Western Australia's Department of Education and Training integrates IT service management operations with HP Software to improve performance, reduce costs

"Not only have we significantly reduced our costs, improved our efficiency and reduced the number of incoming support calls but we have also dramatically improved the availability of systems in urban, regional and isolated communities."
–Glen Veen, Manager, Infrastructure and Telecommunications, WADE

HP customer case study: With a client base that includes some of the most remote communities in the world, WADE implemented a range of HP integrated software modules to create a process-based, consistent and centralised IT service management operation in alignment with the ITIL framework.

Industry: Government

Objective:

Western Australia Department of Education (WADE) sought to implement an integrated service management platform that covered its network and systems performance, mandatory software configurations and support operations.

Approach:

WADE implemented a range of HP integrated software modules. Underpinning its ITIL implementation is an HP Software solution that includes HP Network Node Manager (NNM) software, HP Operations Manager software for Windows, HP Service Desk software, HP Performance Manager software and HP Client Automation software.

IT improvements:

- Ability to rapidly deploy standard operating environments that can be managed from centralised operations centre.
- Improved network performance and availability through pro-active remote network monitoring.
- Simplified use of technology for teachers and students.
- Reduced number of help desk support calls.

Business benefits:

- New capabilities to deliver better quality, more cost-effective IT services.
- Confidence to invest in delivering improved IT services to schools and colleges all over the state including isolated communities.
- Improved compliance with best practice frameworks and adherence to IT governance requirements.

Covering over 2.5 million square kilometres, Western Australia is the largest state in Australia. Its population of around 3 million people includes some of the most isolated communities in the world and there are enormous geographic challenges hindering the delivery of quality technology services including great distances from support and harsh environments.

WADE owns one of the largest networks in Australia which services over 30,000 staff and 265,000 students. Its infrastructure extends to 791 schools, 83 TAFE campuses and 16 branch offices, some of which are thousands of kilometres from the nearest regional centre.

Services delivered include management of enterprise systems and applications, broadband connections and administration networks to all locations as well as managing over 400 servers in central office and regional branches. Under a Government-initiated Learning with ICT program, WADE has also started rolling out centrally managed, standard desktop and server operating environments to schools all over the State. It is also responsible for the Laptops for Teachers program that sees every teacher in the State having access to a fully supported mobile computer.

Breaking down the silos

Glen Veen, Manager, Infrastructure and Telecommunications said that prior to centralising much of its IT support operations, WADE's IT infrastructure was sprawling and complex.

"We had a legacy of siloed IT operations which included a multitude of procurement, deployment and maintenance work groups as well as an extremely diverse array of systems and applications," Veen said. "There was a multitude of internal and external support services with some schools having on-site self-funded technical staff while others relied on departmental or third party resources depending on the location and size of the school."

"As demand for reliable ICT technology and services had been growing rapidly in all teaching and learning environments, we desperately needed to rein in burgeoning costs and the increasing demand on help desk, systems deployment and maintenance operations."

Creating a proactive service culture
It was essential that WADE introduced a cultural change to reduce the complexity of technology within schools and also increase the level of service they were receiving so that they could utilise its full potential in administrative and teaching environments.

"Driving technology down to a lower common denominator would allow WADE to focus on developing full life-cycle solutions and processes around service-based technologies instead of technology-based services," Veen said. "We also needed the ability to provide remote management of ITSM and system configuration to administrative offices and schools."

"This was essential for the transformation to ITIL best practice processes which were identified as the key to generating operational efficiencies and a continuous service improvement culture. For us to allow the continuity of service that is fundamental to effective use of technology in educational programs, we needed to know in real time about technology issues as they arise and to have clearly defined and documented processes to resolve them."

Obtaining and retaining buy-in from departmental management who distribute capital budgets, the technical services staff who make it all happen and the clients (schools and colleges) who were used to running their own IT operations at a micro level was also a key challenge for WADE.

"Convincing all stakeholders of the inherent value in pursuing best practice ITSM was critical," Veen said. "Engineering that cultural change where individual schools would lose their autonomy over technology for a standardised, remotely delivered service was going to be a hard sell and it represented a huge barrier for us."

"There was such a diverse array of support teams. In many cases, each had their own unique processes for dealing with incidents, problems, changes and service levels. These processes ranged from mildly automated to totally manual and in some cases completely non-existent."

