An End to SAN Woes for Coleg Gwent

eurotech

Challenge

With its ageing "Server plus SAN" infrastructure, Coleg Gwent in Wales was struggling to provide reliable and effective IT services to a demanding and growing population of students and staff. "Some of our equipment was over 10 years old and in urgent need of replacement," said Evan Smith, college ICT Infrastructure Manager. "Our Fibre Channel SANs, in particular, were causing real operational headaches with backups, for example, routinely failing due to a lack of usable capacity. As a result students and staff have had regular IT issues to cope with, not just the potential disasters, but simple day to day issues, such as recovery of lost files."

As well as the work required to continually monitor and reconfigure the SAN in the face of growing demand, the college was also running up against the limitations of its servers.

"We don't need massive amounts of computing power," admitted Database and Storage Analyst, Geoff Langdon, "but we had reached the limit as far as the number of VMs we could support were concerned and were still reliant on physical hosts for all our database needs."

Solution

Clearly the college needed to invest in new infrastructure and spent several months securing the funding and formulating its exact requirements. The plans were then put out to competitive tender with Nutanix partner Eurotech eventually coming out on top against some well-regarded alternatives, as Evan Smith recalls.

"We had some really strong bids from respected big name vendors, but the Nutanix proposal submitted by Eurotech stood out because it delivered the best mix of both compute and storage capacity. The solution delivered what we needed, at the scale we wanted, within the budget we had to work with."

Crucially, Nutanix was also able to put the college in contact with a reference site Magna Housing who were more than willing to talk to the IT team at Coleg Gwent to further confirm the wisdom of switching to the Nutanix Enterprise Cloud Platform.

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>
> – Evan Smith, ICT Infrastructure Manager, Coleg Gwent
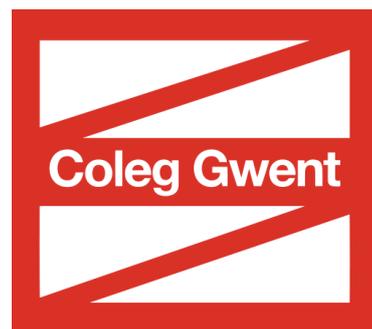
Business Needs

Replacement of ageing server/ SAN infrastructure with more scalable and resilient platform

Solution

- Nutanix Enterprise Cloud Platform

- Nutanix NX-3000 Series clusters running VMware vSphere

- Nutanix Prism management solution

Benefits

- Confidence to virtualise SQL Server hosts

- Data centre consolidation – from 3 data centres to 2

- Data centre rack footprint reduced by over 80%

- Fibre Channel port licensing eliminated

- Single pane of management for compute and storage resources

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Results

Once given the green light the Nutanix solution was installed and ready to start working in just 2 days, the college opting to consolidate down from three to just two data centres as part of the process. It was also able to reduce the rack footprint inside those data centres, from 42 to just 8U in each location. This was a real bonus as, before opting for the Nutanix Platform, Database and Storage Analyst Geoff Langdon had been looking at additional racks in order to expand the SAN configuration and datacentre space was at a premium.

Subsequent workload migration took a few months as it needed to fit around the academic timetable, but the benefits became apparent even before the process was complete, as Evan Smith describes.

"Our issues with storage disappeared almost immediately and we no longer have sleepless nights worrying about the resilience and integrity of our infrastructure or the security of our data. Performance has been brilliant plus, using the Nutanix Prism management interface, we can see exactly what's going on all the time. This means we can stay on top of any issue giving us a confidence in the health and resilience of our infrastructure that we simply didn't have before."

When it was required to roll out a new finance, HR and payroll system, Nutanix's modular "building block" architecture also made it easy to scope the new requirement and seamlessly extend the existing cluster with two new nodes to accommodate the additional workload.

In addition the college has been able to migrate those all-important SQL databases from physical to virtual hosts - something it had previously been unable to contemplate. According to Geoff the college had stuck with physical hosts in order to guarantee performance but has now migrated all of its SQL Server databases onto virtual machines which are happily coping with application demands in just 36GB of RAM.

Power and cooling bills have also been reduced and there have been other unexpected benefits besides. "With our Fibre Channel switches we had to buy extra port licenses when we needed to increase bandwidth", explains Geoff "with Gigabit Ethernet linking the Nutanix appliances that overhead just goes away."

Joint Venture

Nutanix partner Eurotech was heavily involved in both the installation of the Nutanix hardware and subsequent migration processes all of which went very smoothly, and the Coleg Gwent team has nothing but praise for all involved. "I can honestly say I've never experienced support on the same level before," commented Langdon, "even when a disk failed which, previously, would have caused real operational problems. With Nutanix the first we knew about it was a call telling us an engineer was on the way with a replacement!"

About Coleg Gwent

Coleg Gwent is one of the largest further education colleges in Wales, attracting over 23,000 students. Founded in 1992 the college has over 1,500 staff, five campuses and a dedicated business training centre.

http://www.coleggwent.ac.uk/