

CASE STUDY

Delivering life-saving care round-the-clock

Pennine Acute Hospitals NHS Trust maximizes availability while embracing new IBM FlashSystem technologies from Covenco.



In a healthcare setting, every second counts. Clinicians depend on reliable access to essential healthcare systems when providing care. Any interruptions or delays could be a matter of life or death. For the IT teams behind the scenes, that makes avoiding unplanned downtime one of their highest priorities.

The Pennine Acute Hospitals NHS Trust is a regional health organization made up of four hospital sites and a neuro rehabilitation unit in England. It recently became part of the Northern Care Alliance NHS Foundation Trust. The organization employs around 20,000 staff providing a range of community and hospital services to over one million people across Bury, Oldham, Rochdale and Salford, as well as providing more specialist care to patients across Greater Manchester and beyond.

Jav Yaqub, Head of Infrastructure at the Pennine Acute Hospitals NHS Trust, says, "The Trust's mission statement is to provide the very best care to each patient on every occasion. To empower our staff of 20,000 people to deliver on this promise, my team is tasked with ensuring that the systems they rely on for everything from diagnostic information to prescribing drugs run smoothly."

With the storage infrastructure underpinning these systems already at capacity and fast-approaching end of life, the Pennine Acute Hospitals

NHS Trust was under pressure to find an alternative storage platform fast. Moreover, the Trust sought a low-risk migration path to prevent unscheduled downtime.

"We have a complex SQL environment which is predominantly six corporate SQL clusters each hosting multiple SQL instances and thousands of databases," explains the Trust's Technical Architect, Imran Bashir. "These run the Trust's critical clinical systems and are required to be available 24/7 so, a straightforward SQL migration seemed to be out of the question. Our goal was to find a route to a new storage platform that didn't require us to reconfigure our legacy SQL environment, as that would potentially entail systems being offline for days at a time. This was unacceptable to the Clinical teams, as it would put patient care at risk."

He continues, "With a data center move on the horizon and the legacy storage getting less stable by the day, we had to move quickly. The stakes were high: we knew that if we got it wrong, we could leave four major hospitals out of action for weeks."

Moved four hospitals to new FlashSystem technologies with

zero
unplanned downtime

Saving clinical staff

hundreds
of hours per day by improving response times

"Our legacy storage was lacking performance and as a result read and write latencies were unacceptably high. Considering we have between 8,000 and 10,000 staff working at any given time, speeding up those transactional databases adds up to a significant productivity gain - and any time that our clinicians save can be diverted to patient care."

Jav Yaqub

Head of Infrastructure, the Pennine Acute Hospitals NHS Trust

Covering all bases

The Pennine Acute Hospitals NHS Trust selected IBM® FlashSystem® 5000 storage to support critical clinical systems, and engaged IBM Business Partner Covenco to help plan the migration.

“We chose IBM FlashSystem technology because it offers high performance, easy management and built-in high availability features,” says Yaqub. “But excellent technology only comes to life if you have expertise available to show you how to use it, and that’s where Covenco came in.

Once our team met with Covenco it was as if a chemical reaction occurred, and we began building a special relationship.”



With help from Covenco, the Pennine Acute Hospitals NHS Trust deployed three IBM FlashSystem 5000 arrays, with two in an IBM HyperSwap® configuration to enable dual-site, active-active access to critical data. Using IBM Spectrum® Virtualize software, which is integrated into IBM FlashSystem storage, Covenco created copies of the organization’s SQL environment to facilitate a low-risk migration with minimal downtime.

“Covenco took full advantage of the power of IBM technology to make our move to the new infrastructure as non-disruptive as possible,” recalls Yaqub. “They set up the new storage platform to run in parallel with our legacy environment, so we were able to test that it worked properly and had the option to roll back at any time. Planned downtime was limited to just five hours per cluster, which was a fantastic result, and we cut over exactly as planned.”

Dramatically improving patient experience

Since making the move to IBM FlashSystem storage, the Pennine Acute Hospitals NHS Trust has seen a significant increase in performance and reliability for critical clinical systems. By reducing waiting times for users, the IBM technology contributes to higher productivity.

“Our legacy storage couldn’t keep up with demand from our clinical applications,” explains Yaqub. “Now that we’ve deployed IBM FlashSystem technology, complaints about slow-running or unavailable systems have greatly reduced.”

The Trust’s IT team is also able to work more efficiently now that the IBM Storage technology is in place.

“Management of the legacy storage was cumbersome and inefficient taking up around 90 minutes every day,” explains Yaqub. “In the past, we spent time checking that snapshots were clearing, restarting failed dedupes and so on. Now, we get proactive alerts if anything needs attention, saving us time and giving us confidence that everything is running smoothly.”

With its new high-availability storage configuration, the Pennine Acute Hospitals NHS Trust has increased the resilience of its IT systems. By enabling non-stop access to clinical systems, the organization is better able to fulfil its mission of delivering exceptional healthcare services 24/7.

“Before, failing over our systems to the secondary storage was a complex process that we didn’t really trust,” adds Bashir. “With IBM HyperSwap, it’s seamless. With help from Covenco, we now have a sophisticated storage platform that makes the most of the powerful capabilities IBM storage arrays offer.”

The Trust is now working with Covenco to deploy IBM FlashSystem 7200 arrays, and plans to take advantage of the IBM Safeguarded Copy feature to ramp up its resilience even further.

With Safeguarded Copy, the organisation can create logically air-gapped copies of its production SQL data.

Steve Hollingsworth, Sales Director at Covenco, explains, “The Safeguarded Copy feature will take scheduled, immutable, point-in-time copies of the organization’s data, which will be protected by policy.”

Yaqub concludes, “By teaming up with Covenco to deploy IBM FlashSystem 7200 arrays and use the Safeguarded Copy function to protect vital data from virus and ransomware attacks, we will realise even more value for the populations we serve.”

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Northern Care Alliance NHS Foundation Trust

About the Pennine Acute Hospitals NHS Trust

Established in October 2021, the [Northern Care Alliance NHS Foundation Trust](#) brings together two NHS Trusts in England: Salford Royal NHS Foundation Trust and the Pennine Acute Hospitals NHS Trust. The Pennine Acute Hospitals NHS Trust consists of four hospital sites and a neuro rehabilitation unit.

About Covenco

With more than 30 years of experience in the IT industry across a range of technologies, [Covenco](#) specializes in purchasing, selling and renting new and refurbished IBM, HP, Dell and NetApp computing hardware, storage and supporting software. Covenco also provides cloud and hosting solutions, disaster recovery, maintenance, virtualization, backup and high-availability services.

Solution components

[IBM® FlashSystem® 5000](#)

[IBM Spectrum® Virtualize](#)

About Covenco

Covenco started way back in 1989, selling IBM's System 36 and AS/400 servers. Over 30 years later, we still have IBM at the core of our business, but we do so much more now. Covenco have always strived to provide value without compromise, and this remains our primary goal today.

We work across a variety of industry sectors - as Business Partners for new IT infrastructure solutions and as Business Continuity specialists.

Contact Covenco

Covenco
Unit 3, MXL Centre
Lombard Way
Banbury
Oxfordshire
OX16 4TJ
United Kingdom

Telephone: 01753 732000
Email: sales@covenco.com

www.covenco.co.uk