Trident
Technology Solutions

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Enterprise company

CASE STUDY
PENINSULA GRAMMAR

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Wireless networks are now one of the most essential pieces of infrastructure in modern schools. Nearly the entire learning environment depends on having secure, reliable, and high performing wireless access for students, teachers and administration staff.

One school who knows how important this learning environment can be is Mornington Peninsula's premier coeducational school Peninsula Grammar, who offer more than 1400 Kindergarten to Year 12 students' exceptional education in a warm and nurturing school environment.

With an excellent record of academic achievement including outstanding Victorian Certificate of Education (VCE) results, this is a testament to their investment in the highest quality teaching, exceptional state-of-the-art buildings and learning spaces, such as their VCE Science Centre, as well as their innovative approaches to learning and the delivery of a rich and broad VCE program.

PENINSULA GRAMMAR'S NETWORK NEEDS

Peninsula Grammar's Director of Information Technology, Graeme Newland works with his team to manage constantly shifting demand from the school's network. Particularly considering the majority of students now carry at least one device connected to the school's network, depending on their year level students will be connecting:

- Prep to Year 4 - iPad

- Years 5-6 – Microsoft Surface Go

- Years 7-9 – Microsoft Surface

- Years 10-12 – Mac or Windows device

Staff at Peninsula Grammar now also use Surface Books, including in administration roles. With the move away from a traditional desktop environment, portable devices enable administration roles to become part of a more dynamic and mobile team.

With a complete Office 365 environment across the school's application landscape, Peninsula Grammar is leveraging Microsoft Teams to facilitate their online learning environment and Office 365 mailboxes between students and staff to incorporate calendaring functionality. The Adobe Creative Suite is another major application suite that the network and infrastructure need to support.

In addition, sign-in terminals using iPads also needed to create functionality for adding school visitors and guests to the network – by providing them with a user ID and password to connect to the network. The new solution had to deliver this functionality while maintaining the security of the network.

THE NETWORK CHALLENGES

The key challenge for Peninsula Grammar with their existing network was the management burden created by an ageing wireless system with different wireless access point (WAP) types and an overly complex centralised controller model.

Because of the different models of WAP across the school, every time Graeme and his team wanted to update the firmware of one set of WAPs, the model of WAP below would be dropped and stop working – causing cascading complexity.

This complexity carried through to the access controls and the access control lists (ACLs). They were finding their current controls were designed more with an engineer in mind than end users, so they needed a solution that could give them more visibility and control over their network environment.

They were looking for a new solution that would give them better visibility over the devices that students, staff and guests were bringing into their network. They were also interested in adopting a solution that matched their switching infrastructure and hardware servers from HPE.

THE SOLUTION

Graeme and his team determined they wanted to implement a comprehensive Aruba solution because they were attracted by the control and security offered by both Aruba Airwave and Aruba Central, as well as:
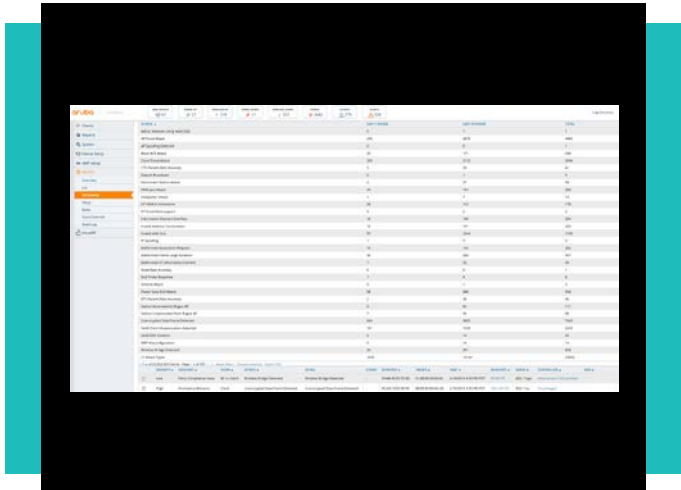
ARUBA AIRWAVE - a scalable, full featured management solution for multi-vendor wired and wireless networks, providing visibility, control, and troubleshooting tools required to fully manage distributed environments.

ARUBA CLEARPASS - a policy management platform to effortlessly onboard new devices, grant varying access levels, and keep networks secure based on users' roles, device type, and cybersecurity posture.

