Small Town, Big Tech: Simplifying Our Healthcare Technology with Nutanix

by Derek Sailors

McCook, Nebraska, is the epitome of rural. The population is less than 8,000 in the city and around 10,000 in the county. The two nearest large cities, Denver and Omaha, are more than four hours away. As in most remote locations, things tend to arrive slowly to our community. But in at least one instance, we are light years ahead of some of the biggest cities in the country.

Wherever there are people, there are medical needs. And McCook Community Hospital, a 25-bed, critical care facility, strives to meet the needs of our rural community as best we can. We provide service to more than 30,000 people in southwest Nebraska and northwest Kansas. We render acute emergency care and long-term services like rehabilitation programs and obstetrics. We are also one of the few critical care hospitals in the United States with comprehensive radiation treatment facilities for cancer patients.

One of the limitations of our remote operation is the inability to attract full-time specialists in a number of fields. As a result, our patients may be forced to receive treatment from someone who is admittedly not an authority on a particular condition. As part of our effort to attract more specialists, we recently completed an $14 million specialty clinic. This project was created to entice new visiting physicians, bringing their knowledge to our community on a rotational basis. That allows us to provide the expertise our patients require without needing to compete with larger cities.

As a 12-year employee of McCook Community Hospital, I can vouch for the hospital's commitment to the best quality service. I began my career here as a help desk technician in 2008. In that role, I was responsible for Windows desktop installation and administration. I also looked after the support services related to a number of other software products.

My responsibilities have grown since then, along with our technology environment. I currently serve as the Director of Information Systems and the Information Security Officer. I am responsible for budgeting, project management, network operations, security, data center operations, software deployment, and other areas of IT. I supervise an office with nine people including myself, mostly technical analysts and clinical analysts.

We take advantage of the latest technologies to help us compete with the service outcomes of larger, better-funded facilities. The challenge is identifying the specific tools that will make a notable difference in our operations.

When Technology Becomes a Barrier to Healthcare

Three years ago, our IT environment was very different than it is today. There was a great deal of inconsistency between our various desktops. Every time we sent our team in to troubleshoot a problem, they almost always found a unique cause. We also had issues with hardware failure. Just about every time we did monthly generator tests we discovered fried hard drives or motherboards.

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Perhaps most troubling, we were increasingly unable to respond to the needs of our users. Static desktops limited the ability of our medical staff to move around the hospital without information disruptions. Any moments that doctors and nurses spend trying to access patient information are moments that could be better spent treating the patient directly. We knew that any future architecture had to provide our staff with the freedom to work seamlessly.

These requirements led us to a number of options. We gave careful consideration to unique solutions from several companies, including Cisco, SimpliVity, and Dell EMC. But our reason for choosing a provider ultimately had nothing to do with technology.

We selected Nutanix because they were the only company that would drive to southwest Nebraska to shake my hand. The willingness to develop a personal relationship still goes a long way out here. It also made us question whether we could trust the customer services of a vendor who couldn't make such a gesture, and whether or not they would be committed to our long-term success.

Making Strides with VDI

When we selected Nutanix, we had our eye on their virtual desktop infrastructure (VDI) solution, so we were excited to move forward on that.

The first stages of our VDI deployment began in our patient wing. These more demanding users created the perfect opportunity to introduce the organization to the benefits of VDI on Nutanix Hyperconverged Infrastructure (HCI). It was a hit with the medical staff who provided direct patient care, and their satisfaction gave us the confidence to push virtual concepts into other areas, such as our laboratories.

Since everybody has been happy, we are moving quickly toward full adoption.

We used Nutanix Move to migrate from our old converged infrastructure. The downtime during migration can be a big source of frustration for staff. Move made the entire process much simpler, and anything that speeds up that process helps us achieve greater customer satisfaction.

Right now we have two VDI clusters. The first cluster sits inside our data center where we use a great mix of the Citrix virtual app and desktop. This is our primary production cluster. We also have a second disaster recovery (DR) cluster located at another location.

We can now deliver better user experiences through VDI and enjoy more efficient management and administration. It's been an absolute game-changer for our hospital. Our doctors and nurses can go in and out of patient rooms all over the hospital with minimal disruptions. Switching users is incredibly fast, allowing medical professionals to focus on patients instead of worrying about accessing information.

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In addition to VDI, we use a mixture of Nutanix AHV and VMware ESXi. We find that the AHV environment gives us a powerful amount of flexibility. We can run almost any virtual machine we need, wherever we need it, which saves us a lot of headaches and frustration. In addition, the system is very low maintenance. I don't spend a lot of time managing the resource, and Nutanix has wonderful support as well.

Realizing the Results

Our actions throughout the global pandemic is a great example of how our VDI preparations improved our operations. In April 2020, we received the order to begin moving some of our staff into home offices. Within two days, we already had the infrastructure in place to connect close to 60 people remotely. Best of all, they were connected from within our existing security networks. That was a huge win and made us rock stars for a few days.

But even apart from pandemic circumstances, our Nutanix system offers a number of everyday advantages. I have been in IT for 15 years, and I have never managed an easier system than Nutanix. We cut our maintenance costs exponentially and saved a lot of money on hardware.

We're also saving human resources. Before Nutanix, we needed a number of specialists in different areas of network management. Today, we can have one person manage the entire system. That is a vast

improvement in efficiency, which is especially important for our remote hospital.

Our end users have seen a number of benefits as well. A recent help desk survey revealed that we get fewer complaints now. We also get more positive feedback on our systems. Our users like that they don't experience anywhere near as much downtime for upgrades and other repairs.

Last but not least, we're particularly proud of our desktop login time, which proves that not everything moves slowly here. It takes about 17 seconds for a new user to get up and running on a desktop—probably one of the fastest times in Nebraska.

Future-proofing with Nutanix

I have never been a person who likes putting all my eggs in one basket—especially when dealing with vendors. However, our results have been so remarkable that we've made plans to move our entire system to Nutanix. We have already started charting out our legacy systems toward that goal.

As part of this future-proofing, we have invested heavily in technologies for our data center and virtual desktops and look forward to seeing what the future holds for other cloud-based products. Given the company's growth, we feel confident that Nutanix will continue to innovate for a long time.

Nutanix's commitment to the best quality service matches our own. In the past, we've dealt with a number of third-party software and hardware vendors that resisted compatibility with VMware. Nutanix was willing to go to bat for us in convincing these companies to work with the changes. That level of customer service is a great advantage over forging ahead alone.

> **Situations can change fast in a hospital, and users need the most efficient information delivery mechanisms possible. #NutanixStories**

Situations can change fast in a hospital and Nutanix has given us the most efficient information delivery mechanisms possible. Doctors and nurses now have free rein over the facility, with the ability to log in anywhere in a matter of seconds. Even better, they rarely have to suspend their activities due to downtime or inconsistent desktops.

McCook Community Hospital may be smaller than other healthcare organizations, but we're running technology that some of the big guys aren't even running yet. It makes us feel like we're pioneers, and we couldn't go on this adventure without Nutanix.