Deakin University cuts licencing costs and creates operational efficiencies with HP OpenView Configuration Management solutions

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– Craig Warren
Operational Service Provision Manager
Deakin University

About Deakin University
Established in the 1970s, Deakin University has rapidly grown to become one of Australia's largest universities with approximately 32,000 award students and 3500 staff spread over 5 campuses in metropolitan and rural Victoria.

Deakin University prides itself on being young and innovative. It embraces a culture of challenging conventional practices while seeking new ways to develop and deliver relevant, practical and up-to-date courses.

It has twice been awarded the prestigious Good Universities Guide, University of the Year. It won in 1996 based on its innovative use of technology in education and again in 2000 for its partnerships with industry.

Managing a diverse infrastructure
About 6 years ago, with increasing numbers of students and staff, Deakin realised that it was continually fighting fires created by its diverse array of aging hardware and software infrastructure. Strategic planning identified the need to adopt a standardised hardware and software update schedule as well as an applications management regime that ensured each system was running approved and current software.

According to Craig Warren, Operational Service Provision Manager for Deakin University, updating any software across the entire infrastructure was a huge exercise in human resources management.

"We didn't want any machines on the network running software that was over two years-old," Mr. Warren said. "However, each time we updated any software to a new version, it required an army of IT staff at each of the 5 university campuses going around to each machine installing the software.

"We needed to be able to deliver up-to-date software in a consistent and efficient manner. We also had to cope with multiple platforms because we had both PCs and Macintoshes, and a small number of Linux systems. Additionally, we wanted to support roaming users."

Additional challenges were that individual students, employees and workgroups had different software requirements, and that the sheer number of users meant there was a need to monitor and eliminate unauthorised or rogue software.

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"Our laboratory computers run different software images from the staff computers and depending on the faculty and the campus where they are located, laboratories could be different to each other," Mr. Warren said. "It is not uncommon for some laboratories to have between 100 and 200 different pieces of legitimate software on them while some staff may only require a dozen or so applications for what they were doing.

"Meanwhile, some laboratories and staff would have completely justifiable reasons to load and trial new software that was not part of the authorised library. So we needed a highly flexible solution that identified the different configurations authorised and used by individual clients and workstations. It also needed to ensure they were all running the same versions of common software and the latest versions of their unique applications."

A centralised solution

In 1998, Deakin University was introduced to HP OpenView Configuration Management solutions which supports ongoing, continuous applications management. A solution was designed by one of HP's premium partners, Extended Enterprise Solutions (EES) who set up a test bed and ran a comprehensive pilot program for Deakin. Other solutions were also assessed, but OpenView was selected because it ensures software is always in its desired state and it automatically restores software components to their prescribed conditions where any changes are apparent.

EES set up a restricted lab based on OpenView technology and was the only solution provider able to address Deakin's business needs for managing both internal staff and student lab environments. Because of EES's extensive experience in doing application and configuration management, it is able to assist in the customisation of the OpenView solution to suit the specific needs of all clients.

Mr. Warren said that OpenView allows for centralised management of software distribution within Deakin University's geographically and technically diverse IT infrastructure. New applications, updates and restores can be "pushed" to or "pulled" by systems anywhere on the network irrespective of whether they are on a Windows, Macintosh, Unix or Linux platform.

"OpenView manages a library of published software which resides on a centralised server," Mr. Warren said. "When we roll out new or updated versions of the larger applications, we instruct them to leave their systems on overnight or over the weekend and then we push the updates out over the network. When users come in the next day, everyone has their new software when they log on.

"Additionally, when users log onto the network, a OpenView client starts on their machine and connects to the central server. OpenView then automatically runs through all of the software packages it is controlling on the PC and verifies them to see if anything has been corrupted.

"As there is usually nothing to fix, this whole process runs relatively quickly – generally under two minutes – and in the background as the log-in procedure continues. If problems are detected, the local OpenView client simply pulls down the necessary bits to fix that workstation thereby maintaining its predefined desired state."

OpenView policy-driven solution allows IT staff to describe flexible, concise software entitlements to individual users and workgroups. Even individual software suites can be packaged in different ways or presented with different templates when launched.

"Some staff and students have no need for access to all the applications within the Microsoft Office suite," Mr. Warren said. "We can package Office in multiple ways for different user groupings and can allow applications – Microsoft Word, for example – to be started up in any number of different templates."

Mr. Warren said that OpenView also supports "self-service" loading of additional software that clients may need by providing browser-based access to the catalogue of software on the central server.

"There is a software update icon on our desktops," Mr. Warren said. "By clicking on that icon, a Web browser starts up and the client can select from the catalogue of published software which the University has licenses for.

"For example, someone might need instant access to a statistical package not previously on their machine. They can click on the icon and be presented with a policy-based software catalogue. They select the software they want, it is installed on their machine and OpenView will keep it up to date automatically from then on."

Improving efficiencies and cost savings

Since it has been incorporated into Deakin University's IT software management processes, OpenView has delivered significant operational efficiencies and cost savings in human resources and licence fees. Standard operating environments, automated software updates and rollouts have dramatically reduced the resources required to manage these tasks. In addition, the centralised management of software used on the network has made the implementation of new applications, updates and real-time antivirus protection significantly easier.

