

# Nutanix Gives Hastings & Prince Edward Counties Health Unit 50% Faster VDI Performance with Amazing Simplicity

## Company Background

Hastings & Prince Edward Counties Health Unit is a public health agency that provides dozens of programs, services, and reliable health information to a population of about 150,000 people in Eastern Ontario, Canada. Its services include water and restaurant inspections, immunization clinics, and health education.

## Stormy Start to Desktop Virtualization

The Hastings & Prince Edward Counties Health Unit was an early adopter of desktop and application virtualization. The organization ran VMware Horizon with View-based desktops on traditional and brand-name blade servers and SAN. The Health Unit relied on a variety of server and healthcare applications, including Athena Penelope, an advanced client information and case management electronic medical records (EMR) application, SQL Server databases, geographic information systems (GIS), file and print servers, and other office productivity applications.

One of the main problems the Health Unit was facing was inadequate system performance. The daily boot storms and antivirus scans generated a huge surge in I/O demand that significantly slowed down the environments for both desktops and server applications.

The IT staff also wanted to add more virtual desktops, but the performance limitations prevented them from expanding the desktop virtualization solution. Moreover, the team needed additional compute and storage on the server cluster, and the blade servers and SAN had just come out of warranty. In addition to all of these issues, the IT team was preparing for an upcoming move to a new datacenter at a different location. The Health Unit quickly realized that it was a good time to consider a new storage and server solution for the VDI deployment.

The criteria for the new system included greater performance and capacity, higher density on the desktop side, easier management with fewer interconnects, and enterprise-class fault tolerance and uptime. "We need to provide an always-on desktop for our clinical services personnel," said Tom Lockhart, IT manager for the Health Unit. "Unfortunately, that was no longer possible with our previous server and storage systems."

## Achieving Simplicity with Nutanix

Lockhart first learned about the Nutanix Virtual Computing Platform at a Healthcare conference. "The Nutanix Distributed File System architecture really intrigued me," he said. "If you look at a Facebook or Google datacenter, you don't see any SANs. I found it very interesting that Nutanix takes this same model and delivers it expertly and efficiently across all verticals."

The Nutanix Virtual Computing Platform is purpose-built for virtualization and is hypervisor-agnostic. Intelligent data tiering moves data between flash and disk

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### Industry

Government Agency

### Business Needs

Needed new server and storage system that could provide more performance and capacity, easier management, and enterprise-class availability for hosted virtual desktops.

### Solution

- Nutanix NX-1000 Series
- VMware Horizon with View

### Applications

- Athena Penelope EMR
- Integrated VoIP softphones
- Microsoft SQL Server
- Geographic Information Systems
- Infrastructure and productivity applications

### Benefits

- 50% faster desktop performance during peak periods
- 50% faster desktop image recomposes
- 6:1 reduction in datacenter rack space requirements
- Higher availability with a fully fault-tolerant solution



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drives to optimize performance and capacity. The system expands linearly to meet future requirements by simply adding new nodes in a modular fashion. “Most importantly, it does all these things in the background,” said Lockhart. “I don’t need to see the complexity underneath. I know that Nutanix is going to do exactly what it was designed to do without a lot of intervention. Until you actually put your hands on the Nutanix appliances, it is really difficult to comprehend just how easy it is to manage. You need to see a live demo, kick the tires, look at the web interface, and see how easy it is to use and to stand up an NFS datastore or get an ESX cluster up and running on Nutanix.”

## Fast Deployment

The Canadian Health Unit installed a Nutanix NX-1350 with three nodes for hosting all of the virtual desktops. Sizing the solution for VDI was very easy, according to Lockhart. “Our Nutanix team asked us some preliminary questions about the number of desktops, percentage of power users vs. knowledge workers, and a few more statistics,” Lockhart reported. “The proposed solution fit the bill nicely. Getting it racked and set up took inside of an hour. Compared to installing the hypervisors on our old blades, interconnecting all of the blades and SANs, and then presenting LUNs – I can’t emphasize enough how much simpler Nutanix is.”

Lockhart recently purchased a fourth Nutanix node to turn the NX-1350 into a NX-1450. “We really appreciate Nutanix’s pay-as-you-grow model,” noted Lockhart. “We had the 3-node NX-1350 for a year before we needed to add the fourth node in the existing chassis to accommodate more VDI users. It was a 15 minute process and the implementation didn’t impact our end users.”

