

MAXIMISING NHS IT SERVICE

NHS shared service increases productivity by approximately 150 per cent with Dell Infrastructure Consulting Services



The IT shared services team at Bedfordshire and Luton Mental Health and Social Care Partnership Trust (BLPT) is committed to delivering responsive and effective IT support. It has to be. Without access to patient data or administrative programmes, providing high-quality health services could be extremely difficult. Whatever the time of day, this small team of IT administrators provides the first line of support – be it desktops, servers or data storage – for thousands of NHS employees across Bedfordshire and Luton.

SOLUTIONS:

- BACKUP, RECOVERY AND ARCHIVING
- DATA CONSOLIDATION AND MANAGEMENT
- GREEN IT
- VIRTUALIZATION



Bedfordshire and Luton
Mental Health and Social Care Partnership NHS Trust

CUSTOMER PROFILE

COMPANY: Bedfordshire and Luton Mental Health and Social Care Partnership Trust

INDUSTRY: Healthcare

COUNTRY: United Kingdom

FOUNDED: 2001

EMPLOYEES: 1,450

WEBSITE: www.blpt.nhs.uk

CHALLENGE

The Trust was experiencing rising IT costs and spent too long on backups, which impacted service delivery. It also needed an effective disaster recovery strategy to meet data compliance.

SOLUTION

Using a five-year IT strategy plan designed by Dell Infrastructure Consulting Services, the Trust enhanced the level of service it could deliver and reduced IT costs.

BENEFITS

Get IT Faster

- Administrators launch virtual servers in minutes
- Infrastructure Consulting Services deliver environment in four months

Run IT Better

- Virtualization consolidates servers by approximately 95 per cent
- Environment increases productivity by around 150 per cent
- Consolidation cuts power usage by around 50 per cent
- Tiered storage reduces costs by approximately 25 per cent

Grow IT Smarter

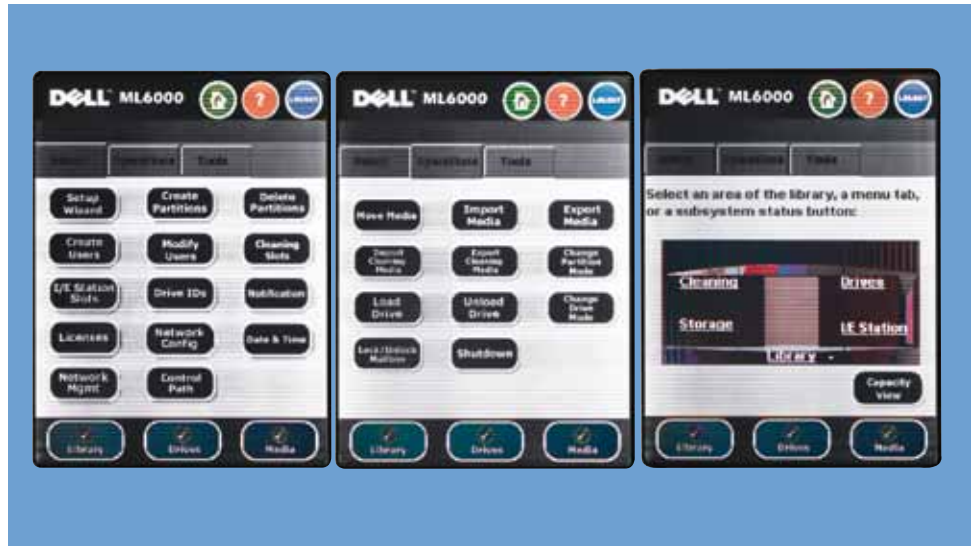
- Environment delivers easy-to-scale architecture



The Trust followed the standard computing model of one application per machine. As such, the IT estate had grown to 86 physical servers supporting a variety of applications, including Microsoft® Exchange Server 2003, Microsoft SQL Server® 2008 and patient systems. The infrastructure's increasing power consumption conflicted with the Trust's stance on sustainability and was of personal concern to Cath Pearson, associate director of business technology at BLPT, who was committed to greener IT. Furthermore, administrators had to order and provision machines whenever a new application was needed and the whole process often took four to six weeks, reducing business agility. Finally, personnel had to take servers offline to complete maintenance, sometimes causing hours of downtime and reducing productivity. Pearson says: "Virtualization offered a more flexible, energy-efficient infrastructure to deliver a better IT service."