"Centralised distribution of software to the desktop facilitated by OpenView has delivered clearly quantifiable efficiency improvements," Mr. Warren said. "The savings in operational costs have been quite enormous.

"We have been able to reduce the human resources required to roll out new or updated applications by as much as 90 per cent. Six years ago, the University employed 20-30 staff almost entirely focused on desktop installations and software rollouts or updates. Since the implementation of OpenView, we have reduced that number to just three."

Previously, when a new version of Office was rolled out those 20-30 technical staff would be out in the field for weeks on end, installing the new application across the entire organisation with a CD in one hand and a login key in the other. As the clients were often busy teaching or researching, often several visits would have to be made before the technician and the user met up.

OpenView has also allowed Deakin University to save money on software licencing by providing the tools required to closely monitor and manage software usage.

"We have a much clearer view of our licencing," Mr. Warren said. "We are now able to accurately determine our usage of any particular application. With various products over the years we knew there was widespread usage across the University but we were unable to determine exactly what our licence usage was.

"We can now be 100 per cent confident of passing any BSAA audit as we know exactly what requests there are for specific software by monitoring the number of downloads from our published catalogue. This has allowed us to make informed decisions about which licencing methods are most cost effective while also ensuring existing agreements are not breached."

Exposure to security risks from nefarious user activity and rogue software loading has also been significantly reduced for Deakin University since it has been using OpenView.

"Over the 6 years we've been using OpenView technology, there have been a few cases of people trying to bypass the published software catalogue to introduce software outside of normal processes and procedures," Mr. Warren said. "In these cases, OpenView just kept fixing the discrepancies.

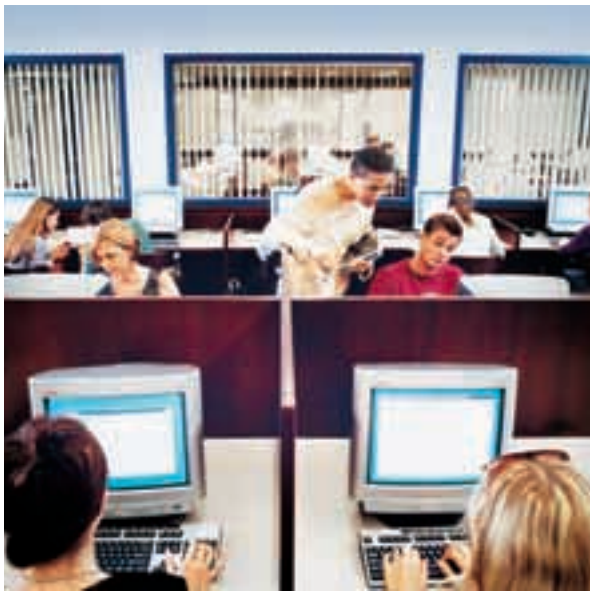
"Security on the desktop is no longer an issue for us. Universities face particular challenges with security and so far as we can tell any attempts at nefarious activities have been unsuccessful since we have been using OpenView Configuration Management solutions.

"This has not, however, interfered with our ability to support authorised staff who need slightly different configurations or to install a particular piece of software for trial."

Network security is further enhanced by not having to rely on individual users to keep up with the latest antivirus updates or application patches. Patches and updates are now simply pushed out from the central server and then automatically implemented at each workstation when it is next turned on. In this way, OpenView simply and constantly maintains a desired state on each workstation.

OpenView multi-platform support and vendor neutrality has been of significant benefit to Deakin University. Out-of-the-box, OpenView ran with just a few cosmetic changes in incorporating it into the Deakin infrastructure.

"We haven't had to integrate it with anything else in our infrastructure," Mr. Warren said. "It has basically been a case of pick it up, install it, populate it, run it and reap the benefits. Since first rolling it out, OpenView has been a very stable product. There has been only one significant new version released in six years and that migration was very simple."



From an end user perspective, OpenView has been a big improvement in terms of finding software for staff and students at Deakin University. There is now a single centralised catalogue of all user software that eliminates the need to go searching all over the place for applications or grabbing a CD from a friend or colleague.

"It has been a fairly significant cultural change within the organisation," Mr. Warren said. "We are no longer seeing people mucking about as much with their desktops loading software from any number of sources without necessarily knowing its origin or licensing status.

"This means that people are doing more of what they should be – that is, teaching and learning – rather than worrying about what is happening on their desktops."

Challenges

- Difficulty managing diverse array of hardware and platforms, and keeping the software environment consistent and up-to-date
- Software rollouts across the organisation were time consuming and costly
- Large number of users with different software requirements increased security risk of unauthorised or rogue software

Solution

- HP OpenView Configuration Management solutions:
  - Application Manager using Radia
  - Inventory Manager using Radia
  - Software Manager using Radia

Benefits

- Centralised management of software enables maintenance of standard software configurations across network and facilitates easy implementation of new applications and updates. Results in significant operational efficiencies and cost savings in human resources
- Cost savings in software licensing and prevention against nefarious activities as software usage can now be managed and monitored closely
- Security is enhanced as antivirus updates and application patches are automatically implemented by the system
- Provides a self-service licensed software catalogue for all users

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