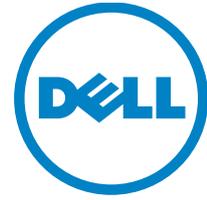


# Thomas College provides students with Dell, Intel and Microsoft technologies, while reducing server footprint by 50%



- Backup/Recovery/Archiving
- Consolidation
- Power & Cooling
- Virtualization



“Windows 7 is well received here. It helps our students be more competitive during the hiring process.”

*Christopher Rhoda,  
Vice President for Information Services,  
Thomas College*

## Customer Profile

Company:	Thomas College
Industry:	Education
Country:	United States
Users:	1,100 student users; 150 staff users
Web:	www.thomas.edu

## Business Need

Thomas College's IT department needed a simplified system that would allow it to provide cutting-edge laptops, desktops and portable computers to the school while managing the data center more efficiently.

## Solution

The school migrated to Microsoft® Windows® 7 on Dell™ Latitude™ laptops and Dell OptiPlex™ desktops while virtualizing servers on Dell PowerEdge™ servers with Intel® Xeon® processors to help students become more productive and IT more efficient. Dell PowerVault™ SAN storage is easy to scale for growing storage needs.



## Benefits

- 50% less time to image machines with Windows 7 than with Vista
- 30 minutes to set up virtual server
- 50% less planned downtime
- 50% reduction in server footprint
- 24 to 36 hours per year saved in SAN administration time
- 30% reduction in heat generation
- Simplified procurement with Dell's direct selling model

Thomas College (Thomas) is a private liberal arts college in Waterville, Maine. Thomas offers a rich liberal arts and professional studies curriculum for undergraduate and graduate students in a wide variety of programs including arts and sciences, business, criminal justice, education and technology. Thomas is the only college in the nation that offers its graduates Guaranteed Job Placement within six months of graduation. On average, 94 percent of Thomas College graduates are hired in their field of study within 90 days of graduation.

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*Christopher Rhoda, Vice President for Information Services, Thomas College*

To help ensure that students are as qualified as possible for that first job, Thomas provides a cutting-edge IT infrastructure built with Microsoft Windows Server 2008 R2, Microsoft Exchange Server 2010 for communication and collaboration, and Microsoft Office Communications Server 2007 R2 for instant messaging and Web-based conferencing.

Thomas faculty, staff and students use Dell OptiPlex desktops and Dell Latitude laptop computers in computer labs and the library. In addition, about 40 percent of students buy into the school's recommendation of a Dell laptop, which they purchase at a discount through a Dell Web site customized for Thomas. The most recent group of students purchased Dell Latitude E6500 laptops with Windows 7.

“We focus on getting the best technology whenever we can,” says Christopher Rhoda, vice president for information services. “But because there are just three of us to manage the college's IT needs, we have to be sure that the technology we acquire allows us to streamline management tasks as much as possible.”

### **Imaging Machines In Half The Time**

The IT department evaluated the Microsoft Windows 7 operating system and decided to become an early adopter. Approximately 200 Dell OptiPlex 760 and 755 desktops and Dell Latitude E6500 and D630 laptops were converted to Windows 7 this year using Microsoft Windows Deployment Services. “What we found that dramatically changed between Vista and Windows 7 for us is the Microsoft

## **Technology at Work**

### **Services**

Dell™ CompleteCare™ Accidental Damage and Theft Protection

Dell Support Services

### **Hardware**

Dell Latitude™ E6500 and D630 laptops with Intel® Core™ 2 Duo processors

Dell OptiPlex™ 760 and 755 desktops with Intel Core 2 Duo processors

Dell PowerEdge™ M610 blade servers with Intel Xeon® 5500 series processors

Dell PowerEdge M600 blade servers with Intel Xeon processors

Dell PowerEdge M1000e modular blade enclosure

Dell PowerVault™ MD3000i iSCSI SAN array

Integrated Dell Remote Access Controllers (iDRAC 6 Enterprise)

### **Software**

Microsoft® Exchange Server 2010

Microsoft Office Professional Plus 2010

Microsoft Office Communications Server 2007 R2

Microsoft System Center Virtual Machine Manager 2008 R2

Microsoft Windows® 7

Microsoft Windows Server® 2008 R2 with Hyper-V™

Windows Deployment Services," Rhoda states. "We can deploy an image onto a machine now in a half the time that we could under Vista—about 20 minutes is all it takes as opposed to 45. We saved more than 80 hours."

The time savings is ongoing because frequently the IT department reimages a machine back to a known state rather than perform extensive repairs on the operating system.

