



Galion Community Hospital

Galion Community Hospital Consolidates Servers by 11:1 and Reduces Maintenance Costs by 50% with OnX/VMware Architecture

Dedicated to improving the health and well being of its local Ohio residents, Galion Community Hospital is a 25-bed critical access hospital with an additional 10-bed in-patient rehabilitation unit. Though a small hospital in the traditional sense, it has heavily allied itself with physician services and provides office space to more than 20 doctors' practices for the convenience of patients. Whether in emergency, rehabilitation or physician services, Galion Community Hospital is committed to providing Ohio citizens with the very best modern medicine has to offer.

Containing the Server Sprawl

Like most community hospitals, Galion employs a limited staff to manage its mission-critical IT infrastructure. In 2008, with nearly 50 aging servers, day-to-day management was becoming increasingly challenging for the hospital's systems administration team of two.

"Nearly every day, we had a hardware issue that had to be resolved," explained Alex Reed, network and security administrator for Galion Community Hospital. "We were struggling to keep pace with routine maintenance – let alone patching and proactive management."

In addition, with its air conditioning units running at full throttle 24 hours a day, the hospital was no longer able to efficiently cool its data center room and was becoming pressed for space. With significant implementations on the horizon – including both physician and hospital electronic medical record (EMR) systems, it was a critical juncture for the IT department.

"We had to figure out how to wrap our arms around the environment," said Reed. "We could replace our aging servers and continue down the path of server sprawl or we could consolidate with virtualization. The choice was easy."

Having recently turned to OnX for a storage area network (SAN) solution, the hospital once again engaged OnX to help design its virtualization solution.

Designing a Virtual Infrastructure

In order to create a custom virtualization roadmap, OnX Professional Services conducted a detailed assessment to gauge the existing servers' performance and capacity. The results revealed that 33 of the hospital's servers were ideal candidates for virtualization, with an average CPU utilization of only 4% and average memory utilization of 43%.

"There was more computer power in the data center than was actually required, but there was no way to dynamically move that power to the servers that needed it," said Dave Wagner, account executive for OnX. "Virtualization would allow the hospital to pool its IT resources, distribute them as needed and fundamentally change the economics of its data center."

In fact, OnX determined that 33 of the hospital's servers could be migrated to just three VMware 3.5 ESX hosts – with a potential consolidation ratio of 11:1.

With approval to move forward, OnX implemented three HP Proliant DL380s, configured them as VMware hosts, and migrated the hospital's 33 servers to virtual machines. OnX then worked closely with Galion Community Hospital's IT staff to ensure the team could troubleshoot, re-build and accurately assess ongoing performance within the new environment.

"OnX's depth of VMware expertise was impressive, but what was even more appreciated was each architect's willingness to share that knowledge and validate that we could seamlessly expand upon and manage this environment after they left," said Reed. "The virtualization effort was the smoothest

IT initiative I've ever been a part of at the hospital."

Reducing Cost of Ownership, Improving Management Efficiency

With its VMware architecture in place, the hospital was able to immediately consolidate 33 servers to just three physical hosts and achieve an 11:1 consolidation ratio that has continued to grow. Today, more than 50 virtual servers support hospital applications including e-mail, SQL databases, domain controllers and the hospital's mission-critical picture archiving and communication system (PACS).

Over the past year, the hospital has achieved significant benefits from its virtualized environment, including:

- **Improved management:**

According to Reed, ensuring that the hospital's core systems remain up-to-date is significantly easier in the new environment. Not only are administrators able to keep pace with patching, but performance is no longer a concern. "If we are alerted that memory is running low on a particular server, we can dynamically assign more resources to it in seconds," explains Reed. "We can also clone and isolate servers for test and development - a huge savings in time and money."

- **Rapid provisioning:**

In the old environment, it took the hospital an average of two days to provision a new server - if the requisite hardware was available. If servers had to be ordered, the process could consume as much as a month. Today, according to Reed, he and his team can provision a server in an hour.

- **Power and space savings:**

Though the IT department is not billed separately for power, Reed has observed a noticeable improvement in energy consumption. "Our air conditioners, which used to run at capacity 24 hours a day, now alternate shutting off. They are getting rest when they need it." The new architecture also freed significant space in the data center, initially reducing the number of racks from six to three.

- **Reduced total cost of ownership:**

In addition to "softer" energy and manpower savings, Reed estimates that the hospital has cut its annual server maintenance costs by 50% since moving to the virtual environment.

"With OnX's help, we've truly transitioned from an overcrowded wiring closet to a state-of-the-art data center," said Reed. "We couldn't be more pleased with OnX's work or our virtualized environment."

Most recently, the hospital upgraded its environment to vSphere 4.0 and added two additional hosts to support a new physician EMR system. The hospital is currently implementing VMware Site Recovery Manager (SRM), a tool that will empower the hospital to transfer operations to a secondary data center site with the push of a button. The hospital is also in the midst of implementing a virtual desktop solution.

"Smaller community hospitals shouldn't have to settle for mediocre IT solutions and support," concluded Wagner. "Galion Community Hospital is a class-act when it comes to caring for its patients, and we're thrilled that this care-giving institution now has an IT infrastructure to match."

Solution at a Glance

Industry:

Healthcare

Challenge:

With 50 aging servers, day-to-day management was challenging for the hospital's limited IT staff. In addition, the hospital was concerned about its ongoing energy and space consumption.

Solution:

OnX conducted a detailed virtualization assessment and then helped the hospital migrate 33 physical servers to just three VMware hosts – a consolidation ratio of 11:1.

Results:

With its new infrastructure in place, the hospital has reduced its annual maintenance costs by an estimated 50% and dramatically improved management efficiency. Server provisioning has been reduced from two days to one hour and servers can easily be cloned and isolated for testing. The implementation has reduced energy consumption and freed nearly half of the hospital's data center floor space.

Who We Are and What We Do

OnX Enterprise Solutions is a global enterprise data center solutions provider with a suite of end-to-end solutions including the industry's leading Federated cloud solution offerings. The company designs, builds and manages complete data center environments comprised of multi-vendor offerings in four core areas - Hardware & Software Solutions, Cloud & Managed Services, Digital & Application Services, and Professional Services. Over the past 28 years, OnX has helped clients achieve exceptional business results that accelerate their growth and value. Headquartered in Toronto, Canada, OnX has a team of more than 500 IT professionals, revenues of more than \$750 million, and clients and offices throughout North America and Europe. OnX is a privately held company and majority owned by Marlin Equity Partners of Los Angeles, CA. For more information, visit: www.OnX.com.



Copyright 2011, OnX Enterprise Solutions. All rights reserved. All trademarks and/or service marks are the property of their respective companies.