Keeping It Simple and Saving Money with Nutanix

by Dave Riesen

There's a scene in the 2002 TV series, "Firefly," where Captain Malcolm Reynolds, ducking under bullets, says, "It never goes smooth. How come it never goes smooth?" My life may not be anything like a space western, but I do know a thing or two about things not going smoothly.

In my 18 years of IT experience, I have been part of a number of solution deployments. No matter the size of the project, nothing ever goes perfectly. In every single case, there was a snag—until now. For the first time in my career, I experienced a cost- and time-saving solution that was deployed seamlessly.

Like many journeys, the first step was the hardest.

I began working with Hallmark as a consultant and became a full-time employee a year ago. Hallmark Tubulars has been in business for 40 years, providing premium OCTG, linepipe and field running services to support the Canadian energy industry. Hallmark maintains key relationships with domestic and global steel mills, operates a 47 acre service centre in Nisku, Alberta and provides field running services for the installation of OCTG across Canada. Hallmark's service model is designed to guarantee integrity from manufacturing through to installation at the wellsite.

> **Implementing the best IT solutions helps companies meet their needs—and their customers' needs. #NutanixStories**

I have always been committed to keeping current with IT trends. This is necessary to best serve Hallmark Tubulars' needs, as well as those of our customers. As a one-person IT department, implementing the best trends and solutions helps make my life easier as well. But sometimes when it comes to the newest solutions, there's more than meets the eye.

Never Too Late to Change Course

At some point, every modern company faces the same decision: either invest in an updated version of an existing architecture, or choose a more modern setup. For most of its recent history, Hallmark used a traditional physical infrastructure, but around the time of my arrival, the company was at the beginning of its migration to the cloud. From their perspective, this was a great way to reduce costs.

I wasn’t convinced, and decided to do some digging. It was true that at first glance, moving to the cloud was clearly a less expensive alternative. When I looked closer, however, I saw that the figures provided did not account for growth. If we stuck to our existing growth trajectory, within a year or two, we’d be spending more of our budget on technology than before.

In addition, the budget projections seemed to assume that we wouldn’t actually use the servers. Sure, we paid a standard fee, but what would happen when we begin to download data from the cloud? None of the figures seemed to account for these costs.

Once I considered the options, I knew we wouldn’t get what we needed in the cloud. The problem was, Hallmark and our technology partner had already begun the journey toward cloud-based infrastructure. Changing lanes now would cause extra aggravation and more than a few headaches. Despite this, I stood my ground. What we needed was hyperconvergence, and I knew just the solution for it.

I came to Hallmark already familiar with Nutanix. I had experienced a few of their products firsthand, and more importantly, I knew they had a lot more to offer. While there were some other hyperconvergence solutions on the market, none of these had the track record and stability of Nutanix. I thought going with Nutanix was a pretty safe bet.

The Difference in Deployment

We began our rollout early in 2020. Our plan was to handle the migration of the server and network at the same time in one holistic infrastructure. We also added some extra layers to enhance our network security and made improvements to our office VPNs.

We couldn’t have known the havoc that the coronavirus pandemic would create, but we were already planning to enhance our remote operations because they were still using incredibly slow MPLS links. Since we were already making changes, it made sense to switch these over to the internet via site-to-site VPNs. This choice led to immediate benefits; right after the switch, the shift to more remote work required additional bandwidth. I don't even want to think about facing COVID-19 with our old remote setup and security.

As for the actual migration, we first installed Nutanix and then used Nutanix Move to relocate the VMs. We started with the non-critical servers and then took the time to verify the process and results. After we were assured everything worked as promised, we then migrated the critical servers. The whole process took about a month.

In fairness, I took a month, not Nutanix. Move created a snapshot of the VMware-based system and then transfer it over to Nutanix. It took a matter of minutes to spin up the new system and shut down

the old operation. The process was seamless.

It was so seamless, in fact, that I spent most of the migration period—and afterwards—assuming that something was wrong. The process was so fast and so simple, I figured it was too good to be true. As Captain Reynolds said, it never goes smoothly, and in my experience, he's right. This time, however, we both were wrong. This time, there was no snag.

Even once the new system was running, I was almost convinced that we were somehow still running solely on the old hardware. This was partly because we established a hybrid situation where VMware and Nutanix ran simultaneously. After we began a series of updates, though, we received confirmation that the migration did occur: Our VMware system took multiple hours to update, while Nutanix completed the same update in an hour. After about a month, we were so confident in our new solution that we ended the hybrid setup.

Multiple Solutions Working As One

Nutanix required very little customization and worked well with our other software products from the beginning. AHV runs on a separate network from our server and workstations. In only a few minutes of configuration, it ran perfectly on the new network. We also had no problem getting Xi Leap up and running for disaster recovery.

Backups aren't the same as true disaster recovery. #NutanixStories

Some people treat backups and disaster recovery as the same thing, but I do not recommend using the two interchangeably. Backups typically run at night and cover an entire day's worth of data. Xi Leap allows us to replicate our servers every two hours without disruption. We previously used VMware's Site Recovery Manager, but decided that we wanted to increase the replication frequency. Some companies may be able to get away with only replicating once or even twice a day. We like the comfort of knowing that there will be minimal data loss in the event of a catastrophe.

XI Leap gives me alerts whenever a replication period is missed. Maybe the transfer rate is going too slow or some other disruption is preventing the backup. Whatever the problem, I don't want to find out after a disaster. The alerts give me a chance to investigate any problems before an emergency happens.

The other thing I love about Nutanix is that they have an innovative UI approach to design. Nearly every operation within their system can be accomplished within three or four clicks. When using VMware for example, testing the environment used to take a long time to set up. The actual test worked just fine, but it consumed so much time that I came to dread the operation. With Nutanix however, a few quick

clicks achieves the same result.

Undeniable Results

Even with an easy transition, the big question is always, "Was the change worth it?" The resounding answer is yes.

Prior to Nutanix, our infrastructure took around 13U in our server rack. Right now, we are only using 3U. That is a significant savings in both space and power. Additionally, common IT tasks like load balancing and UPS usage are now simple. Updates take only a fraction of the time they used to take. I doubt the rest of our staff appreciates the hard work that Nutanix does in the background, but I do. Now that my tasks are faster and easier, my load has definitely gotten lighter.

Because of my experience with Nutanix Move and Xi Leap, I am already looking for more solutions we can put in place to simplify our operations. At the top of my list is Nutanix Frame, which would allow me to create a VDI environment.

I occasionally think back to my discussions with peers before the migration began. Everyone told me to stick with VMware because it was a safe option. Maybe I just like living on the edge, but I have no regrets. And once we got Nutanix running, the only clouds I hear about are the ones in the sky.