"Windows 7 is well received here," Rhoda continues. "It helps improve user productivity. Windows 7 starts faster, and users log in faster. Their applications such as Microsoft Office Professional Plus 2010 run faster. Windows 7 assists the IT department by enhancing the security of our computing environment. With BitLocker To Go™ we can enforce the encryption of data on USB drives."

### Hiring Advantage For Students

Rhoda sees a major advantage in being able to educate students on the same systems they are likely to see in the workplace when they graduate. "It helps our students be more competitive during the hiring process," he says. "They can go into a company that hasn't already converted to Windows 7 and say that they're ready to convert whenever that happens without having to go through a learning curve."

At the same time Thomas College moved to Windows 7, it also migrated to Microsoft Windows Server 2008 R2 on its servers, which is a 64-bit platform, as is Windows 7 on the user end. "The combination makes the desktops faster," says Rhoda.

### 30% Reduction In Heat Generation

In the data center, Thomas is in the process of consolidating the last few Dell PowerEdge rack-mount servers onto Dell PowerEdge M610 and M600 blade servers. "We're changing over to Dell blade servers to consolidate our footprint and save on power and cooling costs," Rhoda explains. "We have six remaining PowerEdge 2950 servers, and by the time we're through moving to the Dell blades, we will have cut our server footprint by 50 percent,

consolidated our UPS systems and reduced heat generation by more than 30 percent."

The PowerEdge M610 blade servers with Intel Xeon 5500 series processors have gotten Rhoda's attention because of their performance. "It's a combination of the additional CPUs and RAM," he says. "They are just a lot faster than the previous generation."

### 50% Reduction In Planned Downtime

Another big change in the data center is using Microsoft Hyper-V on every one of the Dell blades. "Every blade is a virtual host running Microsoft Windows Server 2008 R2," says Rhoda. "Sitting on top of each of those physical blades is anywhere from two to eight virtual servers."

Using Microsoft System Center Virtual Machine Manager, Rhoda can repair and upgrade the physical hosts without interrupting users by simply moving the virtual machine images to a different blade. "We're eliminating half our planned downtime using the Dell blades with Microsoft tools," Rhoda estimates.

IT can set up a new virtual machine in one-half hour, which makes it easy to accommodate new server needs of the Thomas faculty. "I can easily see doubling the number of servers that we have by adding more virtual machines," says Rhoda. "We can do what Microsoft advises, which is to have one server per application, without needing additional hardware."

The Dell PowerEdge M1000e modular blade enclosure helps reduce the cost and complexity of managing computing resources so Rhoda can focus on managing the Thomas IT organization. To further simplify management tasks, Thomas uses Integrated Dell Remote Access Controllers (iDRAC 6 Enterprise) to troubleshoot servers and perform administration tasks remotely. The iDRAC is integrated on the system board with other server components in Dell PowerEdge M-Series server blades and uses an integrated system-on-chip processor for remote systems monitoring and management.

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"We're not in the data center every day, so the ability to work from a remote console makes us more comfortable about being away," explains Rhoda. "My home is 15 miles away, and the iDRAC erases that distance. I could be anywhere with an Internet connection and I can log in, power up and down, and do warm and cold boots."

### Easy-To-Scale San Storage

For storage in the data center, Thomas uses a Dell PowerVault MD3000i iSCSI SAN array, which provides all the benefits of high-performance, centralized storage without the cost and complexity of a Fibre Channel network. Having migrated from direct-attached storage, Rhoda appreciates the management benefits the SAN provides.

"The biggest advantage of the Dell MD3000i for me is the ability to add a few more drives to the SAN as needed," he says. "Let's say I have an E: drive on a server that needs to go from 500 gigabytes to 800 gigabytes. I can just throw a few more physical drives in the SAN, partition the 800 gigs and copy the data over. I just attach the SAN to that server and I'm done. Adding capacity took a lot longer with direct-attached

storage. In addition, the consolidated SAN storage saves 24 to 36 hours per year in administration time."

### Simplified Procurement

Dell Support Services keeps the college's hardware running smoothly, while Dell CompleteCare Accidental Damage and Theft Protection Services offers the support needed when accidents happen. "When occasional problems or accidents occur, Dell is on site the next day to fix them," says Rhoda.

According to Rhoda, Thomas has been a Dell shop for as long as he can remember. "The reason we went with Dell initially was the fact that Dell offered so many ordering options on an easy-to-navigate Web site," he says. "It's really simplified the procurement process. Being able to go to Dell's site, look at the different comparisons and models, and decide what I can get at my price point—that is worth its weight in gold. Our representative is great, and Dell's direct business model has changed the computer industry for the better."



**Microsoft**



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