

Ease of Management and Superior
Support Model Convince Energy
Provider to Move Citrix and Other
Enterprise Workloads to Nutanix



Black Hills Energy Re-Energizes IT with Nutanix Enterprise Cloud and AHV

CHALLENGE

Black Hills Energy deployed virtual desktops for all internal users in 2011, using Citrix XenDesktop and traditional servers and SAN storage systems. When it came time for an infrastructure refresh, Black Hills' IT team made the decision to upgrade to Nutanix. "Nutanix was recommended to us by our Citrix partner, Choice Solutions," noted Paul Farrell, Senior Manager of IT infrastructure at Black Hills Energy. "We also looked at storage and server solutions from competitors, but after reviewing all offerings, we made the decision to run a POC on Nutanix."

Why Nutanix?

"Nutanix has several distinct advantages over the other solutions, but the biggest one for us is their support model," noted Farrell. "Unlike other vendors, the Nutanix Support organization is based in the United States. Most of the other vendors have a 'follow the sun' model of support. We have worked with those organizations before, but the language barriers created a lot of challenges when troubleshooting issues or asking questions. Having a 100% US-based support team was one of the leading factors in our decision to go with Nutanix."

Another reason that Black Hills decided to go with Nutanix was its stellar company reputation. "Nutanix is well known in the industry as an R&D leader," Farrell explained. "We always start our search for new infrastructure solutions by looking at the Gartner Magic Quadrant. We identified the 3-4 vendors in leaders' quadrant, and started our investigation there. Since Nutanix was just named a leader in the Gartner Magic Quadrant for Integrated Systems for the second year in a row, we chose them for the POC."

SOLUTION

After a successful POC, Black Hills purchased six Nutanix 3000-series blocks for its Citrix environment. The Nutanix Enterprise Cloud systems were deployed in an active-active configuration in both Black Hills datacenters. "We outsource to two colo facilities in Nebraska and Wyoming. By moving to Nutanix, we were able to use much less rack space and avoid higher colo costs in the future," said Farrell.

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- Paul Farrell, Senior Manager of IT infrastructure, Black Hills Energy

"We brought Nutanix in to replace traditional server blades and SAN storage in our existing Citrix XenDesktop deployment," Farrell said. "We now have 13 nodes in each datacenter, and each node can host a maximum of 70 sessions, so that's about 1,800 total users. Our highest water mark was 1,203 concurrent VDI sessions in December 2016, with 2,231 unique users logging into a VDI desktop at least once that month. They are running much more reliably on the Nutanix platform."



In addition to the systems used for VDI, Black Hills deployed a separate cluster in each of its two data centers for the company's Genesys call center application. "Our customer call center is used by 1.2 million utility customers," said Farrell. "All of our customer contact center IVR and phone systems now run on Nutanix. We also have a separate Nutanix cluster that runs systems for managing our electric utility, and soon to be our gas utility. Those systems have strict regulatory requirements, so we decided that the best approach was to run them in an isolated environment that isn't sharing resources with our corporate infrastructure. It makes it much easier to demonstrate NERC compliance during an audit when the systems are truly isolated."

Moving to AHV

Black Hills ran Citrix XenDesktop and a competitor's hypervisor on the Nutanix systems for nearly two years. But when they started experiencing instability and a number of unplanned outages, they made the decision to move everything to the Nutanix AHV hypervisor. "In addition to the stability issues, the competitor's hypervisor was a challenge from a management perspective," Farrell explained. "Two of our engineers were spending well over half of their time just managing the hypervisor, instead of supporting our Citrix end users. AHV was able to address the lack of stability, in addition to simplifying hypervisor management."

RESULTS

Easy Deployment

"Deploying the competitor's hypervisor was very time-consuming," noted Farrell. "It wasn't nearly as straightforward as we were led to believe it would be. It wasn't a painful implementation—it just took a lot longer than we expected. The Nutanix deployment was far simpler. We were able to deploy AHV in hours, compared to days with the competitor's hypervisor."

Simple Management

"Before moving to Nutanix, we had to use several different consoles to manage our XenDesktop environment. Now we manage AHV and the Nutanix infrastructure from a single console, since it's completely integrated, which saves time and improves efficiency," Farrell explained. "Another huge benefit with AHV is the time it takes to deploy our golden images. We maintain eight or nine different images for provisioned desktops. Our monthly updates were taking well over an hour per image—and sometimes up to two hours—on the previous hypervisor. With AHV, it takes only a few minutes to update each image. That equates to a huge time savings for our IT team."

Obtaining Stellar Tech Support

"Nutanix Support is the gold standard for any technology support that we use," Farrell stated. "They are head and shoulders above everyone else, especially the big companies that we work with. With most companies, you get placed into queue when you call for support, and usually have to wait for a call back. When we call Nutanix, we get someone on the phone right away that's able to resolve our issues. We couldn't be more pleased with the support that we're getting—it's a big differentiator for Nutanix."

NEXT STEPS

After seeing how well the Citrix desktops are performing on AHV, Black Hills decided to move its Citrix XenApp environment from the competitor's hypervisor to AHV as well. "We just received the new systems, so the migration project will be starting soon," Farrell reported. "Our XenApp environment will run on Nutanix in our primary data center, and we will have DR in the secondary data center."

"With all of the management savings we've obtained by moving to the Nutanix Enterprise Cloud and AHV, we can now focus on supporting our Citrix end users, rather than spending all of our time on the underlying infrastructure," concluded Farrell.

COMPANY

Black Hills Energy serves 1.2 million natural gas and electric utilities customers in eight states: Arkansas, Colorado, Iowa, Kansas, Montana, Nebraska, South Dakota, and Wyoming.

INDUSTRY

Energy Provider

BUSINESS NEEDS

Experiencing stability and manageability challenges with existing storage and hypervisor environment.

SOLUTION

- › Nutanix Enterprise Cloud Platform
- › Nutanix AHV native virtualization
- › Prism management solution
- › Citrix XenDesktop and XenApp

BENEFITS

- › Increased virtual desktop stability and improved user experience by moving to AHV
- › Decreased time to perform monthly image updates from up to 16 hours, to just minutes
- › Obtained excellent, US-based support



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Nutanix makes infrastructure invisible, elevating IT to focus on the applications and services that power their business. The Nutanix enterprise cloud platform leverages web-scale engineering and consumer-grade design to natively converge compute, virtualization and storage into a resilient, software-defined solution with rich machine intelligence. The result is predictable performance, cloud-like infrastructure consumption, robust security, and seamless application mobility for a broad range of enterprise applications.

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