

Nutanix Enterprise Cloud  
Platform and AHV Hypervisor  
Simplify Infrastructure  
Management and Eliminate  
VMware Licensing Fees

# Cardinal Innovations Healthcare Standardizes on Nutanix for All Workloads and Use Cases



## CHALLENGE

Cardinal Innovations was using traditional three-tier IT architecture for all of its healthcare applications and services. “Three-tier is actually a misnomer—our IT environment was more like five tiers,” admitted Robert Edwards, Director of Technical Infrastructure at Cardinal Innovations Healthcare. “We were running Cisco Nexus Unified Fabric at the top of the stack. Below that, we had Cisco UCS servers, storage area network acceleration, EMC VNX 5400 storage systems, and VMware’s ESX hypervisor. There were at least nine different products I had to manage, and coordinating all of the separate contracts was very time-consuming.”

Scaling was also difficult in the legacy environment, according to Edwards. “While the 3-tier infrastructure initially sounded great for scalability, all of the components had ‘tipping points’. For example, we could scale our SAN by adding more disks, but at some point the storage processors that sat in the front of that SAN weren’t able to keep up with the additional disks.”

Keeping track of all of the different product versions and ensuring solution compatibility were huge challenges for the IT team. “We had to check a lot of boxes when making changes to the Citrix environment,” said David Leclair, Citrix Architect at Cardinal Innovations Healthcare. “With multiple parts, more things can break, and you pay the price with unhappy users.”

## Moving Quickly During a Merger

Cardinal Innovations merged with another managed care organization in July 2016. “We were given a budget of \$300K for new laptops, software, and encryption licenses for the 215 employees that were coming on board in a few weeks,” noted Edwards. “I wanted to find a better way to use that money than just purchasing laptops—I wanted a solution that was easier to upgrade and troubleshoot in our datacenter.”

The team made the decision to buy Chromebooks for the new users and connect them to the Citrix VDI environment. “With VDI, we could ship pre-configured and locked down Chromebooks to our new users and they could connect immediately,” Leclair explained. Edwards elaborates, “With this approach, we could support the new users much faster, with fewer IT resources, and at a lower cost per desktop.”

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– Robert Edwards,  
Director of Technical Infrastructure,  
Cardinal Innovations Healthcare

## **SOLUTION**

Edwards looked at several hyperconverged solutions, including EMC, Simplivity, and Nutanix. “We rely on IT generalists to manage everything from end-user support to security,” noted Edwards. “With no specialized IT teams for each piece of the infrastructure, moving to a hyperconverged environment was a no-brainer for me, and Nutanix had the most complete solution of any of the vendors we evaluated.”

Cardinal Innovations purchased 21 Nutanix nodes, with a mix of hybrid and all-flash systems. All enterprise workloads are now running on Nutanix, including the company’s MS SQL transactional and reporting databases, SaaS application suite, MS GP Dynamics, MS SharePoint, and MS Exchange environment. “Nutanix is now the de facto standard for our IT infrastructure going forward,” Edwards stated. “We will be consolidating and replacing all of our old infrastructure as licensing on the existing systems expires.”

### **Switching from ESX to AHV**

Cardinal Innovations also made the decision to use AHV, the built-in Nutanix hypervisor. “My expectations for a hypervisor are pretty straightforward,” noted Edwards. “Performance is the #1 criteria, but I don’t want to pay an arm and a leg for high performance over time. I also want a solution where I can quickly rack and stack the boxes, hook up the cables, turn them on, spend only a small amount of time configuring them, and get on with my day.”

Cardinal is using AHV for its Citrix VDI environment. “We were able to eliminate \$50-\$60K per year in VMware licensing costs by moving our VDI deployment to AHV,” Edwards reported. “The reason we aren’t using AHV for our entire infrastructure yet is that we already have VMware licenses. When that renewal comes due, I would love to move away from ESXi. AHV is much easier to manage—it frees up at least 5X of my time.”