An Aruba solution also provided greater functional integration with their HPE switching infrastructure and servers, and they determined there would be much lower ongoing support costs. To implement the solution, they selected Trident based on a range of factors including:

- an existing relationship from engineering support Trident had at one stage provided in the form of a Trident engineer working as part of Peninsula's team on a part-time basis.

- Trident's more intimate knowledge of Peninsula Grammar's infrastructure environment, having helped them with an earlier upgrade of their core switching infrastructure.

- Trident's ability to deliver the solution in an affordable phased approach which enabled Peninsula Grammar to spread their capital expenditure over the duration of the project.

Trident provided the design, procurement, and deployment of services for Peninsula Grammar in an end to end solution. The project was undertaken in the following phases:

- **PHASE 1** – Trident deployed one cluster of Aruba Instant Access Points (80 x IAP-515) for a section of the school, with the school's existing wireless to run side by side. This also involved setting up two ClearPass instances and subnets.

- **PHASE 2** – ClearPass was integrated with the school's sign-in software and Airwave was deployed. This included two external WAPs for a remote point to point wireless bridge.

- **PHASE 3** - 6 months later – Trident provided an additional 65 access points that due to the configuration work completed during Phase 1 were simply plug and play.

- **COMPLETION** – The full site is now under a single wireless Aruba solution. They also have no physical controllers, with WAPs acting as the primary controller deployed in IAP mode across 2 clusters.

> **Trident were fantastic to work with, all the way from our account manager Stuart through to the engineers on-site who demonstrated exceptional workmanship and dedication**
> Graeme Newland

Peninsula Grammar's **ICT Operations Manager Dilan Pethiyagoda** worked with a dedicated project manager from Trident who provided weekly updates on the project, including any issues they encountered such as mismatches in firmware updates that were easily able to be overcome.

❝ We were impressed with the experience of the engineers from Trident who worked on the project. While Aruba was still a new solution for schools at the time, they brought their experience of implementing the Aruba solution in similar environments, so the project ran smoothly and on time❞
Dilan Pethiyagoda

THE RESULTS

Graeme and Dilan were immediately impressed by the visibility provided by Airwave and ClearPass, as well as the instant access they could get into the whole integration. Through a single pane of glass, the Aruba solution allowed them to see which Window or Mac devices were connected to the network, and even which software versions each device was running.

The policy setup through ClearPass was also an advantage as it was able to mimic their existing firewall solution. For this level of control previously, the team at Peninsula Grammar would need to go through ACLs at the switch level which made fixing problems particularly difficult.

"The whole project, particularly between the firewall and the access points, was really well laid out and easy to maintain from an administration point of view."

The teaching environment was also enhanced as a result of the Aruba solution. With wirelessly activated interactive whiteboards installed in many classrooms, the new network provided much improved performance for these vital teaching tools and technology.

The school's guest access problems were also solved by the Aruba solution. With an end to end solution for automating the authentication of guests and visitors, they can now have peace of mind that they know exactly who is on their network at all times.

Another aspect of the project that Trident was able to facilitate was the creation of a wireless bridge up to one of the school's playing fields. This wireless bridge enabled them to incorporate their security features in the school's pavilion such as CCTV and secure locks, while also allowing teachers and students to access the network.

Peninsula Grammar is also building a new Creativity Centre on-site, which will be taking advantage of the new Aruba network once it is brought online. With dedicated VR rooms, Makerspaces and 3D printers to support, the schools is well positioned with the latest Aruba access points along with Airwave and ClearPass.

SMART NETWORK SOLUTIONS – SMART IMPLEMENTATION

Here at Trident, we specialise in reducing the complexity of network management for our clients. As an Aruba Gold Partner, we bring industry leading network solutions to organisations of all sizes – from schools to companies. Our highly experienced team develop tailored implementations that improve end user experience while lowering network risks.

With Aruba ClearPass, we can help you implement agentless visibility and dynamic role-based access control for seamless security enforcement and response across your wired and wireless networks.

Our solutions are designed to help you protect your users while still delivering the user experience they expect.

❝ The difference with Trident is that they always deliver on what they promise, which can't be said of every technology provider. The skillsets and experience of their engineers means they can get the solution implemented faster, and ensure it works from day one❞
Graeme Newland

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