

Elliot Health System

As the largest provider of comprehensive healthcare services in Southern New Hampshire, Elliot Health System (EHS) prides itself on providing reliable, high quality care for those in need. The system's flagship facility is Elliot Hospital, a 296-bed acute care facility located in Manchester (New Hampshire's largest city). While considered a mid-level hospital in terms of size, Elliot Hospital is on the cutting edge when it comes to technology. The hospital will be 100 percent electronic by the end of 2010 and has virtualized more than 75 percent of its hosts—a significant achievement considering the remaining servers are primarily vendor-owned hardware that cannot be virtualized.

A team of four engineers oversees the organization's VMware and Citrix environments. This small team is tasked with managing 210-plus virtual machines (VMs) that support critical hospital systems such as radiation and oncology, the eChart patient web portal, transcription and dictation services, nurse on-call, one-day surgery, credentialing, pathology lab systems and more.

Across all of these hospital departments, there's one thing in common: there's no room for downtime. Like doctors, nurses and surgeons, critical technology systems are also expected to be available all day, every day. No excuses.

CLIENT STATISTICS

75% virtual environment

210+ Virtual Machines (VMs)

40% reduction in CPU utilization

Requires 24/7 uptime

Challenge

At Elliot Hospital, everyone plays a role in providing superior patient care. The IT team supports doctors, nurses, radiologists, administrators and technicians by delivering fast, reliable access to critical patient information on a 24/7 basis. However as the number of virtualized machines grew, it became increasingly difficult to gain a true global view of the organization's virtual infrastructure using the existing tools within VMware's vCenter.

When the system was running great, everyone was happy. However when a problem arose, it was incredibly difficult to get an accurate picture of where the problem was coming from. Someone would alert the team that an application was running slow. Yet finding the source of the issue could take hours or days. Plain and simple, the team had visibility issues.

"Monitoring 210 VMs with a staff of four is a challenge. We were always reacting to problems. Instead, we wanted to get in front of them," said Thomas Fairfield, manager of technology.

Elliot needed to not only monitor the health of the environment, but also detect availability and performance contention issues across CPU, memory, network and disk I/O. They wanted to better understand relationships so they could better prioritize resources.

Fairfield and his team immediately began evaluating solutions to help them proactively manage their virtual environment. As a non-profit, the team has to fight to spend money, however where they can show value, a purchase can be justified. The team sought a solution that was easy to install, easy to manage within the existing infrastructure, and cost effective.

"Hyper9 has proven a godsend in streamlining the environment and saving management man-hours," Fairfield said. "With one click, we can pull up graphs showing any number of details. This information used to take us hours or days to get. Now we can get it instantly."

Solution—Hyper9 Virtualization Manager

Elliot Hospital deployed Hyper9 3.0 within one hour and quickly began realizing results. The team immediately gained detailed visibility into the health of all VMs—including CPU, memory, disk throughput and disk I/O latency—and is now able to proactively identify, plan and allocate resources across the organization.

As a result of Hyper9, performance levels increased significantly. CPU utilization went from 60 percent to 20 percent and the team has been able to proactively solve speed, latency and bottleneck issues. In addition, they no longer waste valuable time on unimportant issues.

Fairfield has also moved virtual machines among three server clusters to balance out overall CPU and memory utilization and has reduced the number of servers sitting at CPU ready at any one moment from roughly 85 to just one.

And the team has done this with incredible ease.

"Hyper9 is much more user-friendly than alternative solutions. We hold our vendors to high standards. Everyone tells you their product is easy to install and that you don't need training, but few actually live up to the promise. Hyper9 really does," said Fairfield.

In a single-screen, Hyper9 dashboards deliver detailed information that helps the team easily identify trouble spots. Fairfield and his team use the administrator views, but can quickly share information with other stakeholders such as his director, who can easily access the management dashboard for a quick glance of the environment.

Other key features have been the out-of-the-box best practice reports, as well as the alert widgets and trending graphs.



Hyper9 Virtualization Manager enabled Elliott Hospital to gain detailed visibility into the health of all VMs, including CPU, memory, disk throughput and disk I/O latency.

"Hyper9 has proven a godsend in streamlining the environment and saving management man-hours," Fairfield said. "With one click, we can pull up graphs showing any number of details. This information used to take us hours or days to get. Now we can get it instantly."

Over the next two months, an additional 12-20 hosts will migrate to virtual machines, including Elliott Hospital's Exchange server. The team will use Hyper9 to monitor the health of these new hosts and may also expand the solution to address capacity planning considerations.

"We've easily made our money back in the course of just two months," said Fairfield. "Downtime is huge for a small hospital. Being down for four hours is a catastrophe. With Hyper9 we know what to do to prevent these issues from happening."

IT Management Inspired by You.

SolarWinds (NYSE: SWI) provides powerful and affordable IT management software to more than 97,000 customers worldwide — from Fortune 500 enterprises to small businesses. We work to put our users first and remove the obstacles that have become "status quo" in traditional enterprise software. SolarWinds products are downloadable, easy to use and maintain, and provide the power, scale, and flexibility needed to address users' management priorities. Our online user community, thwack, is a gathering-place where tens of thousands of IT pros solve problems, share technology, and participate in product development for all of SolarWinds' products.

solarwinds.com

solarwinds® 

3711 S. MoPac Expressway, Building Two, Austin, TX 78746
T: 866.530.8100 | F: 512.682.9301

©2011 SolarWinds, Inc. All rights reserved. SolarWinds®, the SolarWinds logo, ipMonitor®, LANsurveyor®, and Orion® are among the trademarks or registered trademarks of the company in the United States and/or other countries. All other trademarks are property of their respective owners.