

Organization:

Mid Coast Hospital is a full service, 92-bed, independent, not-for-profit hospital governed by a community Board of Directors. The active medical staff includes more than 160 physicians in over 32 primary care and specialty areas. Mid Coast Hospital is accredited by The Joint Commission, and is recognized as a Magnet™ facility by the American Nurses Credentialing Center for exceptional nursing and patient care.

Virtual Desktop Overview:

VMware® View
ProfileUnity™ FlexApp™
Atlantis ILIO
Cisco® UCS

Overview:

Staff at Mid Coast Hospital in Brunswick, Maine had been dissatisfied with its desktop performance for some time. Traditional PCs badly supported the clinical applications used by staff and required a lot of support. It also was difficult for physicians to access systems from their home computers, and the infrastructure could not easily accommodate the increasing array of personal devices that staff wanted to use to work remotely. When the hospital began construction on a new urgent care facility, the IT leadership had to decide whether to install traditional, physical PCs or to implement the hospital's first virtual desktop infrastructure. It opted for non-persistent virtual desktops using VMware View, Liquidware Labs ProfileUnity FlexApp and Atlantis ILIO storage optimization software running on Cisco UCS servers with local storage.



Mid Coast Hospital: Modernizing Desktop Delivery in Healthcare

The Challenge

Mid Coast Hospital IT department did not have a lot of experience with desktop virtualization when it decided to implement a complete virtual desktop infrastructure for a new facility under construction at a new walk-in facility. Once the decision was made, there was only about 90 days to get the system planned, specified, tested and deployed.

"Things were a bit hectic at the beginning," said Michael Poulin, manager of network services at Mid Coast Hospital. "We had to reach a decision: are we going with our traditional fat clients in the new facility, or should we go virtual?"

The hospital staff set goals for its new system, which were used to help guide their decision. The main goals were:

- Significantly reduce PC downtime;
- Improve the reliability and convenience of remote access, so physicians and other staff could log in from anywhere with practically any device to monitor patient information and perform other tasks;
- Reduce the amount of desktop support required to keep systems running;
- Reduce the overall the cost of the desktop infrastructure;
- Improve upon overall performance and the user experience.

These goals and drivers led Mid Coast Hospital to choose to pursue a virtual desktop strategy, despite having little in-house expertise with the technology. A leading concern was the cost to build a storage system to contain the pools of virtual desktops that would be needed. The hospital engaged with GreenPages Technology Solutions, (www.greenpages.com) a consulting and integration organization that specializes in helping organizations in the healthcare, financial and other industries optimize their IT operations with virtualization and cloud technologies. GreenPages is both a Liquidware Labs (www.liquidwarelabs.com) and Atlantis Computing (www.atlantiscomputing.com) solutions partner.

The Solution

"We decided to go with non-persistent virtual desktops, based on the recommendation from GreenPages," said Poulin. "Non-persistent linked clones have been great. When a user logs off, that session is wiped clean. We don't have to worry about viruses or users downloading anything to the virtual machine that would cause clinical applications to fail, which was something we experienced quite a bit with our previous fat clients."

Mid Coast Hospital runs VMware vSphere 5 on Cisco UCS servers. Mid Coast built its virtual desktop infrastructure using VMware View to create non-persistent linked clones that are stored on a central, virtualized server. Liquidware Labs' ProfileUnity FlexApp user virtualization solution and Atlantis ILIO from Atlantis Computing are integrated with VMware View so Mid Coast Hospital can give users customized desktops that are optimized for efficient storage to deliver an amazing quality user experience. Traditional PCs have been replaced with zero client computers from Dell® Wyse. Virtual desktops can be accessed from mobile carts, nurses' stations and other locations throughout the hospital, and are also accessed remotely by a variety of iPads, laptops and other devices used by physicians and staff.

Users simply login using the View client, which connects them to an available desktop running on the Cisco UCS server. The virtual desktop image (.VMDK) is stored on the Atlantis ILIO using local storage, which both reduces the amount of storage capacity required by 90% and accelerates the performance of the virtual desktops. ProfileUnity FlexApp provides user personalization.

"In order to get the new facility online in three months, we enlisted Atlantis ILIO in order to avoid complex storage sizing and deliver a working environment faster. It solved a key challenge with VDI -- storage," said Francis Czekalski, senior enterprise consultant at GreenPages.



According to Poulin, the storage optimization provided by Atlantis ILIO is “incredibly fast” and allows the infrastructure to handle boot storms, re-compositions, and patching without impacting the user experience.

“The system avoids boot storms. Mid Coast can go from 70 to 120 virtual desktop users, and the 70 users that were already on don’t even know there are 50 more users on the same host,” said Czekalski. “Applications are actually launching faster on the virtual system than they did on desktops.”

When the user logs in, ProfileUnity FlexApp, which does not require separate servers or desktop agents, maintains user profile settings and data, and delivers all user personalization to the virtual desktop, complete with configurations, application data, screensavers, font preferences and more. ProfileUnity FlexApp also supports application portability and virtualization to enable the use of shared-image, stateless deployments.

“We’ve had great success with ProfileUnity FlexApp. It is very efficient at what it does,” said Poulin. “It enables us to customize the user experience because we can deploy INI files as icons and the solution makes it very easy to map drives and printers. There are also a myriad of different features that can be leveraged that we have not even delved into yet.”

ProfileUnity FlexApp is an excellent solution for the environment because it works with any Windows® desktop or server system (plus Citrix® XenDesktop and physical platforms), migrates user-generated data (not just folders), does not require a desktop agent or separate server, and is highly scalable, which Mid Coast Hospital has found advantageous.

“The overall solution allows us to speed up deployments,” said Poulin. “We are able to deploy 70 linked clones per server in 12 minutes, and we can do that on all servers at the same time, letting us scale to an unlimited number of users with no performance impact. When you are able to see vCenter light up with all those virtual machines coming online, it’s pretty impressive.”

The Results

The VMware View deployment on Cisco UCS, leveraging ProfileUnity FlexApp and Atlantis ILIO, delivered the desktop performance at the price point that Mid Coast targeted for this project. ProfileUnity FlexApp makes it easy and affordable to create and manage customized virtual desktops, and Atlantis ILIO makes them very cost effective by addressing storage cost, a main concern of Mid Coast IT staff.

“Storage costs were a key concern for us at the outset. But the new system allows us to manage desktops more efficiently and effectively while reducing overall operational costs and increasing reliability for providers and staff,” said Poulin. He forecasts that, over time, the virtual desktop infrastructure will provide substantial return on investment. Poulin said the desktop virtualization project required roughly the same upfront capital investment as physical PCs would have, but the virtual architecture is resulting in lower total cost of ownership.

“Where we are seeing our return on investment is the operational side,” Poulin said. “With virtual desktops, it is much easier for us to deploy new applications, to make changes on the fly, and get desktops out to our physicians, nurses, and staff very rapidly.”



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