Somerset College gains network clarity from HP AllianceONE Networking solution

"With our new HP Networking platform working in conjunction with InMon's Traffic Sentinel application, we keep on top of potential issues and deal with them proactively. The network operates more efficiently and we have complete control. Identifying and resolving problems now takes minutes rather than hours, enhancing service delivery." Tom Ranson, IT Network Engineer, Somerset College, UK

HP customer case study:
Somerset College deploys an HP Networking solution to resolve network manageability and security issues

Industry:
Further and Higher education

Objective
Somerset College needed a unified switching platform to accommodate current wireless and Internet Protocol (IP) technologies, support future network expansion and deal with network management and security issues proactively.

Approach
After choosing wired and wireless infrastructure specialists Pervasive Networks to design and implement a suitable solution, the College deployed an HP Networking solution that includes an HP AllianceONE Services zl Module, incorporating InMon Traffic Sentinel
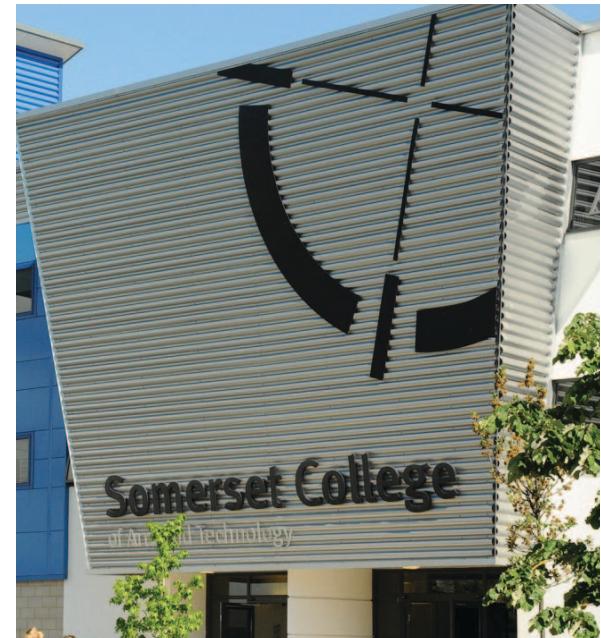
IT improvements
- A reliable, scalable and unified network platform supports activities across the campus, enhancing the students' learning experience.
- HP Networking software works with InMon's Traffic Sentinel to enhance manageability, security and network visibility.
- InMon offers complete network visibility, enabling rapid identification and resolution of performance issues and security threats.

Business benefits
- The College runs InMon Traffic Sentinel on an HP AllianceONE Services zl Module, rather than a separate server system, which consumes 84 per cent less power, thereby lowering energy costs.
- Identifying and resolving network problems now takes minutes, not hours, which saves money and frees administrators' time for more strategic work.
- Open standards-based technology supports current wireless and IP capabilities and provides choice by enabling the deployment of cost-effective technologies from other vendors.

Somerset College, part of the University of Plymouth College network, is a community college based in Taunton, England. Formed in 1974, it provides full-time and part-time education courses to approximately 9,000 students. The College provides six core learning disciplines; arts and design, construction, foundation learning, service industries, social and professional studies, and technology.

As part of a £15 million campus redevelopment scheme, the College has constructed numerous new buildings including a conference centre, a health and social care centre, a three-storey atrium and several pavilions. The atrium houses the main reception, shops, classrooms, common rooms and the service industries division whilst the pavilions contain seminar rooms and lecture theatres.

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Tom Ranson, IT Network engineer, Somerset College

Mixed platform lacked manageability, security and scalability

Effective technology is essential to facilitate an effective learning environment and support administrative functions. Somerset College employs an extensive wired and wireless networking infrastructure to deliver services across the campus and aid activities within several learning centres. With approximately 1,500 workstations linked to the network, the system supports applications such as media streaming, video and computer-aided design.

However, prior to the redevelopment, a multi-vendor switching architecture had evolved over time. The heterogeneous wired network also supported wireless technology and Mitel IP telephony.

"Organic growth had created a mixed switching platform that lacked scalability, manageability and traffic visibility," explains Tom Ranson, IT Network Engineer, Somerset College. "We could not control abnormal traffic flows or deal with network issues before they disrupted services. Security standards were also a concern because students were regularly bypassing our web-filtering process. We needed to spend less time fire-fighting sporadic network issues to deliver both improved service and efficiency.

"We needed a unified switching platform to support our current wireless and IP technologies, aid future network expansion and accommodate appropriate management and traffic monitoring tools to deal with potential problems proactively. To monitor, analyse and report network traffic, we were keen to integrate InMon's sFlow® technology."

HP AllianceONE Networking Specialisation

Somerset College saw the redevelopment as an ideal opportunity to implement a future-proof network. The College therefore approached Pervasive Networks, an HP Gold Preferred Partner, to discuss refreshing the Local Area Network (LAN) and explore a suitable sFlow solution. Pervasive Networks provided pre-sales technical support to identify problems with the College's existing network and demonstrate the value of a robust, scalable HP Networking solution. It also explained the value in the HP AllianceONE Networking Specialisation, which reinforces HP Networking's commitment to open standards-based technology.

