Unity Healthcare relies heavily on its Electronic Health Record (EHR) as well as many other patient management applications, all focused on improving patient care and operational efficiency. When the performance of Unity's storage infrastructure started to impact medical staff productivity as well as back-office personnel, the IT staff investigated several flash based solutions in the market and choose to install Pure Storage all-flash arrays. Since then, Unity's application performance has been trouble-free, and storage-related CAPEX and OPEX have been significantly reduced, and storage management has been dramatically simplified.

BUSINESS TRANSFORMATION

Physicians, clinicians, and back-office staff now have real-time access to the data and records they need to best serve patients while achieving the efficiencies promised by Electronic Health Records (EHR).

GEO

North America

INDUSTRY

Healthcare

"Once we installed Pure Storage, the difference was night and day."

Brent Fletcher, *IT Director*

PURE STORAGE REMOVES EHR APPLICATION ROADBLOCKS AT UNITY HEALTHCARE

As a small, physician-owned provider in an industry increasingly dominated by large organizations, Unity Healthcare in Lafayette, Indiana, distinguishes itself by the close relationships it builds between the local community as well as its 650 employees. All departments within Unity strive to balance the mission of excellent patient care with the goal of operational efficiency.

That is especially true of its IT department, which for many years has invested in Electronic Health Records (EHR) and Virtual Desktop Infrastructure (VDI) systems designed to make it easier for doctors and other clinicians to serve patients effectively and efficiently. But when performance problems with their EHR and VDI systems began to cause performance issues around patient data retrievals times the IT department took immediate action.

After investigating several solutions in the market they found their solution in all-flash storage from Pure Storage.

SAGGING PERFORMANCE DRIVES SEARCH FOR STORAGE OPTIONS

For more than six years, Unity has invested in Allscripts for both its EHR and practice management applications, which IT Director Brent Fletcher called the "heavy hitter" of its technology infrastructure.

Over the years, doctors and other staff have benefited from the data centralization offered by EHR, but behind the scenes Fletcher's staff saw the Allscripts applications grow in complexity and their demands on IT resources.

Recently, Fletcher and his team started hearing complaints from end-users — both physicians, nurses, and back-office support staff — about the time it was taking to use critical applications. "Users were waiting as long as 45 seconds for a report to appear or a screen to populate. And if a physician is in a room with a patient, the last thing they want is to wait a long time for a chart to appear. If that happens, they'll just put the EHR aside and go back to paper. And this is just not a feasible option and puts the physician at risk for losing meaningful use dollars."

COMPANY:

Unity Healthcare
www.unityhc.com

USE CASE:

- Database – Allscripts, Microsoft® SQL Server
- VSI – VMware® vSphere®
- VDI – Horizon View
- Application Deployment – Citrix® XenApp®

CHALLENGES:

- Clinicians encountered unacceptably slow access times for key patient applications.
- Size of database on previous SAN was consuming valuable space from other production applications.
- Complex storage management over-taxed the small IT staff.

IT TRANSFORMATION:

- Unity achieved a 7:1 data reduction from their EHR application.
- The health provider significantly reduced unacceptable wait times for patient records.
- Dramatically streamlined storage administration frees up valuable IT resources.

"Allscripts applications put a very heavy demand on our SQL Server databases," Fletcher noted. "There is a high and constant level of I/O between the applications and the database which was negatively impacting IOPS and access response times." Adding to its storage demands, Unity supports its health care staff with Citrix XenApp, virtualized with VMware vSphere, placing additional stress on the organization's IT infrastructure.

Fletcher says Allscripts was able to achieve some improvements in system performance by making adjustments in the software, but a much more effective solution was needed. "It came down to disk response times," he said, "so we looked into solid-state storage technology, and that brought us to Pure Storage."

Unity's linkage to Pure Storage's flash storage solution was facilitated by SIS, a leading technology and managed IT solutions provider headquartered in Lexington, KY. Among their core competencies is expertise in data protection and storage management. This expertise extends to healthcare where SIS helps organizations like Unity minimize the risk of migrating to electronic health records (EHR).

"We fully understand the challenges healthcare organizations face with increasingly complex EHR applications and the storage infrastructure needed to optimize their performance," said David Herbon, account manager with SIS. "That's why we recommended Pure Storage to Unity Healthcare. Their flash storage solutions take away so many of the performance, migration, deployment and management headaches that have historically plagued EHR implementations."

IMPROVING THE PERFORMANCE OF KEY APPLICATIONS

"With our legacy SAN, we were almost out of capacity and we were seeing increasingly unacceptable levels of performance," Fletcher said. "The system just couldn't keep up with the demand from the applications, and continuing to spend large amounts of capital to build on older dated technology did not make sense for Unity Healthcare." So, Unity installed a FlashArray from Pure Storage, and the impact was immediate.

"Once we installed Pure Storage, the difference was night and day," Fletcher noted. In the billing office, for example, users noticed the performance improvement immediately. "We made mention to our billing department that some server infrastructure changes were coming. I didn't notify them in advance when we were going to make the actual change," Fletcher said, "but they noticed it right away and let us know."

Physicians and other clinicians have also noted the greater efficiency of access to the key EHR and patient-management applications they rely on every day.

RADICALLY SIMPLIFYING STORAGE MANAGEMENT

In addition to solving the performance problems affecting end-users, Pure Storage has simplified life for the IT department.

"Pure Storage has definitely simplified our capacity planning and storage administration processes," Fletcher said. "We are a small team, and we've become much more efficient by eliminating time and resources needed to support our storage. One of the things I like best about Pure is its utter simplicity. It's just like '1-2-3' and the system is up and running."

The data-reduction and de-duplication features of Pure Storage have also benefited Unity. "The amount of data we run on an array has been greatly reduced," Fletcher noted. "Right now, we're getting 7:1 data reduction." Storage demands for the Allscripts EHR and patient management applications currently run about 2.2TB.

The storage space freed up by Pure Storage data reduction has allowed the IT team to support other strategic efforts, most importantly a collaboration between Unity and Allscripts to test pre-release versions of new Allscripts applications.

The support from Pure Storage also has impressed Fletcher. "After years of dealing with vendors who operate behind a curtain, it's refreshing to deal with the support team from Pure. They have a very down-to-earth approach, and they present things very clearly."

"We've only had one small glitch in our Pure Storage array since we installed it almost a year ago, and I heard about it from Pure before I even knew it was happening. I got an email, and then a phone call from the help desk letting me know they were already working on it. That kind of proactive approach is rare in our industry."

After listening to promises from Pure Storage about how its product would perform, Fletcher was eager to put it to the test. "As we started to move our larger servers over to Pure, we saw the data reduction and compression happening right before our eyes. That was the 'aha moment' that confirmed this was the right decision."

Further confirmation came shortly thereafter when Unity engaged an independent firm to conduct performance studies on its EHR system. "When it came to the storage part of our installation, we passed with flying colors. They were so impressed they asked who we were using for our storage."

"One of the things I like best about Pure Storage is its utter simplicity. It's just like '1-2-3' and the system is up and running."

Brent Fletcher, *IT Director*

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