



## Alameda County Medical Center puts Citrix desktop virtualization into practice

“ With XenDesktop, we don’t have to spend time building each desktop or worrying about adding a new resource—everything is automated, and the correct desktop is dynamically assembled each time the user logs in. ”

Dave Bennett,  
Director of Technical Support  
Alameda County Medical Center

Alameda County Medical Center in Oakland, California, serves as the healthcare safety net for the county, providing care to all residents regardless of their ability to pay. The medical center has six campuses that include two hospitals, ambulatory clinics, rehabilitation services and a psychiatric facility. There are approximately 2,700 employees.

### The challenge: streamlining and tailoring desktop delivery to reduce IT workload

Several years ago, Alameda County Medical Center implemented a Citrix application delivery solution to enable an upgrade from its mainframe clinical application to Siemens INVISION. To avoid the cost of purchasing several hundred PCs to replace green-screen terminals, the IT team selected Citrix XenApp™, Enterprise Edition and thin-client devices with the help of **Entisys**, a Platinum Citrix Solution Advisor. “We began publishing a desktop of applications, including INVISION, Siemens’ SIGNATURE practice management solution for the clinics, and Wellsoft’s EDIS tracking system, to our doctors, nurses and other clinical staff,” said Dave Bennett, director of technical support.

As user requirements evolved, the IT team began looking at ways to tailor the standard desktop being delivered to all clinicians and staff. “For simplicity, we created one published desktop with all the applications that the clinical and support staff could possibly require. Unfortunately, even if they didn’t use all these applications, people tended to click on the icons to see if the applications would work—and call helpdesk when they didn’t. This situation added to our workload—and with multiple campuses, we were already stretched very thin. We needed to find an easier way to build and deliver customized desktops with only the applications each person needed to do their job.”

## Key Benefits

- Simplifies and controls desktop delivery to benefit users and IT
- Supports rapid disaster recovery with server virtualization and provisioning
- Reduces IT administration with centralized management
- Lowers costs with thin clients vs. PCs and less server hardware



## Networking Environment

- Citrix XenApp™, Enterprise Edition running on 12 Dell 2950 servers
- Citrix® XenDesktop™ Platinum Edition
- Citrix® XenServer™ Platinum Edition
- Citrix Provisioning Server™ for Datacenters
- Microsoft® Windows Server® 2003
- IGEL and Wyse thin clients

## Expanding the Application Delivery Infrastructure from Citrix

When Citrix introduced Citrix® XenDesktop™ for desktop virtualization, Alameda County Medical Center decided to add this solution to its application delivery infrastructure. Bennett selected the Platinum Edition of XenDesktop to enable delivery of tailored, virtualized desktops to about 200 users.

In addition, the medical center turned to another Citrix solution—server virtualization—to support a planned disaster recovery site. “We have a small datacenter located about 13 miles away from the main campus that we want to use for disaster recovery,” said Bennett. “To save money and optimize flexibility, we decided to implement Citrix XenServer and Citrix Provisioning Server for Datacenters. Virtualization will reduce the amount of server hardware needed in the failover site, and will accelerate server provisioning during an interruption.”

## Policy-based desktop virtualization enhances IT control, efficiency and flexibility

Bennett looked at XenDesktop as a way to leverage the existing Citrix XenApp environment, but manage it more easily and efficiently with a small IT staff. “XenDesktop offered us the ability to use policies to tailor desktops to the particular needs of different users. We can provide a basic desktop and then specify the required applications for each user or group of users. For example, based on policies, registration clerks will get all the applications and resources they need—but no more. With XenDesktop, we don’t have to spend time building each desktop or worrying about adding a new resource—everything is automated, and the correct desktop is dynamically assembled each time the user logs in.”

With XenDesktop, policies can also be applied to control the user’s environment, such as limiting the ability to upload files if the user is connecting from a home PC, to support confidentiality of medical information.

He added, “And Citrix technology has improved the performance of our picture archiving and communications system, or PACS, enabling us to include it and any other problem application together with XenApp hosted applications in the virtualized desktops. XenDesktop gives us more flexibility in what we can deliver to our users, and avoids the need to run applications locally.

