



*“The students are the lifeblood of the school: they’re why we’re here. Purchasing and deploying VMware solutions allows us to provide new and innovative services to the students that will enhance their academic journey. You can’t really put a price tag on that.”*

— Josh Spencer  
Team Lead, Desktop  
Development Group,  
University of Toledo

#### KEY HIGHLIGHTS

##### Challenge

Desktop environment within university setting can be resource intensive for IT to manage and provides limited accessibility for students

##### Solution

VMware View creates a virtual desktop infrastructure that delivers applications and information to end users at less cost and with less hassle than physical PCs.

##### VMware at Work

VMware View, featuring:

- VMware Virtual Desktop Infrastructure
- VMware ThinApp

##### Deployment environment

- Hardware: Dell M600 blades with IBM DS4800 SAN
- Desktop Environment: Windows XP desktops on Wyse V10L and X90L thin clients
- Virtualized applications: More than a dozen clinical applications including Misys Vision, McKesson Care Manager, and McKesson Clinical Portal. More than a dozen academic applications including ArcGIS, Maple, and SAS. Several enterprise applications including Office 2007, Banner, and Lawson Client Insight.

## University of Toledo

The University of Toledo (UT) is one of 13 state universities in Ohio. Originally founded in 1872, the university now serves more than 22,000 students.

“While evaluating the needs of the students and their use of technology on campus, we decided to leverage virtualization to give students access to University licensed software from anywhere with a internet connection,” says Aaron Flynn, Director of Client Services at UT. “We also saw application virtualization as a way to effectively reduce support costs and increases desktop stability for faculty and staff.”

A licensing agreement between VMware and OARnet—the Ohio Academic Resources Network—allowed UT to easily procure VMware solutions like VMware View and VMware ThinApp to help it meet its IT goals. “Purchasing through OARnet gives us the additional advantage of having a single vendor to go through for our VMware purchases that understands the technology requirements and purchasing needs of a higher institution like ours,” says Flynn.

VMware View has allowed UT to create virtual desktops that give students greater accessibility to critical applications and data. “VMware View really extends the boundaries of the university out to our students wherever they are,” says Josh Spencer. “Students can access their H drives, applications, and network resources even if they’re off campus; normally, they’d have to drive on campus and physically go into a student computer lab.”

Additionally, VMware ThinApp has allowed UT to package applications and deliver them virtually. “ThinApp makes it easy to push out applications and then update them with a minimum of downtime,” says Spencer. “The more seamless that process is, the more time that faculty and students can spend on their educational pursuits.”

## Results

- Virtually eliminate software upgrade glitches. “We have nearly 3300 desktops on the Health Science Campus. We used to average a 3 - 5 percent failure rate when upgrading one of our main applications,” says Spencer. “With VMware solutions, we’ve reduced that number to nearly zero percent.”
- Reduce energy costs by 60 percent. “Based on the findings of our own in-house energy study, 500 thin clients running VMware-created virtual desktops would cost about \$7,000 per year in energy costs, compared with 500 standard PC’s, which cost about \$17,000 per year,” says Spencer. “That would make us a greener institution.”
- Use IT budget more efficiently. “We can use refresh dollars to replace PC’s with thin clients, take the leftover money, and put it into more backend infrastructure to continue to grow the virtualization environment,” says Spencer.
- Provide better customer service. “We can allow student access to University licensed software from anywhere with an internet connection, twenty-four hours a day, seven days a week,” says Spencer.



CUSTOMER SNAPSHOT