



SUCCESS STORY
Healthcare



MT. SAN RAFAEL HOSPITAL | PROBLEM SOLVED

Mt. San Rafael Hospital transformed its IT organization to bring world-class care to rural communities in Colorado.

Mt. San Rafael Hospital Powers Predictive Analytics with Flash

Mt. San Rafael Hospital is a community hospital serving the medical and surgical needs of Trinidad, Colorado, and surrounding areas. Under the leadership of visionary CIO Michael Archuleta, Mt. San Rafael Hospital has been named a Healthcare's Most Wired hospital by the College of Healthcare Information Management Executives (CHIME) for the past four years. The Most Wired award is given annually to the top hospitals in the country making the most progress in the adoption of health IT. Archuleta modernized the hospital's IT infrastructure by using NetApp all-flash storage to empower doctors and hospital staff with fast, reliable access to the data they need to improve wellness and save lives.

56%
reduction in costs

99.9%
uptime for critical
healthcare systems

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Michael Archuleta
CIO, Mt. San Rafael Hospital

BUILDING FROM THE GROUND UP

Located in southern Colorado, just north of the New Mexico border, Mt. San Rafael Hospital provides critical healthcare and wellness services to thousands of residents. Archuleta began working at the hospital in 2007, when the Affordable Care Act was just gaining momentum. The U.S. government had begun mandating the use of electronic medical records (EMR) systems, imposing steep penalties for noncompliance.

“My first day on the job, I had to start thinking about how we were going to implement an EMR system,” says Archuleta. “We had to act quickly or the penalties for not having an EMR system would have been devastating.”

Deploying an EMR system is no small feat—even for an organization with a mature IT infrastructure. At Mt. San Rafael, Archuleta was starting from the ground up. An independent audit of the organization’s IT infrastructure revealed legacy hardware and software housed in server closets throughout the hospital. Without a centralized data center, the hospital lacked robust solutions for business continuity, disaster recovery, and cybersecurity.

“Step one was building a new data center,” explains Archuleta. “One of our very first decisions was to standardize our storage platform on NetApp AFF storage. We wanted to take advantage of predictive analytics and virtual desktop infrastructure, so we needed the fastest and most-efficient storage available.”

That was the beginning of a total IT transformation. With the new data center operational, uptime improved from 59% to 99.9%. The hospital transitioned to 99% virtualized servers and over 90% desktop virtualization. It rolled out its new EMR system, Medhost, giving healthcare professionals a more stable, flexible way to access patient data. And Archuleta was just getting started.

“We implemented an enterprise-grade wireless system with a new-generation firewall,” he explains. “Built-in redundant network and power management within the data center give physicians nonstop access to patient data. And, for the first time, we are sending backups to an off-site facility for disaster recovery.”

PROTECTING DATA AND TRANSFORMING CARE

Electronic health records (EHRs) are among the most valuable types of data for hackers looking to make a profit. A single EHR can be worth thousands of dollars on the dark web. With the growing use of web-based portals and remote patient monitoring technologies, it becomes even more difficult for organizations to keep that data safe. Like all healthcare organizations, Mt. San Rafael must protect its data from hundreds—sometimes thousands—of attacks each day.

The hospital depends on predictive analytics running on Splunk and powered by NetApp all-flash storage to protect patient records from security breaches. NetApp all-flash storage provides the speed required for real-time event logging and analysis to predict attacks before they occur.

“Our NetApp flash storage provides the speed and reliability we need for our Splunk database applications,” says Archuleta. “Hackers don’t rest. We don’t either.”

Mt. San Rafael Hospital also applies predictive analytics to its EHR data to help physicians identify trends and strengthen diagnostic capabilities. Using predictive modeling, Archuleta and his team can track how often patients come into the facility and why, giving physicians insights and suggestions for care.

“Predictive analytics and machine learning have helped reduce our readmission rates and improve overall patient health,” explains Archuleta.

“Sepsis is one of the primary causes of hospital deaths, but by using predictive analytics, we can identify the early warning signs to dramatically reduce incidents of sepsis at the hospital.”

PUTTING PATIENTS FIRST

Archuleta himself has been recognized throughout the industry for his achievements in transforming health IT. For the last 3 years, he’s been on the Becker’s Healthcare list of Top 100 CIOs to Know, and he’s been named a Rising Star in Healthcare. In a world where profits and shareholders often drive IT decisions, Archuleta’s groundbreaking “patient-centric” approach is now paying dividends.

“Patient care remains our number one priority. Our patients benefit from our technology investments, which are focused on enhancements in safety, quality, and operations,” says Archuleta. “We have been successful because we have great business partners like NetApp. NetApp has a vision for healthcare. They speak my language. I trust NetApp to work with me to build solutions to transform care and save lives.”

SOLUTION COMPONENTS

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+1 877 263 8277



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