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INFRASTRUCTURE VIRTUALIZATION

BUSINESS CONTINUITY

DESKTOP VIRTUALIZATION

## VIRTUALISATION

# New College Durham

New College Durham makes exemplary use of VMware View - reducing the costs of their desktop environment

New College Durham (NCD) is a Beacon College in the North East of England. Each year NCD enrolls approximately 10,000 students and has been rated 'Outstanding' by Ofsted.

At New College, excellence extends beyond the classroom to the IT department, which strives to use technology as effectively as possible to support the goals of the College.

"When it comes to IT assets such as our desktops, we need a fast reliable platform so that teachers and students don't have to do without access to Microsoft Office, Internet Explorer and other essential applications that they've come to depend upon. NCD is also continuing to strive to reduce its Carbon Footprint," said George Wraith, Head of Systems at New College Durham.

This goal led the College to explore desktop virtualisation as a cost-saving strategy.

"Normally we replace our desktops every four years, but desktop virtualisation would enable us to significantly extend the life expectancy of our desktops, using the new P20 clients, to 10 years. This, combined with the huge savings in reduced power costs, would dramatically reduce the total cost of ownership of our desktop estate," continued Wraith.



**New College Durham**

## FIND OUT MORE

For further information on the VMware solutions and services available from Phoenix, contact your Phoenix Account Manager on 0845 265 1265, email [info@phoenix-es.co.uk](mailto:info@phoenix-es.co.uk) or visit [www.phoenix-es.co.uk](http://www.phoenix-es.co.uk)



## “VMware View simplifies the management, deployment and security of the College desktop infrastructure while providing much better performance and lower power requirements than traditional desktops.”

George Wraith, Head of Systems, New College Durham

NCD decided to evaluate VMware View so together with Phoenix, they ran a Proof of Concept. This was carried out using existing hardware and a high performance SSD solution to ensure suitable backend storage performance based on a Capacity Planning exercise Phoenix had previously run on the existing 1,200 desktops at the College.

### DEVELOPING THE SOLUTION WITH PHOENIX

For New College Durham, the support and knowledge-sharing that the Team at Phoenix Enterprise Solutions provided was extremely important.

“The Phoenix Team came in and did a ‘health check’ on our existing desktop infrastructure to make sure it was ready to handle the latest version of VMware View,” says Wraith.

“To have Phoenix come in, analyse the environment and then design a high performance VDI solution based on market-leading technology has ensured that we have a cutting edge system. Our solution massively exceeds the performance possible via large, traditional SAN-based technology – ours is a modular, building blocks-based solution that builds linearly and is also significantly cheaper than the SAN-based option.”

### THE TECHNOLOGY

Phoenix and NCD have worked closely with FusionIO to deliver one of the world’s first VDI solutions - running entirely on FusionIO Storage Technology.

NCD now has a VDI solution for Windows 7 - based on the world’s fastest Solid State Storage solution. This ensures that the heavy

IO loads experienced on an hourly basis with hundreds of users logging on/off and launching applications are more than catered for. A traditional SAN-based solution would have required many shelves of disks for the complete solution, had high power usage and significant cooling with high maintenance costs. The FusionIO solution exceeds the performance of an entire large SAN Array.

With around 200,000 IOPS and almost 1000MB/s or 1GB/s per server this means around 800,000 IOPS of performance across the 4 vSphere Hosts - NCD is confident that they are able to cater for this version and future versions of Windows without any issues. Power usage is just 25 watts per server per card - saving thousands in power costs compared with a SAN solution.

Working on the recommendation of the Phoenix Team, therefore, NCD began a rollout of VMware View. Starting with the replacement of 140 desktops in the Learning Resource Centre, one of the College’s busiest environments, they then rolled out another 220 WYSE P20 PC-over-IP (PCoIP) Terminals to 20 classrooms.

### THE RESULTS

Virtualising the desktops has had an immediate impact.

“We achieved a huge boost in performance on our applications,” says Wraith. “Logins that used to take a minute or more were completed in a matter of seconds. So, not only is VMware View helping us provide a better desktop experience, it is also helping it run much faster - which enables teachers and students to be more productive.”

## KEY HIGHLIGHTS

### THE CHALLENGE

Establish long-term cost, deployment and management savings while providing a high performance VDI solution for up to 1,200 desktops.

### THE SOLUTION

VMware® View™ 4.5 provides a platform for desktop virtualisation that helps New College Durham reduce costs of the desktop environment.

### THE RESULTS

Replace 400 desktops with WYSE P20 PCoIP Terminals

- **Managed desktop environment** - easy provisioning of new images and applications via ThinApp
- **Increased performance of desktop applications** - provides a superior educational experience for students and teachers alike
- **Deployed Windows 7, Office and multiple applications**
- **Improved availability over a desktop solution**
- **Eliminated need for expensive SAN, power and maintenance and networking infrastructure costs**

### VMWARE AT WORK

VMware Infrastructure 4.1 Premier, featuring:

- VMware vSphere 4.1
- vCenterServer 2.5
- View 4.5
- ThinApp 4.6

### TECHNOLOGY/PERFORMANCE

High performance platform featuring:

- Dell R810 - 128GB 24 Cores - 80 to 100 VMs per host
- FusionIO IO-DriveDuo 640GB (~200,000 IOPS and >800MB/s throughput per card)
- WYSE P20 - PCoIP Terminals



Application delivery has also received a boost.

“With VMware View delivering PCoIP support, users have noticed a significant improvement in graphics rendering with some of the applications that traditionally would not have worked well in a virtualised desktop environment,” commented Wraith.

Additionally, the ability to centrally manage the virtual desktops makes it easier for NCD to make better use of its IT personnel.

“It takes a lot of time and effort to send people out to the actual physical workstations to do upgrades or updates. With VMware View, everything is centralised and we can make changes to desktops in a matter of minutes. Each time the user logs off the desktop is refreshed and each user always logs on to a clean image – helping make much more efficient use of our people, reducing costs and increasing efficiency.”

The WYSE Management Suite allows all terminals to be managed centrally - this includes configuration and firmware upgrades. The initial deployment was simple – it was a case of plug in the power,

network, monitor, keyboard, mouse and walk away - the rest was done centrally.

In conclusion, Wraith said, “VMware View simplifies the management, deployment and security of the College desktop infrastructure while providing much better performance and lower power requirements than traditional desktops.”

Summing up the whole project, Darren Goldsborough, Head of IT Services at Phoenix Enterprise Solutions said:

“The performance is better than we expected and View 4.5 is doing exactly what it should do. With this latest version supporting Windows 7, the whole environment is reliable and a great example of VDI working at its best.”

### **FUTURE PLANS**

Based on the initial success of VMware View, NCD is seeking to further its usage of desktop virtualisation throughout the College. This will be accomplished over the next couple of years - NCD is looking to replace the remaining 800 desktops with WYSE P20 Terminals and expand the VMware Server Farm.

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Darren Goldsborough, Head of IT Services,  
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