

Guildsbrough School Upgrades to Nutanix for a Fast, Scalable, Reliable Virtual Environment

Background

Guildsbrough School is a co-educational academy in Northamptonshire, England, with 1,340 students for years 7 to 13 (ages 11 to 18). As a specialist technology college, its curriculum emphasizes design technology, mathematics and science. Guildsbrough is one of few secondary schools in the country that equips all students with a netbook and campus-wide network with 50 wireless access points.

Servers and SAN Storage Overwhelmed

The servers and SAN storage at Guildsbrough School were straining to keep up with the growth in application workloads and number of devices accessing the network. The school maintains a virtual learning environment for students based mainly on Microsoft technologies. As netbooks were rolled out for all students over the last two years, the number of devices increased from roughly 700 to 3,000. Apple iPads and iMacs and Android-based devices started being used, in addition to standard Windows systems. Teachers and students began using third-party applications such as online testing and online course books. The IT department increasingly saw a need for greater performance – not only to meet existing and new workload demands, but also to prepare for future, as-yet undetermined technology changes, including BYOD (bring-your-own-device) and VDI (virtual desktop infrastructure).

When it was time to upgrade the infrastructure, the school selected the Nutanix Virtual Computing Platform to replace its servers and SAN storage. “We were looking for a fast, stable platform with solid reliability that could be an effective virtual platform,” said Tim Sparks, IT Systems Manager for Guildsbrough School.

The previous infrastructure consisted of 3 Dell servers running VMware connected to an HP SAN, in addition to 8 standalone servers from various vendors. The setup was partially virtualized – some applications running on VMs and others remained on physical servers. File servers, firewalls, DNS, classroom security control, core central services and various web applications ran in the virtual environment, while major applications like SharePoint, SQL Server, Exchange and SIMS (School Information Management System) ran on dedicated physical servers. The IT staff preferred the ease of provisioning and consolidation in a virtual environment, but the system was performance limited – the SAN in particular was an I/O bottleneck.

Nutanix Tops the List

Guildsbrough School put out a tender to its major IT suppliers for new servers and storage, specifying high IOPS performance and the ability to grow storage capacity 30% annually as the key objectives. The reseller Misco proposed a Nutanix converged storage and compute NX-2000 Series cluster with 3 nodes. Its combination of ultra-responsive performance, built-in redundancy and automatic clustered failover, extremely compact 2U footprint and low power requirements was by far the most attractive solution proposed. “Nutanix could handle all of our performance requirements and our entire environment would just fit into the bottom quarter of one rack,” said Sparks.

“We used to move only as fast as one machine would allow us to move. Now, while one application is being installed, I can look at an application in another VM, so I can work perpetually. I’m constrained by my own limitations and not the technology in front of me, which is invaluable and it saves an awful lot of time.”

- Tim Sparks,
IT Systems Manager, Guildsbrough School



Guildsbrough School
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Striving for Excellence

Industry

Education

Business Needs

Virtualized server and storage system with high IOPS, scalability, redundancy and high availability to host school's entire virtual learning environment.

Solution

The Nutanix Virtual Computing Platform (NX-2350)

Benefits

- 60 to 75% reduction in rack space
- Setup in 2 hours and virtual applications migrated in less than 2 days
- Solid application performance with plenty of overhead capacity
- Faster application development, upgrades and maintenance
- Smooth, continuous operation, even during flood and electrical malfunctioning in the datacenter
- Knowledgeable, responsive support



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Guilsborough School replaced all 11 servers and SAN storage with Nutanix. The installation was “incredibly simple and straightforward,” according to Sparks. Everything was up and running in a couple of hours. All virtualized applications were migrated to the Nutanix platform by the end of the following day.

Easier, Faster, All-Encompassing

There are 30 VMs now running on Nutanix, and 10 of those are applications with significant workloads, such as SharePoint with 5,000 users and Exchange with 3,000 mailboxes. Performance is solid and the system has plenty of headroom. “The Nutanix interface is incredibly simple,” Sparks added. “It is definitely easier and will save us time in the future.”

The new system reduced rack space by 60%. With additional consolidation, they expect to reach 75% reduction by the end of the year.

“Support from Nutanix was brilliant,” he continued. “Absolutely everyone I’ve had contact with in the support has been friendly, amicable and has responded quickly. When we wanted to upgrade the version on VMware, they were very quick to answer our question on compatibility and whether we needed to upgrade to the latest firmware version. They upgraded all the firmware versions for us when we did the VMware bit. I’ve never had an easier life.”

Application development, upgrades and maintenance have accelerated with Nutanix, improving IT staff productivity. Sparks noted he was able to complete a project that was outstanding for 6 months in only a week and a half. The problem was that the application would not support Windows Server 2012 until a physical server’s firmware was updated. But the update went awry and the box had to be shipped back to the supplier for repair. The Nutanix virtual environment allowed them to work in Windows Server 2008 and 2012 smoothly and simultaneously, which expedited the process. “We used to move only as fast as one machine would allow us to move,” he said. “Now, while one application is being installed, I can look at an application in another VM, so I can work perpetually. I’m constrained by my own limitations and not the technology in front of me, which is invaluable and it saves an awful lot of time.”

Sparks and his team highly value the reliability that Nutanix provides. He mentioned about an unfortunate incident in which the school experienced a flood which caused electrical short circuits, minor voltage fluctuations and air conditioning failure. The entire SAN crashed due to flash drive failures, despite redundant disks and power supplies, and the three virtualized servers attached to it went down. In contrast, the Nutanix system, with its discrete, redundant nodes and robust design, remained operating smoothly during the entire episode.

Agility for What Comes Next

Sparks is pleased with his decision to go with Nutanix. “It’s been simple, reliable and easy to work with,” he said.

The school stands ready to handle whatever the future holds. “As we look forward, this is the most diverse and ambiguous future that we’ve ever seen. Because we don’t know what technologies are going to win out,” said Sparks. Whatever the school does decide to adopt next, Nutanix’s powerful, virtualized platform and node-by-node scalability gives them the flexibility to bring in any new application technology.



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About Guilsborough School

Guilsborough School in England ranks among the top secondary schools based on exam results. In particular, students excel in science, technology and math, and the school holds the prestigious ICT Mark Award. Visit www.guilsborough.northants.sch.uk for more information.

About Nutanix

Nutanix provides datacenter infrastructure solutions that are hyper-efficient, massively scalable and elegantly simple. The award-winning Nutanix Virtual Computing Platform has disrupted the market by seamlessly and natively converging compute and storage in a single appliance. Headquartered in San Jose, Calif. with offices and authorized solution providers throughout the world, Nutanix is privately held and backed by top-tier VC firms. For more information, visit www.nutanix.com.

Tel 855.NUTANIX | (855.688.2649)

Fax 408.916.4039

Email info@Nutanix.com

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