

Alice Peck Day Health Systems



Ensuring high availability for critical electronic medical record software

Business situation

Alice Peck Day Health Systems is focused on “Strengthening our Future,” as the cover of a recent annual report declares. Built up from a cottage hospital in the Connecticut River city of Lebanon, New Hampshire, Alice Peck Day (APD) serves 20 communities in two states, offering primary care, independent and assisted living, and specialty services from rehabilitative care to neurosurgery. Its medical staff, area clinics, and service offerings are growing, which bolster the 25-bed hospital’s ability to invest in new programs, infrastructure and technology.

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Lorraine Nichols
Director of Information Services
APD

QUICK FACTS

SOLUTION PROFILE

- Data center and IT investments key to hospital’s continued growth
- High availability a critical success factor in deployment of new EMR software
- Virtualization provides cost efficiencies, simplifies network management
- Geographic separation of servers to ensure operational continuity and disaster recovery

PRODUCTS AND SERVICES

- Stratus Avance® high-availability software
- Stratus remote monitoring and management services
- Greenway Medical Technologies ambulatory EMR software
- Industry standard servers

Uptime. All the time.



Hospital leadership is committed to including IT and data center improvements in its strategic growth plans. APD already had been using hospital information system (HIS) software for 14 years. In the past three years, they have deployed a virtualization software platform with 24 virtual servers hosting various applications such as Active Directory, Microsoft® Exchange, Corepoint Integration Engine, business intelligence, whole disk encryption, among others.

As it began evaluating and testing new electronic medical records (EMR) software, the IT department became concerned that the current virtual infrastructure would not provide sufficient protection against downtime. Because staff is not available 24/7, they wanted the system to be as automated as possible for business continuity with virtually no interaction on their part. The inability to keep EMR operations running should a catastrophic event occur also weighed on their minds.

“The [Avance] software was very affordable but, even so, we didn’t compromise on any of our performance requirements for high availability and disaster recovery.”

Mike Mahar
Systems/Network Administrator
Alice Peck Day Health Systems

Staff concerns nearly became reality when a backhoe broke the conduit carrying their fiber and ISDN lines. The ISDN line connecting the medical/surgical facility to the data center, which is located in a campus out-building a tenth of mile away, was partially cut. “We would have been an island, cut off from the hospital,” said Lorraine Nichols, APD director of information services. “We are planning to move our primary data center to the main building, but not for three years. With the EMR deployment eminent, we had to search out alternatives to overcome the shortcomings of our current arrangement.”

Business solution

APD selected an ambulatory EMR suite from Greenway Medical Technologies as its software platform for going paperless in hospital-owned clinics. The roll out would be phased in over six months, preceded by another six months of testing. In answer to the hospital’s requirements for uptime assurance and co-location, Greenway recommended Stratus Avance high-availability software, running on standard x86 servers.

“We have very little space, no server duplication and no ability for split site, which is why Avance software interested us,” said Nichols. “We worked with a couple partners to come up with a VMware-based solution, but it wasn’t fully automated and required cluster replication. Avance had virtualization built right into the product, something we had never seen before. EMR modules run in virtual machines on just a couple servers with the assurance of high availability.”

Avance software automatically sets up on two servers to create a virtual, high-availability computing platform. APD's Greenway EMR software runs on a primary Avance platform in the hospital building and a secondary platform in the data center. The software manages all the computing resources available to it, and works to detect and prevent outages preemptively. Even when hardware fails, the Avance real-time duplex-server architecture ensures that applications operate uninterrupted, with no data loss.

Data is replicated between the two server nodes and between the primary and secondary sites in near real-time. If desired, the two servers comprising an Avance platform can be separated by up to 5 km. "Automated

solutions like Avance make network administration easier," said Mike Mahar, APD systems/network administrator. "The software was very affordable but, even so, we didn't compromise on any of our performance requirements for high availability and disaster recovery."

Nichols and Mahar are looking forward to a major EMR software release from Greenway in a few months. Performing that upgrade on one Avance platform node while the current software version continues to provide services to its network of clinics will be an important test. "Software upgrades and patching can be nerve-wracking. I expect we'll receive the same solid support from Greenway and Stratus that we've experienced so far."



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Business Impact

Greenway's Practice Management was the first module to go live, in April 2011. By year-end all eight clinics will access E-prescribing, messaging, online charting and documentation. Had the EMR system been in place in 2010, records for 40,000 clinic visits would have been captured electronically in place of paper files. These numbers are expected to grow. EMR deployment on the Avance platform went as anticipated. "We had only one hiccup, which ended up being a configuration issue between the primary and secondary platforms," said Mahar. "The response from the Stratus support guys was very impressive. They were knowledgeable and helpful."

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Mike Mahar
Systems/Network Administrator
APD

With the ambulatory electronic health records system operational by the end of 2011, APD is already targeting other areas high availability computing services. The IT department's plans call for adding HA to the hospital's HIS system.

GREENWAY

www.greenwaymedical.com

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