Hewlett Packard Enterprise

Case Study

Poole Hospital NHS
NHS Foundation Trust

# Poole Hospital reduces backup window by 85 per cent

## HPE Data Protector safeguards critical clinical and operational data

**Objective**
To improve productivity, cut costs and strengthen disaster recovery and business continuity readiness

**Approach**
The hospital was looking for a highly efficient, easy-to-use and scalable backup software solution to protect operational and clinical data

**IT Matters**
- Seven-fold cut in backup window
- Shortened file recovery times from hours to minutes
- Cut server recovery times from days to hours
- Reduced backup footprint with 20:1 deduplication
- Decreased backup management by 20 hours each month

**Business Matters**
- Improved operational and clinical staff productivity
- Enhanced IT system performance by completing backups overnight
- Boosted disaster recovery capabilities
- Strengthened business continuity readiness
- Robust scale-out architecture, supporting increasing data volumes
- Reduced cost of backup storage

Poole Hospital needed to reduce its backup and recovery windows to meet strengthened business continuity and disaster recovery plans. HPE Data Protector in conjunction with HPE StoreOnce System ensures that critical operational and clinical systems and data used by more than 4,200 employees are constantly available. Lost files can be recovered in minutes and servers in hours.

## Challenge

**Providing healthcare across East Dorset**
"We were unable to get a full backup completed within five days and our recovery window was days rather than hours," recalls Russell King, Infrastructure Services manager at Bournemouth and Poole Hospitals in the UK.

Poole Hospital must ensure the information used by its operational and clinical staff is constantly available. The security and accessibility of information is critical to its vision to provide excellent patient-centered care to the people it serves.

Poole Hospital is an acute general hospital with 4,200 staff members supporting a 24-hour major accident and emergency department. It is the designated trauma centre for East Dorset, servicing more than 500,000 people and provides general hospital services to a further 280,000 people in nearby areas.

"With HPE Data Protector and HPE StoreOnce, our full backup window has been cut from between five and seven days to 20 hours."

– Russell King, IT Infrastructure Services manager, Bournemouth and Poole Hospitals

**Long backups creates risk**
Poole Hospital's tape backups were taking between five and seven days to complete. They ran both night and day, eroding the performance of the IT systems they were protecting.

In addition, operational files and whole clinical systems vital to the smooth running of the hospital could not be recovered. "If on a Wednesday someone requested the recovery of a file that they created on the Monday but deleted on the Tuesday," elaborates Russell. "We couldn't recover the file as we hadn't even captured that file creation or deletion because the backups were still running from the previous Friday."

Potential data loss was not only impacting staff productivity, it was impacting the hospital's ability to deliver on its vision.

**Moving to a virtual environment**
Technology advancements, such as virtualisation, were stretching the hospital's ability to safeguard its servers. With the hospital moving into an increasingly virtualised environment, a virtual server backup and recovery capability was vital for protecting critical data.

As Russell explains, "At that time around 75 per cent of our environment had been virtualised. The product we had in place was only licensed to perform Microsoft Windows® backups, so we were unable to restore virtual servers. These file-level backups added to recovery times."

**Ailing backup solution**
Recovery management was having a significant impact on operational, clinical and IT resources – with IT spending a significant amount of time managing backups. Furthermore, new technologies, such as 4D ultrasounds, meant the hospitals' data volumes were expanding rapidly, increasing the amount of time needed to manage backups. The hospital needed to find an efficient, reliable and easy-to-manage data backup and recovery solution.

"We were in the process of building on our business continuity and disaster recovery plans," adds Russell. "We needed to offer a better recovery than we were currently able to. We needed a backup solution that would enable us to complete a backup overnight ready for the next day."

## Solution

**A single vendor solution**
Having long standardised on Hewlett Packard Enterprise (HPE) hardware, Russell recognised that seamless integration provided by an HPE data backup and recovery solution would simplify recovery management.

"We run HPE Blade servers for our VMware environment and HPE fabric switching," recalls Russell. "Our storage server farm has always been based on HPE technologies."

Having always received strong support from HPE, Poole Hospital felt it important to consolidate its IT solutions under a single, proven vendor.

With Poole Hospital IT Services in the process of merging with Bournemouth Hospital, which were a satisfied HPE Data Protector customer for many years, implementing the HPE backup software solution made perfect sense.

Russell adds: "We could see how well the HPE data backup and recovery solution Bournemouth was using would integrate with VMware and our own HPE environment."

Keen to take advantage of HPE Data Protector's ability to backup both physical and virtual environments from a single console, Poole Hospital selected HPE Data Protector in combination with a HPE StoreOnce 6500 backup system for protecting its critical data and applications.