Integrated HP software modules
Underpinning the ITSM framework that is allowing WADE to centralise its support, standardise its operating environments and improve its service levels, is a broad range of HP Software modules. These are all tightly integrated with complete flexibility to allow for the diversity of operations, systems and third party applications to be plugged in.

Modules used by WADE include HP Service Desk software, HP Network Node Manager (NNM) software, HP Operations Manager software for Windows/Unix/Linux software, HP Client Automation software and HP Performance Manager software. These HP products are managing WADE's ITIL-based processes for Incident, Problem, Change, Configuration and Service Level Management for the majority of network, systems, applications in both administrative and curriculum environments.

HP Network Node Manager is used to manage WADE's complex IP networks. It provides automatic discovery, intelligent monitoring, automated dynamic root cause analysis and virtual network service state determination.

"There is now a single interface that allows me to see everything that is going on with our network at any time. Every school is monitored and there are automated alarms generated wherever there may be issues arising in network availability, disk capacity or service levels."
Glen Veen, Manager, Infrastructure and Telecommunications, Western Australia Department of Education and Training

HP Operations Manager is the alarm aggregator that looks after event management, proactive performance monitoring, automated alerting, reporting, and graphing for Windows, Linux, and UNIX systems, middleware and applications.

HP Service Desk is used as the core tracking and asset management system. It manages workflows for the various work groups that are using it by assigning tasks, monitoring their progress and then automatically escalating job tickets that exceed pre-defined service level thresholds.

HP Performance Insight and HP Performance Manager provide a powerful reporting solution and a single interface for monitoring, analysing, and forecasting resource utilisation. HP Service Information Portal software then creates a Web-based "portal" view to show status information of a customer's unique environment.

HP Client Automation is playing a central role in delivering the Government mandated Learning with ICT initiative. This sees a newly-formed centralised IT organisation being charged with deploying and managing thousands of new PCs with a wide range of configurations for primary, secondary and training institutions. It manages ITIL-based Configuration Management processes that have seen over 35,000 systems come under the care of WADE's centralised ICT services.

"There is now a single interface that allows me to see everything that is going on with our network at any time," Veen said. "Every school is monitored and there are automated alarms generated wherever there may be issues arising in network availability, disk capacity or service levels.

"If someone rings up to complain about an issue, the support group responsible can drill down through a single screen in front of them to see if there is a problem

"The HP Software toolset is allowing us to provide the levels of support that will see Western Australian at the cutting edge of technology-enhanced education."

Glen Veen, Manager, Infrastructure and Telecommunications, Western Australia Department of Education and Training

and what the problem is. All of the HP software modules monitoring all of our systems are fed through a single interface and that gives us a comprehensive responsive and preventative support capability."

Reaping the rewards of best practice

There is no doubt that WADE's HP software implementation has been able to enhance its fundamental ability to extend the use of technology in all teaching and learning environments under its control. Specifically it has enabled the rapid development of cost effective deployment and management of new systems that have been part of the WA Government's Learning with ICT initiative.

The success of the pilot program in this area has meant that the scope of this initiative has expanded considerably. As HP Software allows WADE's IT organisation to demonstrate its successes, the Department and State Government is buying into the centralised ITSM vision and schools are starting to recognise they are better off focusing on applying technology to educational curricula and leaving the configuration, deployment, management and maintenance of systems to WADE's specialist IT organisation.

"By allowing a larger number of teachers and students to access systems and the Internet, WADE is improving education programs and allowing remote communities to take advantage of teaching and learning resources they would otherwise never have been able use," Veen said.

"Remote network monitoring through HP Network Node Manager is improving the performance and availability of technology services. Through the use of threshold benchmarking, often issues that would previously not be identified until they had crippled systems are now being identified and resolved before they cause an incident—and without the client ever knowing."

In a regional spread such as that which is faced by WADE, often incidents and problems can take days to resolve because it takes that long to get someone onsite to investigate. By having remotely managed, preconfigured standard operating environments that are designed to be reliable, WADE is further improving the performance and simplifying the use of IT.

Standard configurations are automatically updated and maintained in their desired state from a consolidated control centre which is allowing the IT organisation to concentrate on strategic direction rather than fighting fires.

From reactive to proactive

For WADE it is now about being proactively identifying recurring issues and instantly reacting to problems when they do arise. HP Performance Insight allows it to look at all of the WADE's Software modules and other toolsets, compare incidents at a glance to see if there is a root cause problem and then generate a report to demonstrate what is going on.