Historically, the organisation saved data to a storage area network (SAN) and transferred the information to a tape library on a daily basis. The system was inefficient because data that was 30 or more days old remained

on expensive storage disks. Adam Whiting, server and solutions technology manager at BLPT, says: "One of our aims was to create a flexible system of tiered storage. This type of architecture enables organisations to match the age of the content to the cost of the storage technology. It also facilitates compliance and record-retention best practices."



“COMPARED WITH OTHER IT SOLUTION PROVIDERS, DELL OFFERED THE STRATEGIC THINKING WE WANTED. IT UNDERSTOOD OUR BUSINESS NEEDS PRECISELY AND DEMONSTRATED A HIGH LEVEL OF EXPERTISE IN IT INFRASTRUCTURES FOR HEALTHCARE.”

Cath Pearson, associate director of business technology, Bedfordshire and Luton Mental Health and Social Care Partnership Trust

HOW IT WORKS

SERVICES

- Dell ProConsult
- Dell Education Services
- Dell ProSupport for IT
 - Mission Critical option

HARDWARE

- Dell™ PowerEdge™ servers with Intel® Xeon® Processors
- Dell/EMC CX3-20 storage area network (SAN)
- Dell PowerVault™ ML6000 tape library
- EMC Centera storage

SOFTWARE

- VMware® ESX 3 server software
- VMware vCenter™ Server
- Dell Management Console
- Symantec Enterprise Vault
- EMC Navisphere Management Suite
- EMC MirrorView
- EMC SnapView

DELL UNDERSTANDS HEALTHCARE NEEDS AND DELIVERS ROADMAP FOR MAXIMISING IT PERFORMANCE

Pearson and Whiting looked for an IT solution provider that offered a complete IT strategy, covering virtualization, storage, backup, recovery and archiving solutions. Says Pearson: "We wanted an IT provider with the services and solutions to help us create an infrastructure that could deliver effective services for years to come. Compared with other IT solution providers, Dell offered the strategic thinking we wanted. It understood our business needs precisely and demonstrated a high level of expertise in IT infrastructures for healthcare."

As part of the Dell ProConsult service offering, the Dell Infrastructure Consulting Services team created a five-year IT plan for BLPT, based on the organisation's current and future requirements and incorporating Dell's vast experience of working in the NHS. It proposed

replacing the SAN, virtualizing the server environment with VMware, adopting tiered storage and planning for disaster recovery and business continuity. Whiting says: "The Dell Infrastructure Consulting Services team presented a roadmap for delivering a simplified IT infrastructure that offered maximum performance."

SAN STORAGE LAUNCHES FIVE-YEAR IT STRATEGY

Phase one of the strategy was to replace the existing storage solution with a Dell/ EMC CX3-20 SAN and a Dell™ PowerVault™ ML6000 tape library. The SAN offered tight integration with VMware to deliver a robust virtual server environment. Along with the SAN, the team proposed the EMC Navisphere Management Suite, which includes EMC MirrorView software and EMC SnapView for administering the SAN.



“BY VIRTUALIZING OUR SERVER ENVIRONMENT, WE CONSOLIDATED HARDWARE BY APPROXIMATELY 95 PER CENT. WE NOW HAVE AN INCREDIBLY SCALABLE ARCHITECTURE THAT WE CAN EASILY EXPAND TO MEET DEMAND.”

Adam Whiting, server and solutions technology manager, Bedfordshire and Luton Mental Health and Social Care Partnership Trust

Whiting says: “Our IT administrators worked alongside Dell during the deployment of the SAN. Dell Education Services provided a recognised EMC SAN training course, which gave us a thorough understanding of how to use the management software. The Navisphere Management Suite is helping simplify administration, promoting greater productivity.”

DELL TIERED STORAGE WILL REDUCE ARCHIVING TOTAL COST OF OWNERSHIP (TCO) BY AROUND 50 PER CENT

The organisation is now implementing a new backup and archiving platform. The infrastructure will help keep data secure for compliance, allowing policy-based retention periods. With EMC Centera storage and Symantec Enterprise Vault backup software at the heart of the platform, the Trust can manage unstructured data better. For instance, the Centera technology will enable the organisation to move email data from expensive primary storage and significantly shorten backup times.

Whiting says: “The Dell strategy showed there were some major benefits in email archiving and recovery. Furthermore, consultants designed a solution to meet our precise business needs. We expect the TCO for data storage and backup mechanisms to reduce by around 50 per cent because of the new archiving infrastructure.” The organisation now plans to replicate the server and storage environment, complete with Dell/EMC CX4-240 SAN and EMC Centera storage, to a secondary datacentre for disaster recovery and business continuity.