**Straightforward deployment**

Russell and his team initially implemented HPE Data Protector 7 in just two weeks with support from HPE Partner, Deverill. "HPE Data Protector is very simple to deploy," confirms Russell. "The initial server set up and configuration was straightforward. Deverill has a good understanding of the latest HPE solutions and their benefits, along with a great deal of experience in implementing them. Their team came on site quickly to support us whenever we needed them."

The HPE data backup and recovery software solution protects data across 250 servers – predominantly VMware virtual machines with a small number of Windows servers. Initially 250 terabytes of data was backed up from a variety of sources, including SQL Server and Oracle databases, Microsoft Exchange mailboxes, Microsoft Office files, clinical applications and a wide range of bespoke systems. The hospital's new electronic document management system, which manages patients' medical records, has increased that volume by a further 20 terabytes.

HPE Data Protector automates incremental backups from Saturday to Thursday, with full backups on a Friday. A deduplication rate of 20:1 means backups require significantly less storage.

**Support for new hardware investments**

Poole Hospital recently upgraded to HPE Data Protector 9 and expanded its storage capacity, installing HPE 3PAR StoreServ 7400 storage. "We are eager to implement the HPE Data Protector and HPE 3PAR snapshot integration," reveals Russell. "We anticipate it will improve the speed with which we can snapshot and backup our data. Going forward this will reduce our backup window even further."

The hospital has also recently invested in a Microsoft Windows 2012 R2 failover cluster to run alongside its HPE 3PAR 7400 storage. HPE Data Protector 9 natively supports the solution's peer persistence feature, simplifying recovery management.

**Remote site protection**

The IT Services merger between Poole Hospital and Bournemouth Hospital has provided additional opportunities for improving resilience. Firstly, HPE Data Protector 9 combined with a HPE StoreOnce 4900 backup system will provide Bournemouth Hospital with a cost-effective, scalable disk-based data protection solution.

**Case study**
Poole Hospital

**Industry**
Healthcare

## Customer at a glance

**Hardware**
- HPE StoreOnce Backup system
- HPE 3PAR StoreServ 7400
- HPE Bladesystem c7000
- HPE FlexFabric Switches

**Software**
- HPE Data Protector

Furthermore, it will provide an opportunity for replication across the Poole and Bournemouth sites – a vital element of the hospital's disaster recovery and continuity plans.

"We have recently invested in an HPE StoreOnce 4900 for our Bournemouth site, where we are implementing a similar data backup and recovery solution to the one here at Poole," clarifies Russell. "We'll then replicate the backups across sites using the HPE StoreOnce systems to provide us with an additional level of protection from offsite data."

The HPE StoreOnce solution has replication capability built-in and managed centrally by HPE Data Protector.

## Benefit

**Seven-fold reduction in backup periods**
With HPE Data Protector deployed, Poole Hospital has seen a seven-fold reduction in its backup window. Russell confirms, "With HPE Data Protector our full backup window has been cut from between five and seven days to 20 hours, with incremental backups taking just five to six hours."

Now that incremental backups are completing overnight, the hospital's operational and clinical systems and data are no longer at risk, and users are no longer impacted by poorly performing systems during the day.

**Recovery cut from hours to minutes**
The HPE data backup and recovery solution has also enabled the hospital to significantly reduce recovery times. Files can be recovered in minutes rather than hours. Server recovery times have been cut from several days to just a few hours.

As Russell explains: "Previously when a server failed, files had to be recovered from tape onto a physical server – once the supplier had resolved the fault. With HPE Data Protector we can recover a full virtual server with data in around two hours."

With supplier intervention no longer required, Poole Hospital is able to not only significantly reduce its recovery window; it is also able to significantly reduce recovery cost.

**Preparing for the future**
HPE StoreOnce deduplication significantly reduces the amount of capacity required to store backup data sets, saving further cost. Currently 250 terabytes of changes requires only 23 terabytes of storage. "The ability to store all our backups on much less storage has been a great help," adds Russell.

With data volumes ever-increasing, the HPE backup solution is playing a key role in helping Poole Hospital plan for future storage requirements. Working with HPE Russell and his team are better able to understand trends in backup storage capacity growth, so they can predict future growth and prepare for future backup storage capacity requirements.

**Ticking all the boxes**
Storage is not the only resource the HPE solution has freed up. It has freed up around 20 hours a week for Russell and his team now that backup and recovery is much quicker and easier to manage. The capital investment has enabled them to bring operational efficiencies and reduce hidden operational costs to the hospital as well as take them to a place of greater resilience.

"Our HPE data backup and recovery solution helps us to reduce risk while saving time and cost. It allows us to tick all the boxes for our business continuity and disaster recovery plans," concludes Russell.

Learn more at
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