"Perhaps the biggest benefit has been in the primary school teaching and learning environments," Veen said. "These clients have never really been able to pay for a technician but they are now able to have their networks monitored centrally and be notified immediately when there is a problem.

"Feedback from these schools has been so positive about the improved management and operation that the new Learning with ICT initiative is struggling to keep up with demand and is forcing the WA Government to invest further."

Veen also said that the flexibility of the HP Software toolset has allowed this program to be customised to each set of individual requirements.

"It has built a tremendous amount of confidence in the services we are offering," Veen said. "Teachers are now far more willing to use technology because they know it is being managed well and that it is going to work when they need it."

The process of deploying new systems has now been refined to the stage where WADE's Learning with ICT program can procure, configure and roll out a fully managed standard operating environment anywhere in the state within two weeks. As a result of this program's success, just about every school in the state is now putting its hands up to be part of the program.

There are now over 200 schools and 35,000 systems under the centralised, remote management of HP Software. Live reporting of this success is also proving the value of the program to departmental management and helping them to gain the funding to expand the program even further. In short, WADE's IT organisation now has a demonstrable ability to do much more with its resources at a lower cost than it has been able to do in the past.

Easy support for teachers' laptops

Another example of the efficiencies and cost savings generated is the Laptops for Teachers program, which enables every teacher in the state to have a fully

supported, high-end notebook from the Department at a salary sacrifice of $5.00 per week.

"We are managing hardware and software support for this program at a ratio of one staff member for every 1600 laptops," Veen said. "This is a ratio that is far better than defined industry best practice standards and it is only possible because of the processes that we have put in place and the HP Software tools that are managing the execution of those processes."

WADE has also been able to demonstrate a reduction in the number of calls that have been received to its various help desks since implementing the more proactive and centralised service management afforded by HP Software. With so many of the steps in individual processes now automated, efficiencies are easy to demonstrate by means of the time saved in what were once manual tasks.

IT governance and best practice compliance

HP Software is also assisting greatly in the area of governance and alignment with mandated best practice. Like all public education departments, WADE is closely scrutinised in performance and expenditure. Integrated, fully-searchable data collected from service delivery, systems and application management is able to set benchmarks and accurately determine true and total lifecycle costs.

"A range of reporting formats are used to account for the use of resources and to set benchmarks against which continuous improvement can be measured," Veen said. "Data can be sliced and diced to be presented in a range of formats that suits specific purposes.

"Management personnel can see demonstrable evidence of return on investment by way of performance improvements and operational efficiencies. IT operations can see exactly what issues are happening historically or at any particular moment and how well they are performing against benchmarks in resolving them.

"In addition, schools that have previously been sceptical about the benefits of relinquishing control of their IT environments can see that they are getting better services and developing a closer relationship between technology and its role as an education facilitator.

"These reports are also greatly assisting in the development of business plans used in our application for further investment and then in defining the details of call for tender documents. They are also enhancing the accuracy of budget forecasts as well as the adherence to current budgets."

Meanwhile, the close alignment of HP Software to best practice processes defined by the ITIL framework is allowing WADE to implement continuously improving Incident, Change, Problem and Configuration Management.

"Convincing all stakeholders of the inherent value in pursuing best practice ITSM was critical. Engineering that cultural change where individual schools would lose their autonomy over technology for a standardised, remotely delivered service was going to be a hard sell and it represented a huge barrier for us."

Glen Veen, Manager, Infrastructure and Telecommunications, Western Australia Department of Education and Training

A further example of how technology supported by HP Software is driving business objectives at WADE is the Online Teaching and Learning Service (OTLS). This state-wide program incorporates a range of Internet connection and content availability services that allow access to vast centralised, online teaching and learning resources. While content delivery, content management and content creation are all managed at a school level, a centralised model is applied to security and service management.

Reports drawn from HP Performance Insight are being used to justify the investment that has been made to date and to ensure that future funds are also made available to accelerate the consolidation of systems, applications, and services supplier relationships.

Importantly, WADE's HP Software tools are arming the IT organisation with knowledge about where it can make improvements and how it can better manage resources going forward.

"We now have a platform upon which we can move forward with the fundamental objective of providing the best possible technology for teaching and learning," Veen said. "The HP Software toolset is allowing us to provide the levels of support that will see Western Australian at the cutting edge of technology-enhanced education."

To learn more, visit www.hp.com

4AA1-7286EEW, July 2008

invent