

## Case study

# Ballarat Grammar improves network performance by leveraging SDN applications



### Industry

Education

### Objective

Increase student and faculty productivity and educational opportunities along with educational opportunities by deploying SDN technology and applications

### Approach

Leverage OpenFlow-enabled hardware to deploy the HP Network Protector & Kemp Load Balancer SDN apps to maximize network performance

### IT matters

- Enable automated network-posture assessment
- Deploy adaptive high-availability load balancing
- Provide real-time security across network devices
- Leverage new SDN apps

### Business matters

- Increase student and faculty productivity
- Enable secure BYOD connectivity
- Provide real-time protection from one million threats
- Optimize performance of enterprise apps across network during peak loads
- Decrease the time IT spends on security problems, from days or weeks to hours
- Enhance network security—thousands of threats easily detected and blocked



**“At a time when many companies are hesitating to deploy SDN applications, Ballarat Grammar is ahead of the pack in embracing the new technology. We are seeing remarkable results with a more secure and reliable network—resulting in increased productivity among staff and students.”**

— Gregory Bell, Head of Technical Services, Ballarat Grammar



Ballarat Grammar is a K-12 school located in Victoria, Australia, featuring an extensive campus hosting a flourishing community of 250 faculty and 1,400 students, with over 200 students living in boarding houses. Ballarat has provided a school laptop to each senior student and faculty member allowing everyone access to the network in classrooms, boarding houses, and throughout the campus. The IT team faced numerous security and performance challenges associated with allowing unmanaged devices onto the network. HP Network Protector and Kemp Load Balancer SDN apps provided real-time security and high-availability load balancing resulting in increased student/faculty productivity and network performance.

## Customer solution at a glance

### Application

- HP Network Protector SDN Application
- Kemp Load Balancer SDN Application

### Hardware

- HP 3800 Switch Series
- HP 5400 Switch Series
- HP Advanced Services zl Module
- MSM 422 Access Points
- MSM 466 Access Points
- MSM 560 Access Points

### Software

- HP Virtual Application Networks SDN Controller

### BYOD brings security challenges

Ballarat Grammar outfits each of its senior students and all faculty members with a school-provisioned laptop, while allowing everyone access to bring their own device (BYOD) to access the network in boarding houses and residences throughout the campus. The IT team realized that allowing unmanaged devices onto the network would pose security challenges and increase the network load, therefore they looked to HP for a solution.

Despite implementing measures such as installing local antivirus software on the school-owned machines and intrusion prevention on the firewall, the team was still bogged down with hours of manually identifying and eliminating network threats such as botnets, spyware, and malware—issues that were also impacting student and faculty productivity.

### Software-defined Networking (SDN)

Harnessing the power of SDN, HP delivered the Network Protector SDN Application to identify and block network threats and enable secure BYOD.

HP Network Protector, running on the HP Virtual Application Networks (VAN) SDN Controller, enables automated network posture assessment and real-time security across OpenFlow-enabled network devices such as switches.

The school was able to take advantage of the Network Protector SDN solution by downloading a free software upgrade for their existing switches to enable OpenFlow, eliminating the need for a costly rip-and-replace of their network infrastructure.

Network Protector leverages the Virtual Application Networks SDN Controller and OpenFlow to program the network infrastructure with security intelligence from the TippingPoint RepDV Labs database.

This effectively turns the entire network infrastructure into security-enforcement devices, providing unprecedented threat protection and visibility. By protecting Ballarat Grammar from threats, HP Network Protector improves productivity and enables

students and faculty to experience the benefits of rich media and collaboration securely in the classroom or boarding house with their choice of device.

Bell described another unique feature, “We use Network Protector to help us with challenges around sites like Facebook, which are a distraction during class. With the DNS Blacklist feature, we restrict access to websites like that, which encourages the staff and students to engage more with one another during class.”

### Maximizing network performance

Ballarat Grammar’s SharePoint infrastructure is under heavy load with staff, students, and parents constantly accessing the portal for classwork, reporting, and collaboration with Microsoft® OneNote.

They host all of their services in house, “We liked the KEMP solution over other load-balancing solutions because it leverages SDN and the HP VAN Controller to be intelligent about other network traffic running on our network, and including that in its load balancing algorithm,” says Bell.

The KEMP solution provides maximum performance at any given time, without making assumptions about the load on the network. “By working with our HP VAN SDN Controller, we’re confident KEMP is helping provide a great SharePoint experience to our school community at all times,” says Bell.

At a time when many companies are hesitating to deploy SDN applications, simply because they don’t understand the benefits, Ballarat Grammar is ahead of the pack in embracing the new technology. They are seeing remarkable results with a more secure and reliable network—resulting in increased productivity among staff and students.

“It’s hard for us to measure the return on investment that we’ve had with HP Network Protector,” Bell concluded, “but there’s no doubt that it gives us the power to help staff and students be more productive in the classroom; and at the end of the day, that’s what we’re all about.”

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