

Residence Life: University of Arizona

Case Study

Reliable, accessible, secure and affordable campus-wide student registration becomes a reality with Wyse.

Providing a simple and secure computing environment at any university is especially challenging given that there are limited IT staff to maintain the computer infrastructure, new students and staff to train each year, information often stored in silos across departments, and many different users sharing the same computers. Add to that the threat of viruses, PC failures, and other security concerns and you have a recipe for an IT nightmare. The IT staff of the Residence Life department at The University of Arizona tackled that problem head-on with virtualization software and thin clients from Wyse Technology.

Residence Life made the move to Wyse after a failed attempt at installing PCs at the front desk of each residence hall. According to Dimitri Petropolis, principal systems administrator for the Residence Life Department, "When I joined Residence Life the laptops installed at the front desks were unlocked, virus-ridden, and immensely troublesome. It's not surprising given that they had few security controls in place and were being shared by multiple users. Nearly 200 different users shared these machines. They were a mess."

Virtual clients to the rescue

Now, Residence Life workers use virtual clients as part of standard front desk procedures which consist of greeting visitors, checking out equipment and generally maintaining order in the lobby of each building. Virtual clients are also deployed throughout conference rooms and for the department's software developers. IT security concerns have decreased significantly.

In addition, residence hall staff shares computers at the front desk of each residence hall to enter time and communicate with their superiors. All full-time staff – from the accountants to customer service representatives to the director of the department – conducts their daily business using thin clients and have the ability to work on a remote desktop at any location with Internet connectivity. In all of these situations, IT is tasked with controlling access to data and applications while providing a safe and secure computing environment.



Viewpoint

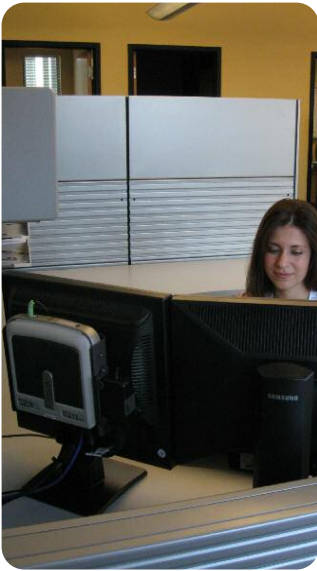
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DIMITRI PETROPOLIS,
PRINCIPAL SYSTEMS
ADMINISTRATOR
RESIDENCE LIFE
UNIVERSITY OF ARIZONA



THE UNIVERSITY
OF ARIZONA®





Classroom in a box

“Our Classroom-in-a-Box is comprised of twelve thin clients mounted to the back of monitors that connect to our classroom terminal servers. We custom-designed the packaging to fit the clients and accessories in one box and now have a solution in place where we can deploy computing resources very quickly. During our fall freshman housing check-in, we need all the computing resources we can muster, and this solution has been ideal.”

**DIMITRI PETROPOLIS,
PRINCIPAL SYSTEMS
ADMINISTRATOR
RESIDENCE LIFE
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Secure, efficient student check-in and network access

"From an end user perspective, everything's the same," added Petropolis. "But from an IT perspective, the savings are monumental. We're not replacing PCs every 2-3 years and I'm not worried about laptops being stolen. Because the thin clients don't store any information, they have no inherent value. As a result, I can guarantee a level of security to my staff and the university at large. For IT and administration purposes, the Wyse thin clients have been a godsend."

Each fall, Residence Life staff use virtual desktops instead of PCs to check 6000 students into their dormitory rooms through a Web-based system. All of this happens over the course of just six days. Now, thanks to the virtual desktop environment, this check-in process is fast and seamless and can be done anywhere on campus.

"The Residence Life department is similar to a giant retailer, much of our traffic comes all at once," added Petropolis. "The beginning of the school year is to us what Black Friday is to Amazon.com. We have to process 6,000 students across 22 residence halls in a matter of days."

Residence Life has approximately one Wyse virtual client for each employee, in addition to approximately 60 devices allocated for student and conference room usage. We use Wyse S10s for the majority of our users, and in particular for the hundreds of students who periodically access these devices as part of registration or as part of front desk responsibilities. Wyse V90LE are also in use to accommodate multimedia and multi-monitor usage, and Wyse V10s running VDI from VMware with multi-monitor support are used by IT and software developers.

