

## Success Story: VCUHS



# IBM XIV Storage System helps lower patient risk at Virginia Commonwealth University Health System (VCUHS)

### At a Glance: Virginia Commonwealth University Health System's XIV Solution



Customer	VCUHS, an academic medical center
Industry	Healthcare and education
Environment	Microsoft® SQL Server, Oracle databases, IBM Lotus Notes® (15,000 users); VMware, IBM System p® (IBM AIX®), IBM XIV® Storage System, IBM System Storage™ SAN Volume Controller (SVC), IBM Tivoli® Storage Manager, and IBM Virtual Tape Library
Challenge	To transform the organization's storage infrastructure by implementing a unified, highly reliable, scalable, and easily managed platform that delivers uninterrupted information flow at minimal overall cost
Results	<b>Business results</b> <ul style="list-style-type: none"><li>• Improved patient care through reduced risk</li><li>• Increased productivity organization-wide</li><li>• Dramatic reduction in power, cooling, and space costs</li><li>• Excellent responsiveness across all workloads</li></ul>

# IBM XIV Storage System

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## Overview

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Virginia Commonwealth University Health System (VCUHS) is an award-winning regional healthcare and medical teaching center, serving more than 600,000 patients per year. Their emergency facility is the area's only Level I trauma center. Groundbreaking research takes place at the nearly

200 VCUHS specialty centers, including centers for cancer, cardiology, the spine, and neurosurgery. VCUHS strives to excel in all service areas—patient care, research, and education—and as an organization.

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## A vision of life-saving information flow

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For VCUHS, as for any medical care facility, swift access to records can mean saving lives.

“Without a solid storage infrastructure, it's hard to be successful,” explains Greg Johnson, Chief Technology Officer for VCUHS. “IT is responsible for preventing human or business risk by making sure our clinicians and business staff can get to the data they need. I set out to transform our overall technical structure, with the vision of ensuring uninterrupted access to data. Implementing a world-class storage system was a central and foundational part of achieving that vision.”

For years, the VCUHS IT environment comprised outdated and disparate storage, backup, and related products. Controlling the multi-vendor complexity was a nightmare—the IT team lacked a common management interface for the different architectures, and was burdened by the need to classify data and migrate it between multiple tiers. Negotiating with multiple vendors caused delays. Energy and space were wasted due to outdated technologies. Apart from standard RAID, the team did not perform data mirroring. The organization was dependent on tape-based backup and recovery for more than 200 TBs of stored data, including a mission-critical Electronic Medical Record (EMR) system.

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## Implementing a transformative storage solution from IBM

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VCUHS IT management felt it imperative to standardize on a single vendor. “By then, IBM XIV was available,” Johnson recalls. “We realized that it was either the best stuff since sliced bread or just smoke and mirrors. Our need was great, so we gave it a try. During the proof of concept, we tried every possible stress test we could think of, and in a mixed workload environment. The XIV system either matched or beat the performance on our existing arrays every time.”

The VCUHS team realized that in addition to revolutionizing their storage infrastructure, the XIV system offered the simple and unified solution they sought, through a single-tier platform and exceptionally intuitive management. They

deployed one XIV system at their primary data center and another at a backup site. “Implementation was incredibly fast and easy; we migrated the data from all our other platforms in just a few weeks,” notes Johnson.

The VCUHS team had already implemented IBM SVC for virtual storage management of their heterogeneous environment; integrated with the XIV system, this enabled transparent, online migration from the retired storage. VCUHS also deployed IBM Tivoli Storage Manager and an IBM Virtual Tape Library (VTL), reducing their tape backup process to just minutes.



# IBM XIV Storage System

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## Shrinking floor tiles and power consumption

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VCUHS consolidated their four legacy arrays, including two EMC CLARiiON systems, to a single XIV box. Describes Johnson, “We’ve shrunk our floor footprint from 10 tiles down to two. When we shut down the CLARiiON boxes, the room temperature dropped by 6 degrees Fahrenheit [3.33 degrees Celsius]. With the more efficient XIV rack, we’re seeing a reduction in our cooling and power use.”

“We now have a fully integrated cross-IBM solution with consistent administrative capacity, eliminating our previous complexity nightmare. We can easily move storage around, grow it, shrink it—whatever our need is,” says Johnson.

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## Business-responsive through flexible scaling

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“As our storage requirements increase, we can scale our XIV disk capacity on demand,” explains Johnson, “avoiding the time once lost to bidding for new capacity. IBM XIV’s on-demand, single-platform scaling is terrific, giving us the flexibility to grow dynamically in real time without delaying projects and clinical initiatives.” The XIV system scales proportionally in all aspects, including processing power, ensuring high reliability and levels of service as VCUHS’s volumes grow.

“Our new storage environment directly enhances our ability to support new medical patents, procedures, protocols, and data—all that which makes VCUHS a world leader and able to attract more patients,” says Johnson.

Johnson sums up, “XIV has lived up to all the promises to be a revolutionary technology: It’s a major cost-saver, yet it changes the paradigm of storage management. It has enabled us to rapidly transform our storage operation to a reliable world-class enterprise system easily managed by a very small staff. With the XIV system, we are well-positioned for the future.”



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—Greg Johnson, Chief Technology Officer, Virginia Commonwealth University Health System





## Benefits: Getting more with the XIV system

IBM XIV Storage System	Business Value to VCUHS
High reliability	<ul style="list-style-type: none"><li>• Continuous data availability</li></ul>
Energy and space efficiency	<ul style="list-style-type: none"><li>• Reduced TCO and overhead</li></ul>
Single-tier storage	<ul style="list-style-type: none"><li>• Ease of management</li><li>• IT staff free for other tasks</li></ul>
Flexible, powerful scaling	<ul style="list-style-type: none"><li>• Continued high performance</li><li>• Easy, on demand, migration-free scaling</li></ul>
Integrated IBM solution	<ul style="list-style-type: none"><li>• Tight interoperability</li><li>• World-class comprehensive support</li></ul>

### For more information

Contact your IBM sales representative or IBM Business Partner, or visit: [www.ibm.com/systems/storage/disk/xiv](http://www.ibm.com/systems/storage/disk/xiv)

For more information about VCUHS, visit: [www.vcuhealth.org](http://www.vcuhealth.org)

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