## 50% Better Performance

After non-disruptively adding another node to their existing Nutanix system, the Health Unit now supports 200 virtual desktops on the Nutanix Virtual Computing Platform, with an average of 140 concurrent end users. Approximately 60% of the deployed desktops are floating and the remaining are persistent in nature, and 70% of the end users are knowledge workers and 30% are power users. A few of the users work from remote locations, but the majority use the desktops from the Health Unit’s six offices across Canada.

Lockhart and his team are now able to support more virtual desktops on the Nutanix environment than they could on the previous storage infrastructure, and desktop performance is at least 50% faster during peak periods. There are no longer any IO bottlenecks during antivirus scans or boot storms. In fact, one of the power users who uses graphics-intensive GIS software recently sent Lockhart an email commenting about the performance improvements: “I’d like to thank you for the changes you’ve made as to how the geographic information system operates. It’s running much more smoothly and there’s a big difference in speed.” Lockhart added, “That sort of email summarizes what I’m hearing across the board from our VDI users.”

The Health Unit’s IT team is now able to spin up and recompose desktops 50% faster with the Nutanix system. “It’s pretty shocking to see that we can spin up desktops so fast,” Lockhart admitted. “That same task took double the time on our previous environment.”

## Reducing Footprint and Power

With Nutanix in place, the datacenter footprint for the Health Unit’s VDI environment has been reduced from 12U to only 2U. Power and cooling requirements have fallen substantially as well. And finally, there have been no downtime or support issues since the installation. “The best post-sales support is none,” said Lockhart. “With Nutanix, we have a cost-effective, fully fault tolerant solution and the performance has improved as well.”

## Relying on Nutanix Prism for Easy Management

Lockhart and his team are using Nutanix Prism to efficiently manage the environment. "The Nutanix Prism interface is very simple to navigate - it is incredibly easy to find what I'm looking for and I get a lot of visibility into what's happening. Having a single pane of glass into our environment is invaluable. We can now support our entire IT environment with just two people. If it wasn't for the simplicity of virtual desktops and the Nutanix Virtual Computing Platform, we would need at least double that number to manage our desktops in a traditional storage environment."

## Partnering with Zycom Technology

Zycom Technology, an IT solutions provider, and the Health Unit have been working together in partnership for several years. Zycom sold the concept of virtual desktop infrastructure solution to the Health Unit. "The predictable web-scale performance of the Nutanix solution has rapidly increased VDI adoption, and enabled government and healthcare organizations, like the Health Unit, to obtain a true virtual end-user platform to maximize health taxpayer dollars", said Terry Buchanan, vice president technology and general manager of Zycom, the 2014 Nutanix Channel Partner of the Year for Canada.

"Zycom has been a great technology partner for us," sums up Lockhart. "I can't stress enough the integrity and honesty of our relationship. They consistently work with us to make sure we get the proper solution that will easily grow when we need more capacity. I know they have my organization's best interests at heart."

## Final Thoughts

"I know convergence is the 'big thing' right now and everybody is trying to do it," Lockhart stated. "But Nutanix has at least a two-year leg up on all of the other vendors trying to get into the converged space. Once you unpack one of the Nutanix boxes and put it into production, you'll never go back to buying a separate chassis, putting blades into the chassis, buying the storage separately, cabling it all together, presenting the storage, and configuring and presenting the LUNs. I know I won't ever go back to traditional storage and servers."

Due to the huge success of the VDI implementation, the Health Unit now plans to migrate the rest of its server applications to the Nutanix Virtual Computing Platform. "It's going to be a lot simpler to move the datacenter - and less that can go wrong because of fewer points of failure," Lockhart concluded. "I am extremely pleased with our decision to go with Nutanix."

### About Nutanix

Nutanix delivers web-scale converged infrastructure to medium and large enterprises with its software-driven Virtual Computing Platform, natively converging compute and storage into a single solution to drive unprecedented simplicity in the datacenter. Customers can start with a few servers and scale to thousands, with predictable performance and economics. With a proprietary elastic data fabric and consumer-grade management, Nutanix is the blueprint for application-optimized and policy-driven infrastructure.

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