Boone County Health Center runs faster with Infinio

Regional hospital improves VDI performance at one-third of the cost, no new hardware and no complex install

Background

The Boone County Health Center is a general medical and surgical hospital serving Boone County and six additional counties in eastern Nebraska. Used by the vast majority of the Health Center's employees, including physicians, nurses, receptionists, administrators and business workers, virtual desktop infrastructure (VDI) is at the core of the facility's IT infrastructure.

Boone County Health Center's IT team needed a solution to improve the response times of virtual desktops during their peak times of morning usage when most employees log on for the day. Employees access electronic medical records (EMR), business reports, financial data, email and other essential applications required to manage daily operations and provide optimum patient care. Some medical staff and administrators occasionally log in from their homes on personal devices such as laptops or iPads. The Health Center initially considered purchasing an add-on all-flash array for the VDI to help eliminate slow response periods during boot storms. However, before making this type of investment, the Center wanted to explore other alternative solutions.

IT Environment

The Boone County Health Center's IT infrastructure, which includes 50 virtualized servers, hosts about 140 employee VDI sessions per day, with most employees logging in and out during the same periods. The storage environment includes a NetApp array with a capacity of 20TB, in operation for more than three years.

Challenges

Starting at 6:30 a.m. each morning, a handful of users log into their desktops. By 8:30 a.m., the Center experiences a major boot storm, with more than 140 employees logging in for the day. Desktop latency, typically at one to three milliseconds (ms) during other periods of the day, spiked as high as 17-18 ms, often resulting in slow or locked personal computers (PCs) that interrupt operations at the facility. User frustration grew as latency increased, and having to log off and restart VDI sessions each day delayed patient care and other critical aspects of operations.

COMPANY
Boone County Health Center

INDUSTRY
Healthcare

BENEFITS

- Reduced the boot storms and smoothed out the latency spikes

- Improved end-user VDI experience

- Offloaded 90 percent of I/O requests

- Eliminated the need to purchase a $65,000 array

- Decreased troubleshooting and support calls during peak usage times

"Infinio solved our problem at one-third of the cost, with no additional hardware and no weeklong install."

JUSTIN BLEICH
DIRECTOR OF MIS,
BOONE COUNTY HEALTH CENTER

Evaluating Infinio

The IT team was tasked with improving and stabilizing VDI performance during the critical four hours of the morning. The team started with an evaluation of an add-on all-flash array that would be a major capital expenditure of $65,000. Aside from the significant financial investment, this option presented a large time commitment with a weeklong disruptive installation expected.

When Infinio emerged as an option, Boone County Health Center liked everything it heard. After a simple 30-minute installation on four VMware ESXi hypervisor hosts in a cluster that supports virtualized desktops, the IT team observed an immediate improvement in the VDI performance and more satisfied users. The Center was able to continue using its existing NetApp array, extending its life while providing more flexibility on adding performance to the environment.

The results with Infinio

Boone County Health Center achieved its goal of improving performance of its VDI environment during the day's most taxing periods, at just one-third of the anticipated cost of a new array. Infinio extended the results of its existing storage system without the financial or time investments expected with most hardware-based solutions. As the number of service calls went down dramatically, the IT team could begin to focus on other strategic projects. "The number of 'slow' calls we get during peak time has decreased by 90 percent since we adopted Infinio," said Justin Bleich, director of MIS and security officer at Boone County Health Center.

"We deployed Infinio Accelerator into our 140-user VDI environment with an existing NetApp back-end storage system. After a quick, easy install, we immediately saw the results. By offloading 90 percent of input/output (I/O) requests from our VDI environment, which freed up much needed I/O for our servers, Infinio eliminated the boot storms and smoothed out the spikes, greatly improving the end-user experience. Infinio is a great alternative to expensive, hardware-based solutions; it helped us avoid a $65,000 storage upgrade and extended the life of our existing storage, while giving us more flexibility for adding performance to our environment, " he said.

"Our VDI is used by about 95 percent of our staff, and is most critical for our clinic and nursing floors, where the desktops are used to access electronic medical records, email and other essential applications. It's the heartbeat of our facility, so we go as it goes," Bleich said. "Before adopting Infinio, the latency spikes during boot storms would ripple through the system and slow our end users, hanging up machines and prompting us to start new sessions, which overall increased wait times for our patients. Infinio solved our problem at one-third of the cost, with no additional hardware and no weeklong install."

To learn more about Infinio Accelerator, contact us at 617. 374.6500, visit us at www. infinio.com, or follow us @infinio.

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