

Legacy Health needed to qualify for the Epic® electronic health record (EHR) system's Honor Roll designation. When an underperforming spinning-disk storage system was found to be the cause of failing to meet a key criterion, Legacy installed all-flash arrays from Pure Storage. Thanks to Pure Storage experience and expertise in working with Epic software, the installation was completed in record time, and the performance problem was resolved instantly, giving Legacy Health a spot on the Honor Roll.



BUSINESS TRANSFORMATION

Pure Storage arrays help Legacy Health meet all the criteria necessary to achieve significant savings on its Epic maintenance contract with Honor Roll designation. At the same time, caregivers have faster access to the critical EHR system, and IT staff members benefit from dramatically simplified storage management.

GEO

North America

INDUSTRY

Healthcare

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Jeff Olson,
Manager of Enterprise Technical Services

LEGACY HEALTH DEPLOYS PURE STORAGE FOR EPIC ELECTRONIC HEALTH RECORD (EHR) SYSTEM

When two hospital systems were merged in 1989 to create Legacy Health, the name paid tribute to the long history of the antecedent institutions, founded in 1875 and 1912. But today, Legacy Health is all about looking to the future and how it can best address the needs of the patients and communities it serves.

In addition to three large hospitals in Portland, OR, Legacy operates four community hospitals, and more than 70 primary care and specialty clinics across the Portland-Vancouver metro area to the Mid-Willamette Valley. It also participates in Epic's Community Connect program, sharing its Epic EHR implementation with other providers in its region. “Through Community Connect, we host EHR applications for independent but closely aligned healthcare facilities,” noted Jeff Olson, Manager of Enterprise Technical Services for Legacy Health.

Excellence in IT is a key priority for Legacy Health, as evidenced by its early achievement of Stage 7 designation by HIMSS Analytics, the highest designation in the Electronic Medical Record Adoption Model that measures utilization of EHR and progress toward achieving the ideal paperless patient environment.

UNDERPERFORMING STORAGE IMPERILED SATISFYING A MAJOR BENCHMARK

Since 2010, Legacy Health has used Epic software as its fully integrated EHR system, running around 20 applications, including patient records, ordering, pharmacy, hospice and billing. Legacy is one of few Epic customers now accredited as an Epic Connect provider, meaning it can host large customers with its Community Connect service.

Legacy puts a high priority on achieving Epic's Honor Roll designation, which Epic has defined for highest achievement of the benefits from using their software. Backing their commitment to customers, Honor Roll can lead to a substantial savings on annual maintenance fees if the customer meets a long and stringent list of requirements. One set of those requirements relates to the technical aspects and performance of an Epic implementation.

COMPANY:

Legacy Health
www.legacyhealth.org

USE CASE:

- Database – Epic Caché®
- VSI – Microsoft® Hyper-V®

CHALLENGES:

- Steadily expanding healthcare services and patient loads put ever-growing demands on the IT infrastructure, overwhelming the capacity of the previous storage system.
- Underperforming storage prevented Legacy from meeting one of the criteria for Epic's Honor Roll designation.
- Complexity of storage management placed a heavy burden on IT staff.

IT TRANSFORMATION:

- Pure Storage expertise in Epic enabled remarkably fast migration to new storage.
- All-flash storage arrays from Pure Storage immediately resolved the Epic EHR "exception rate" criterion problem.
- Read latencies plunged from over 7 ms to consistent sub-millisecond levels.

"Pure Storage has exceptional talent that understands Epic and its requirements. That was a big help in our implementation."

Jeff Olson,
 Manager of Enterprise Technical Services

The continuing expansion of its own facilities, programs and patients served — as well as the success of its Community Connect operations — led to escalating growth in users of Epic and its infrastructure over time. As a result of the ever-increasing demands, Legacy's Epic implementation started failing to meet one of the requirements for the Honor Roll designation. That requirement is an "exception rate" no greater than 1.3. What this means is that no more than 1.3% of all interactions with the Epic system can result in a response time considered slow. "By the Fall of 2016, the growth in users had gotten to the point that we were no longer meeting the 1.3 goal," Olson said.

In addition to threatening its Honor Roll designation, the increase in slow system responses was causing complaints from end-users, including caregivers in both the Portland hospitals and the remote clinics. Having identified its spinning-disk storage system as the cause of lagging performance, the IT team sought a solution.

EXCEEDING CUSTOMER EXPECTATIONS

Olson arranged for a proof-of-concept test, using Epic sizing guides. The installation of the Pure Storage array took a mere two hours, said Olson, "and we passed the Epic performance test right away."

Legacy purchased three Pure Storage arrays for its Epic environment — two FlashArray™//M20s and one //M50. A second //M50 was purchased later for use in a new data center opened in mid-2017.

Given the importance of meeting the Epic requirement, the Legacy team wanted the Pure Storage arrays installed as soon as possible. "We made it a focus and definitely pushed it," Olson said. "Our Epic support person said our timeline was very ambitious but still possible if there were no problems along the way. And there were no problems."

Just seven weeks after the purchase order with Pure Storage was signed, Legacy had Epic running live on Pure arrays. "The whole process exceeded our expectations," Olson noted. "We went much faster than most Epic users ever could."

Impact from the installation of Pure Storage was immediate and profound. "We immediately saw our exception rate cut by more than half, from around 1.5 to 0.5," Olson noted. "That means we will qualify for Epic's Honor Roll designation, because that is the only metric we had not already met. From a caregiver perspective, an Epic system that runs faster means doctors and other clinicians can do their work faster and easier."

Olson also observed, "We don't see the spikes in performance that we used to experience. In the first week after the Pure Storage arrays were installed, read latencies on the Epic system went from more than 7 milliseconds to 0.28 milliseconds."

After Legacy went live with Epic on Pure Storage, the company's chief medical information officer asked a variety of end-users about their experience. Most reported a much-improved work environment. "One doctor said he thought Epic was 'a lot peppier,' which is rare praise coming from a physician," Olson said.

In addition to an improved end-user environment, Legacy has seen a noticeable drop in the response times of back-office functions like batch processing and extracts of data into Clarity, Epic's report-preparation tool. "We have more confidence that the data will be there when needed. Now, when people who need reports to do their jobs show up at 8:00, they can start their work without waiting for data to load." The reports are ready for them.

IT STAFF PRAISES GREATLY SIMPLIFIED MANAGEMENT

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Olson said the staff managing Legacy’s IT infrastructure is enthusiastic about the Pure Storage equipment. “It’s easy to manage, they like the tools, and they’re getting great support from Pure. They’re very happy. One of the great things about Pure is its support. The phone-home capabilities built into the arrays and the proactive support are not something you see from many vendors. Their commitment to proactively addressing problems before we even see them is a highlight of the working relationship we enjoy with Pure.”

Olson cited another positive about Pure Storage — its deep understanding of Epic. “Pure has exceptional talent that understands Epic and its requirements. To make our previous storage system work with Epic, we had to do a lot of work to get all the functions operating properly. When we bought new storage, that work had to be recreated. Given Pure Storage expertise and experience with Epic, they quickly developed an implementation plan.”

Reflecting on Legacy’s decision to adopt Pure Storage all-flash arrays, Olson recalled, “Every morning for six months I had to get up and see how we did with the Epic response time. I don’t have to do that anymore. With Pure, I have confidence we are meeting our goals.” Going forward, IT has confidence in its ability to support growth and new Community Connect partners in its Epic environment.



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