Intermountain Healthcare: the Benefits of Leveraging a Data Platform

Intermountain Healthcare, a Salt Lake City, Utah-based not-for-profit system, is known for staying ahead of the curve in developing and using technology.

The American Hospital Association's *Hospitals & Health Networks* magazine ranked Intermountain as one of the nation's "100 Most Wired" health systems in 18 of the survey's past 19 years.

The 22-hospital health system uses the Life Flight app to capture patient data en route to hospitals to deliver immediate, specific care. Intermountain uses ChartMarxx to scan, index and upload paper medical records after discharge. More than 180,000 patients can access personal health information and send messages to their physicians through the My Health patient portal. Its telehealth program and Connect Care portal leverage technology to further patient engagement.

For a "wired" hospital, it's no surprise that when leadership learned of a slowdown in SelectHealth, Intermountain's insurance arm, they knew it was time for a change. "We were getting reports from users saying the system was slow," said Intermountain Healthcare enterprise storage manager Kent Petzold. "We were spending a lot of time investigating the slowdown. About that time, Pure and a few other hybrid models came out with a lot more flash at a decent price point."

Intermountain replaced its hybrid data storage platform with a Pure Storage FlashArray//M50 for the SelectHealth database and an M70 for other data. When Intermountain launched the M50, the slowdowns stopped.

Petzold also reported 3.8-to-1 data reduction capability for the M50, which improves efficiency. "We can theoretically put 200 terabytes of data on that system," he said. "This reduces cost-per-GB and the need for purchasing additional storage units. It's also helped level off my growth rate from 30 percent year-over-year to 20 percent."

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Kent Petzold
Enterprise Storage Manager
Intermountain Healthcare

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The Evergreen Advantage

One advantage of FlashArray//M is that it's Evergreen™. Evergreen storage lets you upgrade as needed without interruption. The subscription-based service lets you continually add innovations without forklift upgrades and rebuys.

Petzold described Intermountain's first Evergreen upgrade as "flawless." "We've gone through a couple control upgrades since then," he said. "Both times we experienced no downtime and no effect on the customers."

Building a 'Pure' Data Warehouse

Intermountain recently moved its Enterprise Data Warehouse (EDW) to a Pure system. As Intermountain's primary source for analytics and business intelligence activity, EDW houses a centrally managed and accessible copy of data collected from Intermountain's systems, including financial, clinical, laboratory and pharmacy. IT staff aggregates, organizes, structures and catalogues data to facilitate population health initiatives, queries and research.

Petzold said IT staff, who reload data into the database nightly, notice a performance boost with the Pure system. The system runs at a relatively consistent 20,000 IOPS, bursting up to 40,000 at times. "Our throughput is about two gigabytes per second sustained, with bursts of over seven gigabytes per second," he said. "We were struggling on our older system to get those throughputs."

As a result, reports take less time to run and virtually all performance issues have disappeared. "That frees up the storage department's time to be more of a trusted advisor to our business units, rather than continually trying to track down issues," he said.

No More Crisis Calls

FlashArray//M reports of 99.9999% availability, which includes maintenance, failures and generational upgrades, has eliminated late night calls for Petzold and team.

When Intermountain performed controller upgrades, the system worked so well Petzold actually forgot come Monday morning that the upgrade happened on Friday. "There were no issues," he said. "As a manager, that's what you want to hear. We've had situations in the past where you're on the phone all night trying to fix a problem."

Petzold recalled a similar situation where, during planned power maintenance in the data center, his team shut off one leg of power. Within minutes, Pure support reached out. "Our one legacy vendor attempted to call, got an 'all circuits are busy message,' and didn't get back in touch for eight days," he said. "I don't always expect five-minute response times, but I do expect response within a couple hours."

Innovating and Developing Business

The move from a legacy system to Pure Storage has resulted in time saved by Intermountain patients, clinicians, administration and SelectHealth staff. Patients and staff don't have to sit idle while a computer system loads.

"It's frustrating for me when I have to wait ten minutes while an operator tries to pull up something," Petzold said. "That's not happening now. People get the information they need so they can pass it on to the customers." The freedom allows the IT department to spend more time on innovation and assisting business development.

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About Pure Storage:
Pure Storage (NYSE: PSTG) accelerates possible, transforming businesses in ways previously unimagined. The company's disruptive, software-driven storage technology combined with a customer-friendly business model drives business and IT transformation for customers through dramatic increases in performance and efficiency at lower costs. Pure Storage FlashArray//m is simpler, faster and more elegant than any other technology in the datacenter. FlashArray //m is ideal for the move toward big data and for performance-intensive workloads such as cloud computing, database systems, desktop virtualization, real-time analytics and server virtualization. With Pure's industry leading Satmetrix-certified NPS score of 79, Pure customers are some of the happiest in the world, and include large and mid-size organizations across a range of industries: cloud-based software and service providers, consumer web, education, energy, financial services, governments, healthcare, manufacturing, media, retail and telecommunications. With Pure Storage, companies push the boundaries of what's possible to become faster, smarter and more innovative.