FLASH STORAGE:  
A PRESCRIPTION FOR HEALTHCARE SUCCESS

In the healthcare industry, it can be a matter of life and death. The longer patients wait for needed care, the higher their chances of a poor or prolonged recovery.

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Ever mindful of the tight relationship between speed and quality of care, healthcare organizations have been investing in electronic medical record (EMR) solutions, digital imaging applications, and other sophisticated systems for years. In the process, however, more and more of them have discovered that storage plays a crucial role in keeping all of their applications running at peak velocity—and that traditional, disk-based storage arrays are simply too slow to keep pace with patient needs. To get strong performance from healthcare IT, providers and payers need the extreme performance of flash storage.

NEED FOR SPEED

ERs, doctors’ offices, and operating rooms are just a few of the settings where fast access to medical data can help healthcare organizations enhance care and reduce costs. “Having that data for the physician at the point of care allows them to make better decisions,” observes Drew Goddin, managing director of the health solutions practice at FTI Consulting Inc., a global business advisory firm headquartered in Washington, D.C. It also reduces medical errors, which according to a study by the federal government drained $19.5 billion from the U.S. economy in 2008 alone.

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Providers and payers are reaping similarly impressive rewards from big data and healthcare analytics. Mining patient and claim records for clues about which risk factors are most dangerous or which treatments are most effective can help healthcare organizations both enhance care and save money, notes Vivek Salve, chief technology officer for healthcare and life sciences at IBM Corp., of Armonk, N.Y. “There are valuable insights buried in healthcare databases,” he says. “Finding those nuggets can make a lifesaving difference for patients while improving overall efficiency, but speed is of the essence.”

Speed also counts when it comes to safeguarding patient data, which is why more and more healthcare organizations are deploying security monitoring solutions that can detect potential breaches in real time. “If something malicious is happening, you need to catch it while it’s going down, not after,” observes Salve’s colleague, Prashant Avashia, a healthcare software engineer at IBM. Meeting that goal, though, takes truly high-performance technology.

**BETTER CARE, LOWER COSTS**

That’s exactly what flash storage is. By replacing spinning disks and oscillating armatures with solid-state technology, flash arrays deliver medical data to patients, physicians, and pharmacies dramatically faster than disk-based systems. “Everyone starts getting the data they need in sub-second response times,” Simon notes. That, in turn, can help healthcare organizations deliver data to the point of care more rapidly, accelerate clinical workflows, and more effectively embrace patient-centric healthcare.

Flash storage also revs up healthcare analytics. “When you’re processing data from 25,000 patients, you really need the kind of performance that flash storage is uniquely capable of providing,” says Avashia, noting that security monitoring systems need that performance too. “Only a security application running on a flash system will be able to detect problems in real time,” he observes.
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Ultimately, Avashia adds, the extreme performance of flash storage delivers what matters most: healthier patients and a healthier bottom line. “Many clinicians these days see 50, 80, or 100 patients daily,” he notes. Anything that helps them make the right decisions more quickly is sure to result in better care, lower costs, and higher profits.

INDUSTRIAL-STRENGTH STORAGE

Still, to collect benefits like that, providers and payers must be as choosy about which flash arrays they deploy as they are about which treatments and medications they prescribe. Only IBM Flash-System arrays will fully satisfy their aggressive flash storage requirements. Unlike products equipped with controllers, backplanes, and other components originally designed for disk-based arrays, Flash-System arrays are custom engineered from top to bottom for use with flash memory in mind, resulting in industry-leading performance. “We’re talking up to three times better performance than most other flash solutions,” Salve says.

Moreover, FlashSystem arrays match extreme speeds with extreme reliability. EMR and digital imaging systems are mission-critical applications that require nonstop availability. Features like Variable Stripe RAID and redundant, hot-swappable parts enable IBM FlashSystem arrays to clear that high bar. “This is industrial-strength, commercial-grade flash storage,” Simon observes.

Plus, FlashSystem users enjoy access to an extensive family of complementary IBM security solutions. “We have a wide range of systems that can help healthcare organizations secure data both in storage and as it flows between applications,” Salve notes.

Bottom line: IBM FlashSystem arrays empower providers and payers to deliver high-quality care while controlling costs—and that’s a prescription for success any healthcare executive can appreciate.

For more information, visit ibm.com/storage/flash
In the healthcare industry, storage performance is no mere “speeds and feeds” issue. In this executive Q&A, IBM’s Vivek Salve explains how high-speed storage can supercharge the performance of health-care applications, why disk-based storage is too slow for speed-sensitive healthcare solutions, and why IBM FlashSystem products are ideally suited to the needs of today’s healthcare enterprises.

Q: Why is storage performance an even more critical consideration than usual in healthcare?
A: Data is growing astronomically right now in the healthcare industry. On top of the conventional data from medical and billing applications that they’ve always dealt with, healthcare organizations are collecting huge amounts of data from newer sources too, like digital imaging systems, social networking sites, and wearable fitness devices. That new data has valuable insights that the healthcare industry wants to tap into at the point of care to improve health outcomes. To do that, however, you really need high-performance storage technology.

Q: What kinds of problems or bottlenecks does disk-based storage create for healthcare organizations?
A: Let me give you an example. When someone who was just in a car crash is wheeled into an emergency room, the doctors there need to know as much as possible about that person’s medical history, drug allergies, and so on, as quickly as possible. This is truly a situation in which every second counts. The sooner the ER team gets that information, the better their ability to save the patient. Disk-based storage systems have many virtues, but speed isn’t one of them. They’re just too slow to pull patient data together from multiple sources and deliver it to the point of care with the kind of immediacy that ER doctors and nurses require.

That’s just one illustration of a bigger problem. Hard disk drives simply can’t keep up with the healthcare industry’s needs.

Q: How can flash storage improve the performance of EMR, digital imaging, and other critical systems?
A: Flash is extremely fast. A solution that uses disk-based arrays might be capable of analyzing medical data in all sorts of interesting ways, but that analysis is basically useless if physicians don’t receive it in time to influence their decisions. Getting data to the point of care quickly is the key here, and to do that you need the extreme performance of flash storage.

Q: What makes IBM FlashSystem solutions the right choice for healthcare providers?
A: We’ve spoken a lot about performance, and IBM FlashSystem arrays are the fastest flash storage products available. They also provide two additional advantages worth pointing out. First, FlashSystem arrays are as reliable as they are fast. Patient registration systems, for example, are mission-critical solutions that simply can’t go down, and we’ve engineered our FlashSystem arrays to deliver continuous uptime. Second, IBM has a very strong portfolio of security solutions to go along with our storage products. That means we can not only get data to the point of care rapidly, but secure it on its way there too. We really believe no one else in the industry offers that same combination of strengths.