## **RESULTS**

### **CapEx Savings**

“We were able to get four decent-sized Nutanix nodes with the budget we had left from eliminating the VMware licensing fees,” noted Edwards. “The math on that averaged out to about \$100 savings per desktop. We can easily support all of our new users on those systems, with plenty of room for growth.”

### **Fast and Easy Installation**

“We installed the Nutanix nodes in less than 30 minutes,” Leclair reported. “The integration with Citrix was very intuitive—it actually felt too easy. Building the image was a little different than the VMware build, but nothing too hard, and it worked great. All of our desktops are performing very well on Nutanix with the AHV hypervisor—everything is really solid.”

### **Simplified Management and Easier Scalability**

“Since it’s a hyperconverged solution, Nutanix reduces the number of vendors we have to work with, streamlining contract negotiations and support,” explained Edwards. “It also makes it easier to get budgets approved because we’re purchasing much smaller bites at a time. I love the ease of administration and Nutanix’s one-click upgrades. The 3-tier legacy environment upgrades always took at least two months to complete. With Nutanix, we’re done within a day.”

## Faster Performance

“We are receiving rave reviews from our virtual desktop users since we moved away from the 3-tier environment with VMware,” Edwards shared. “Nutanix blows those desktops away with its high performance. Our Citrix architect will tell you it’s nothing short of amazing. He simply loves Nutanix and the AHV hypervisor.”

## Great Nutanix Support and Information Portal

“Support with Nutanix is a dream. I really like the ‘Nutanix Bible’ that’s accessible online and the NuSchool training program I attended for free,” Edwards said. “The level of understanding I have on the product really helps me out when I’m standing up in front of executives explaining my purchases.”

## NEXT STEPS

Cardinal Innovations is now replacing its entire data center infrastructure with Nutanix and AHV as the existing 3-tier systems reach end of life. “Nutanix is bulletproof, it performs great, and it’s easier to manage,” Edwards said. “The Nutanix enterprise cloud platform is moving us from being just an IT enabler, to an initiator—it gives us the ability to tell users ‘yes we can make that happen’, no matter what they ask us. I’ve worked with nearly all of the big IT vendors over the years. This is the best infrastructure I have ever been able to build and support—by far. I couldn’t be happier with the Nutanix experience.”



T. 855.NUTANIX (855.688.2649) | F. 408.916.4039  
[info@nutanix.com](mailto:info@nutanix.com) | [www.nutanix.com](http://www.nutanix.com) | [@nutanix](https://twitter.com/nutanix)

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.  
Learn more at [www.nutanix.com](http://www.nutanix.com) or follow us on [Twitter@nutanix](https://twitter.com/nutanix).

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## COMPANY

As the country’s largest specialty health plan, Cardinal Innovations Healthcare serves 875,000 North Carolina individuals who are either Medicaid eligible or uninsured. Cardinal Innovations has a 40-year history of managing community services for people with mental health, intellectual and developmental disability, and substance use disorder conditions.

## INDUSTRY

Specialty Healthcare Insurance Provider

## BUSINESS NEEDS

- › Existing ‘3-tier’ environment was difficult to manage and scale.
- › Recent merger with another managed care organization provided additional budget for upgraded infrastructure.

## SOLUTION

- › Nutanix enterprise cloud platform, with Nutanix hybrid and all-flash systems
- › Nutanix AHV virtualization for VDI, other workloads in the future
- › Nutanix Prism management solution
- › Workloads: Citrix XenDesktop for VDI, MS SQL transactional and reporting databases, SaaS application suite, MS GP Dynamics, MS SharePoint, and MS Exchange environment

## BENEFITS

- › Eliminated \$60K in VMware licensing costs, with more savings anticipated
- › Decreased management by 5X using one UI for the entire stack and all workloads
- › Gained the ability to manage hybrid systems, all-flash systems, AHV, as well as ESXi clusters centrally using Prism
- › Reduced upgrade cycles from 2 months to less than a day with the Nutanix one-click upgrades
- › Eliminated IT silos by consolidating all workloads onto a single platform