“Overall, Citrix enables us to accomplish more with the staff we have. In fact, without the centralized management capabilities of XenApp and XenDesktop, I would need twice as many people.”

## A consistent user experience on any device

With Citrix virtualization technology, the medical center’s employees can access their desktop from any device in any location, such as a cart on wheels or a PC in a doctor’s home office. “Some of our doctors want to connect remotely in order to work outside the medical center,” said the IT director. “XenDesktop supports that by delivering a desktop with same look and feel they are used to in the hospital.”

## Applications Delivered

- Siemens INVISION clinical system
- Siemens SIGNATURE practice management solution
- Wellsoft emergency department information system
- Siemens Syngo Imaging picture archiving & communications system (PACS)

Another benefit of XenDesktop will come into play when Alameda County Medical Center begins rebuilding a portion of its main hospital to meet earthquake standards. During construction, only a limited number of staff will be able to work on the main campus, and many will have to be relocated to remote sites. “XenDesktop will help facilitate this project because we can centrally deliver desktops anywhere, with the same user experience. We expect this to ease the disruption for employees and my IT team.”

## A cost-effective solution for server virtualization

In addition to providing flexible, consistent access to applications during normal operations, Alameda County Medical Center is working to ensure uninterrupted delivery in the case of a disaster. With Citrix®- XenServer™ and Citrix Provisioning Server™ for Datacenters, the organization not only will benefit from rapid provisioning of virtual servers in its new failover center, but is saving money in the process.

“Public hospitals today face severe financial challenges, so any time I can get more bang for the buck I need to do it. We compared XenServer to the competition and found that we could achieve the same results but at a definite price advantage. I estimate we saved 30 or 40 percent with XenServer, and we got the Platinum Edition to boot.”

Bennett concluded, “We have had phenomenal success with Citrix products and now we are expanding on that success with desktop and server virtualization. Citrix is changing the way we look at application delivery and opening new doors for the medical center.”



### Worldwide Headquarters

Citrix Systems, Inc.  
851 West Cypress Creek Road  
Fort Lauderdale, FL 33309, USA  
T +1 800 393 1888  
T +1 954 267 3000

[www.citrix.com](http://www.citrix.com)

### Americas

Citrix Silicon Valley  
4988 Great America Parkway  
Santa Clara, CA 95054, USA  
T +1 408 790 8000

### Europe

Citrix Systems International GmbH  
Rheinweg 9  
8200 Schaffhausen, Switzerland  
T +41 52 635 7700

### Asia Pacific

Citrix Systems Hong Kong Ltd.  
Suite 3201, 32nd Floor  
One International Finance Centre  
1 Harbour View Street  
Central, Hong Kong  
T +852 2100 5000

### Citrix Online Division

6500 Hollister Avenue  
Goleta, CA 93117, USA  
T +1 805 690 6400

### About the Citrix solution

Citrix XenApp™ is the industry's de facto standard for delivering Windows®-based applications with the best performance, security and cost savings. Citrix® XenDesktop™ allows customers to virtualize Windows desktops in the datacenter and deliver them on demand to office workers in any location. Citrix® XenServer™ is an enterprise-class solution for virtualizing application workloads across any number of servers in the datacenter as a flexible aggregated pool of computing resources. All are members of the Citrix Delivery Center™ product family. Citrix Provisioning Server™ enables IT organizations to dynamically stream datacenter and desktop operating systems and workloads to both virtual and physical machines from a central location.

©2009 Citrix Systems, Inc. All rights reserved. Citrix®, Citrix Delivery Center™, XenDesktop™, Citrix XenApp™, XenServer™, and Citrix Provisioning Server™ are trademarks or registered trademarks of Citrix Systems, Inc. and/or one or more of its subsidiaries, and may be registered in the United States Patent and Trademark Office and in other countries. Microsoft®, Windows® and Windows Server® are registered trademarks of Microsoft Corporation in the U.S. and/or other countries. All other trademarks and registered trademarks are property of their respective owners.