Western Australia boosts education with technology

Efficiencies of management automation ultimately benefit teachers, students

HP logo

"I'm now more willing to use technology-enabled education tools, because I'm confident the services are well-managed and reliable."
—Teacher at Western Australia Department of Education and Training

HP customer case study: HP Software enables an Australian school system to better serve more than 300,000 students, faculty and staff by standardizing technology services and automating management across its diverse environment

Industry: Public sector

Objective:

Improve management of education system's large, diverse IT environment

Approach:

Implement ITIL-based processes and management tools to enable standardized, centralized infrastructure management

IT improvements:

- System uptime increased from 98 percent during business hours only to 99.8 percent 24 x 7
- Deploy complete Standard Operating Environment in two weeks
- Automated system monitoring allows IT staff to focus on other tasks
- More than doubled the number of devices managed by each staff member

Business outcomes:

- Technology use in schools significantly increased by making more engaging and interesting educational services available to students and teachers
- Schools no longer have to fund as much support locally
- Better usage reports support improved technology planning

Like many school systems worldwide, the Western Australia Department of Education and Training (WA DET) increasingly depends on technology. WA DET serves more than 300,000 total users and customers, including 30,000 state education employees, more than 250,000 primary and secondary students, and eventually the students' parents. As these constituents become more technology-proficient, demand for IT services continues to grow. The department delivers an array of technology services, ranging from online education and curriculum applications, collaborative workspaces, and tools that give students better access to teachers and classroom activities.

As a result, the WA DET infrastructure ranks as one of the largest private networks in the Asia Pacific. It spans 1,294 sites, and links over 3,000 servers and 92,000 personal computers across a 2.25 million

WA DET needed to link seamlessly to all legacy systems, manage service provision in alignment with the ITIL best practice framework and generate reports in a range of formats to suit individual stakeholders. HP management software delivered all of these capabilities, enabling WA DET to better manage its technology infrastructure while freeing its schools to focus on education.

square kilometer region covering more than one-fourth of the Australian continent. The network's downloads account for more than half of the state government's Internet traffic.

Managing an environment of that size and reach would present challenges under the best of circumstances. For WA DET, however, those challenges were historically made worse by department-level variations in management protocols. Individual departments had, over time, devised their own, unique processes for dealing with incidents, problems, and changes. Some of these were completely manual. Others leveraged some automation. Service levels were defined differently, depending on device location, as well.

The WA DET knew it needed a more consistent, enterprise management framework. So it formed a central Information and Communications Technology (ICT) organization to implement an enterprise service delivery model, using an ITIL-based approach to define and report all associated processes.

The ICT group, in turn, selected HP software to automate its service management workflows, manage configurations remotely, and enable improvements to the visibility and control of its network infrastructure.

Centralized management, ITIL-based processes
The ICT began with a number of organizational changes. It trained all technology staff in the principles of ITIL and clearly defined staff roles and responsibilities. It defined Standard Operating Environments (SOEs) to standardize its infrastructure environment.

Within its help desk operations, ICT rolled out HP Service Management Center software. The solution serves as the central tracking and asset management system, enabling a range of ITIL-based processes including incident, problem, change, and configuration management. Tasks are assigned to work groups and then monitored; built-in workflows automated change control and escalate job tickets that exceed pre-defined service level thresholds. These controls help assure reliability and enable the ICT organization to address proactively any issues that could erode service quality.

A number of other HP software solutions are in turn integrated with the service management platform. HP Network Node Manager enables the organization to control its IP networks through automatic discovery, remote monitoring and dynamic and root cause analysis, thus improving the performance and availability of technology services. HP Operations

Customer solution at a glance

Primary applications
Educational services

Primary hardware
• HP Service Management Center software
• HP Network Node Manager
• HP Operations Manager
• HP Client Automation software
• HP Performance Insight

Manager provides proactive performance monitoring, automated alerts, alarm aggregation and reporting for middleware, applications and Windows®, Linux and UNIX® systems.

ICT uses HP Client Automation software to support its SOEs for its highly distributed PC environment, with remote monitoring and maintenance, including operating system updates and deployment of software and security patches.

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School Administrator, Western Australia Department of Education and Training

HP Performance Insight is used to generate reports on the WA DET's investment in these solutions, and to ensure that future funds made available to accelerate the consolidation of systems, applications, and services are justified.

Major uptime improvements drive increased usage
Since implementing its HP management software and ITIL-based processes, WA DET has achieved a number of significant benefits.

Incidents and problems once took days to resolve and put school system technology at risk of unplanned downtime. Today, centralized monitoring enables the ICT organization to notify schools immediately when a network problem is detected. These notifications are backed by standardized, repeatable response processes. The result: Network and server availability is now greater than 99.8 percent, exceeding SLA requirements. This has had a direct impact on users. For example, one teacher said, "I'm now more willing to use technology-enabled education tools, because I'm confident the services are well-managed and reliable."

Managing the state's education services is easier, because it's less labor-intensive. The WA DET requires fewer staff to support its services, yet it can respond more quickly to requests. The ICT team can configure and deploy a fully managed SOE anywhere in the state within two weeks.

Managing the infrastructure is also less labor-intensive. Previously, the organization's support effort required an estimated one person per 300 devices in the data center. Today, that ratio has more than doubled to one person per 700 devices. For laptop management, the ICT team achieves a support ratio of one staff member for every 1,600 laptops, exceeding industry benchmarks for IT productivity.

Western Australia primary schools, which could not previously afford technicians to manage their networks, can now leverage the ICT's centralized monitoring instead.

The new ICT management framework has also helped the school's administrators with their technology planning. Because infrastructure is pre-configured and supportable, school-level procurement processes are simpler.

WA DET is now able to provide schools with extensive reports on Internet usage and popular download sites, allowing them to better manage their proxy filtering services.

The payoff: students more interested, engaged
But perhaps most important, the new management infrastructure has enabled WA DET to accelerate change and expand the educational services available throughout the state. New services the ICT is rolling out include an Online Teaching and Learning Service, Online Professional Learning, e-mail, calendaring and collaboration. Teachers, students and administrators now have a single point of access to digital curriculum resources.

These services are, in turn, enhancing the state's ability to deliver quality education to its students. "Students of our Online Teaching and Learning Service demonstrate and report increased interest and engagement in learning. They attributed this to the connected nature of the system," says a WA DET school administrator. "Students can connect to the web, to their teachers, and to their peers. Because the system is offered online, students can access their work from different locations and work at their own pace—a true enhancement to learning."

And because it's the ICT, instead of the schools, that monitor performance, availability and capacity issues, more school-level resources are freed to focus on their primary mission: education. It's little wonder that these schools—many of which were initially skeptical about relinquishing control of their technology environments—now agree that they are receiving better services that allow them to more effectively align technology with their educational initiatives.

Technology for better business outcomes

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