use the technology because they can count on its reliability.”

The redundant back-up controller with automatic switch over means a controller is always available to provide wireless access, even during short controller upgrades or outages. Fortinet’s unique approach

also removes the problem of co-channel interference common in other micro-cell systems so that Fortinet’s APs are able to operate at full power, typically reducing the number of APs required by up to 30 percent, reducing equipment costs and infrastructure requirements.

Sullivan said, “Fortinet delivered cost efficiencies for the school by providing high density access with a reduced number of APs. Unlike others on the market, the school does not need an AP in every classroom, reducing equipment and cabling costs.”

For Mount St Benedict this means Fortinet’s wireless LAN solution delivers simultaneous wireless access to high numbers of users in all areas of the school.

Sullivan said, “It is not unusual for the school to have 200 laptops simultaneously using wireless internet from just four APs. Recently the school observed 450 laptops simultaneously connected using the traffic monitoring interface with close to zero latency.

“Even in outside courtyards, where the students go to study or relax, wireless coverage is excellent.

“For an effective wireless solution to work, schools need to make sure the existing LAN infrastructure is equipped to support a wireless environment,” he said.

The school is planning building expansions in the next six months and expects to take its number of APs to 50 to accommodate the additional buildings. The school is also investigating the possibility of voice over the wireless LAN.



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