The College runs InMon's Traffic Sentinel application on an HP AllianceONE Services zl Module. This HP blade consolidates the software onto a common platform, optimises rack space and lowers operational costs. Under the alliance, HP Networking and InMon collaborate to help customers strengthen security, simplify and improve network manageability and boost network performance.

"Given that we already employed HP Networking technology and were very pleased with Pervasive's technical support, we were convinced this combination would provide an attractive, cost-effective solution," continues Ranson. "However, what really clinched it was the HP AllianceONE programme with InMon. We can run an InMon application on an HP blade module linked to a chassis switch rather than a separate rack server. This is a very economical approach."

HP AllianceONE Services zl Module integrates InMon Traffic Sentinel

To refresh Somerset College's wired infrastructure and deliver 1 GB connectivity, the HP Networking solution comprises two HP E8212 zl core switches in a redundant configuration, 17 HP E5412 zl switches and 12 HP E3500 yl edge switches. Power over Ethernet (PoE) supports some 400 Mitel IP handsets and the wireless infrastructure, which has 120 strategically positioned access points.

InMon, the inventor of sFlow technology, pioneers the use of statistical sampling to develop scalable, cost-effective solutions for network-wide traffic monitoring, analysis and reporting. By surveying the College's wired and wireless networks, Traffic Sentinel offers complete network visibility, enabling rapid identification and resolution of performance issues, security threats and suspicious behavior.

To complement Traffic Sentinel's capabilities, the College also implemented HP PCM+, HP Network Immunity Manager (NIM) and HP Identity Driven Manager (IDM). HP PCM+ allows College administrators to configure, update, monitor and troubleshoot wired switches centrally whilst HP NIM automatically deals with virus attacks, boosting network availability. HP IDM dynamically applies security, access, and performance settings to the College's network infrastructure devices based on user, location and time. Combining this software provides granular control and network-wide visibility, all across a common user interface.

Customer solution at a glance

Primary applications
- Network management
- Security
- Unified communication & collaboration

Primary hardware
- 2 x HP E8200 zl Switches
- 17 x HP E5400 zl Switches
- 12 x HP E3500 yl Switches
- 1 x HP AllianceONE Services zl Module

Primary software
- HP PCM+
- HP Identity Driven Manager
- HP Network Immunity Manager
- InMon Traffic Sentinel

Pervasive Networks designed the solution and managed the entire project. Refreshing a network to this extent can take months. However, to minimise the disruption to staff and pupils, Pervasive Networks deployed and customised the solution during the six week summer vacation, working extended hours, every day.

HP Networking and InMon solutions yield complete visibility

Today, the College has a highly reliable and scalable wired networking infrastructure that supports both Aruba wireless technology and Mitel IP telephony. InMon Traffic Sentinel software operating on an HP AllianceONE Services zl Module works with three HP Networking software applications to deliver a secure and easily managed network environment.

Consequently, potential network traffic and security problems are clearly visible to the College's IT personnel, allowing rapid resolution of issues and safeguarding service delivery across the campus. "We are leveraging the interoperability benefits of the HP Networking solution and the HP AllianceONE Services zl Module running Traffic Sentinel. This lowers Total Cost of Ownership," adds Ranson.

Moreover, compared to a traditional rack server with a typical power consumption of 500W, the HP blade consumes 84 per cent less energy as it takes power directly from a switch.

"This HP AllianceONE solution dynamically monitors the entire network and we apply traffic policing on flows we dislike. The HP Networking technology provides complete control from core to edge and integrates well with InMon's sFlow technology. I can identify issues and determine the root cause of a problem quickly without leaving my desk or from anywhere in the world," concludes Ranson.

Partner at a glance

InMon offers a full spectrum of traffic monitoring and analysis solutions, ranging from sFlowTrend, a free troubleshooting tool, to Traffic Sentinel, an enterprise solution that can monitor the largest of networks. All products run on standalone systems and Traffic Sentinel is also available for the HP AllianceONE Services zl Module. InMon's customers include leading Enterprise, Service Provider, Educational, Healthcare, Government and Media organisations around the world.

Company: InMon

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Telephone: +1 415 283 3260 (US) +44 131 202 6291 (EU)

URL: www.inmon.com

Business: Developer of traffic monitoring solutions for high-speed switched networks

Products: Traffic Sentinel, sFlowTrend, sFlowTrend-Pro and Virtual Probe

Partner at a glance

Company: Pervasive Networks

Headquarters: Newbury, UK

Telephone: +44 870 004 0002

URL: www.pervasive.co.uk

Business: Integrator and managed service provider of secure business communications

Products: Storage, network infrastructure, IP communications, mobility and security solutions and services

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