DELL ENSURES SUCCESSFUL VIRTUALIZATION PROJECT IN FOUR MONTHS THANKS TO DETAILED PLANNING

Phase two of the strategy was to virtualize the server environment. To ensure the project’s success, the Infrastructure Consulting team completed a Virtualization Readiness Assessment (VRA) of the existing server infrastructure, assessing hardware and software. The report checked rates of utilisation for CPU, memory and disks across the server estate. The team compared these with the hardware requirements for a virtualized environment and proposed that BLPT create a consolidated hardware platform featuring the latest Dell PowerEdge™ servers running Intel® Xeon® Processors and VMware® ESX 3 server software.

Says Whiting: “The VRA and documentation for deploying VMware gave us peace of mind because they were so comprehensive. After speaking to a Dell project manager and solution architect, we saw that Dell was delivering our virtual infrastructure based on best practices and a proven track record of virtualization and consolidation projects. Thanks to the Dell consultants we completed the project in four months.”

SEAMLESS VIRTUALIZATION PROJECT CONSOLIDATES SERVERS BY APPROXIMATELY 95 PER CENT

A Dell consultant worked closely with the Trust throughout the virtualization project. Following the consultant’s advice, Whiting and his team were able to virtualize 40 servers in one week. As part of the deployment,

the organisation also installed VMware vCenter™ Server to manage the environment and monitor performance from a single console. By the end of the implementation, five Dell PowerEdge servers featuring Intel Xeon Processors were supporting 86 virtual machines.

Says Whiting: “By virtualizing our server environment, we consolidated hardware by approximately 95 per cent. We now have an incredibly scalable architecture that we can easily expand to meet demand. The Dell PowerEdge servers and their Intel Xeon Processors have performed incredibly well. Dell and Intel technology are the ideal combination for a virtualized infrastructure.”

VIRTUALIZATION AND MANAGEMENT TOOLS INCREASE IT PRODUCTIVITY BY AROUND 150 PER CENT

There have been significant productivity benefits from moving to a virtualized environment and implementing management software for the servers and the SAN. An IT administrator can launch a virtual server in minutes and downtime has been almost eliminated because administrators can move virtual machines to standby servers during maintenance work. In addition, tools such as VMware vCenter Server, EMC Navisphere Management Suite and the Dell Management Console have automated many tasks and alert administrators to potential issues so they can be proactive in maximising server availability.

“THANKS TO DELL, I KNOW THE SHARED SERVICES TEAM AT BLPT HAS TAKEN A MAJOR STEP IN REDUCING OUR CARBON FOOTPRINT. SINCE DEPLOYING OUR VIRTUALIZED ENVIRONMENT WE’VE CUT POWER CONSUMPTION BY APPROXIMATELY 50 PER CENT.”

Cath Pearson, associate director of business technology,
Bedfordshire and Luton Mental Health and Social Care Partnership Trust

Pearson says: “Our virtualized Dell server environment has increased the productivity of IT personnel by approximately 150 per cent. The shared services team is smaller now, but our customers haven’t seen any change in performance. Due to virtualization, administrators work more efficiently – and we can deliver a better service.”

CONSOLIDATED INFRASTRUCTURE REDUCES POWER CONSUMPTION BY AROUND 50 PER CENT

By consolidating the server infrastructure, the Trust has reduced power consumption, helping promote greener IT. The servers include Dell Energy Smart technology, which ensures all components are optimised for low-energy consumption. Because the organisation is working hard to reduce its carbon footprint, the virtualized environment is playing an important role in helping the organisation achieve its green ambitions. For Pearson, the eco-friendly IT environment is the realisation of a long-held goal. “I have been aware of the impact of IT on the environment for many years. Thanks to Dell, I know the shared services team at BLPT has taken a major step in reducing our carbon footprint. Since deploying our virtualized

environment we’ve cut power consumption by approximately 50 per cent,” she says.

RESPONSIVE SUPPORT MAXIMISES INFRASTRUCTURE PERFORMANCE

The Trust chose Dell ProSupport for IT with the Mission Critical option and four-hour on-site support to optimise the performance of the server environment. Dell has designed the service for organisations such as BLPT where unplanned downtime significantly affects operations. The service includes emergency dispatch, phone and on-site troubleshooting, and problem replication in Dell’s simulation labs. “Dell ProSupport for IT plays a key role in delivering excellent services,” says Pearson. “By choosing the Mission Critical level of support, we ensure a speed of response that provides great peace of mind.”

For more information on this case study or to read additional case studies, go to www.dell.com/casestudies and www.dell.co.uk

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