Flexible and mobile

The Residence Life IT department even designed an innovative Classroom-in-a-Box concept, a mobile computing solution that allows thin clients to be deployed anywhere on the campus within minutes. Utilizing Wyse clients and virtualization software, the IT group created a flexible computing infrastructure that allows for the deployment of thin clients anywhere on the 356-acre campus without the burden and maintenance of virus-prone and unreliable PCs. With client virtualization, multiple user sessions are executed on a single remote server. Furthermore, applications and software are managed via the server infrastructure, improving efficiencies as fewer resources need to be maintained.

"We needed a solution that combined the reliability and security of our thin client infrastructure with the flexibility to setup workstations anywhere on our campus to handle peak demands," continued Petropolis. "Our Classroom-in-a-Box is comprised of twelve thin clients mounted to the back of monitors that connect to our classroom terminal servers. We custom-designed the packaging to fit the clients and accessories in one box and now have a solution in place where we can deploy computing resources very quickly. During our fall freshman housing check-in, we need all the computing resources we can muster, and this solution has been ideal."

Classroom-in-a-Box is used not only during fall student registration but throughout the year across a wide variety of activities. It's also used for software and payroll systems training. The Residence Life IT team has also used Classroom-in-a-Box to for teacher training on topics such as advanced Excel usage, or Office 2007 transition classes. The Residence Life IT team also makes extensive use of mobile virtual clients on carts. Spread throughout the 22 residence halls are an average of three meeting rooms at each location, and each of these rooms can have technology and multimedia needs delivered through a simple reservation system.

"Our computing needs demand a great deal of flexibility," continued Petropolis. "Our Classroom-in-a-Box gives us one level of flexibility, but our carts are probably used more frequently. We have virtual clients available on carts to aid in presentations or lessons across campus. Most people don't think of virtual clients as having multimedia capabilities, but the Wyse devices give us everything we need. Whether it's a PowerPoint presentation or watching a DVD, our virtual clients provide a reliable and flexible solution."





Committed to sustainability

‘While I value the improved security and streamlined computer management the virtual client implementation has generated, I also greatly appreciate that the thin clients use a fraction of the energy of PCs and last significantly longer than PCs. With this implementation, we have aligned Residence Life’s IT business processes with the university’s commitment to sustainability.’

NICHOLLE ZARKOWER,
ASSOCIATE DIRECTOR FOR
ADMINISTRATIVE SERVICES AND
OPERATIONS FOR RESIDENCE LIFE

Securely Green

Security was one of the primary reasons for deploying virtual clients throughout Residence Life. The combination of student records and credit card information makes for a high-risk environment, but those risks have been mitigated. As a result of the implementation, compliance mandates and audits from organizations such as the PCI Security Standards Council have gone smoothly.

"We've survived two security audits unscathed," added Petropolis. "In one case, the auditor stated that he was 'truly impressed' that Residence Life could guaranty the level of security that we do."

Because computers are stationed at the front desks of 22 residence halls, there were theft concerns when PCs were in place. With virtual clients, however, no local disk drive means that data is never lost, stolen, or corrupted by mechanical failure, virus, or malicious attacks. Should a virtual client be stolen, there is absolutely nothing of value on the device.

Nicholle Zarkower, the Associate Director for Administrative Services and Operations for Residence Life, was also very pleased with the environmental impact of virtual clients.

"The University of Arizona has a campus-wide commitment to sustainability," Zarkower said.

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Solution architecture

Clients	150 Wyse thin clients including V90, V10 and S10 desktops and X90 mobiles
Management Software	Wyse Device Manager VMware View 3.0 VMware vCenter Server
Applications	Microsoft Office 2007 AutoCAD Microsoft Visual Studio 2005 Adobe Creative Suite CS3
Servers	3 ESX Servers 5 Terminal Servers 30 Supporting Servers
Network	1Gb infrastructure throughout the server room 100Mb to the Wyse Clients

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