Case Study

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Key Benefits:

- Optimized existing server and virtual desktop infrastructure
- Reduced software licensing costs
- Cut single desktop set up from hours to minutes
- Centralized lab management for time-savings
- Reduced power consumption by 75%

Awarding its first degrees in 1862, the University of Maryland at College Park is the state's primary center of research and graduate education and the institution of choice for more than 25,000 undergraduate students. As the flagship campus of the University of Maryland higher education system, the university shares its research, educational, cultural and technological strengths with the state's businesses, government and other educational institutions.

The university is comprised of 13 colleges and schools with each providing their own information technology resources for faculty, employees and students, as well as a host of visiting faculty and guests that require PC access. Specializing in one of the oldest areas of study at the University of Maryland, the Department of Agricultural and Resource Economics (AREC) focuses on the issues and economics impacting agricultural, environmental and natural resources. The AREC department supports faculty members, graduate students and undergraduate students.

With more than one hundred PCs on their LAN and dozens more belonging to faculty and staff working from home, the two-member IT department at AREC found themselves spending a significant amount of their time maintaining the school's PCs while also troubleshooting personal PCs for the faculty working from home. Compounding the constant PC repair and monitoring issue was the fact that in the past few years the department had purchased new PCs that had a variety of hardware issues requiring many of the system components to be replaced.

"With an IT staff of our size, we were looking to solve the constant break and fix cycle with our PCs," said Jeff Cunningham, director of Information Systems for the AREC department at the University of Maryland. "One of our labs has 25 PCs and despite its infrequent use, every time we checked we would find one or two PCs that were not working. The downtime and the fact that we were spending a

considerable amount of time workingon fixing these PCs was one of the most significant reasons we turned to desktop virtualization."

Leveraging Existing Vmware Infrastructure While Eliminating Time Spent Fixing Pcs

The AREC department virtualized the department's 16 servers with VMware ESX in 2006. As the benefits of server virtualization became more pronounced, the IT team began looking at ways to extend the benefits of server virtualization to the desktop. In early 2008, Cunningham began investigating desktop virtualization technology and liked the features, but found many of the offerings to be too cumbersome.

Continuing his search of alternative desktop solutions, Cunningham read an article about Pano Logic and the Pano Virtual Desktop Solution (VDS). Once he talked with Pano Logic, he realized the Pano VDS was ideal for many of his users, and would allow the department to leverage their existing virtualization experience and technology infrastructure. These features coupled with how easy Pano VDS is to use and its central management capabilities solidified the department's decision to purchase Pano VDS to replace many of their PCs.

"What appeals to me with Pano VDS is the simplicity of the solution," said Cunningham. "I basically provisioned my virtual desktops and was able to start using our new Panos literally within a couple of hours."

ProSync Technologies, the Maryland-based reseller and integrator of Pano Logic products noted, "We are impressed with the quick implementation of the Pano devices at the University of Maryland. The AREC IT department has been able to quickly integrate desktop virtualization into their environment with minimal impact on the end-user experience. They have done an amazing job introducing advanced technology that provides immediate value to this long-standing institution."

Enabling Remote Access and Improving PC Up Time

Since deploying Pano VDS, the AREC department has streamlined the management of their lab environments, improved desktop up time, saved on the cost of buying expensive software for out-of-lab use, been able to provide visiting faculty with a better user experience, and decreased overall power usage. Most importantly, the department has been able to replace the PCs that have given them so many problems in the past.

"The department uses a lot of software, especially for math and statistics, which is fairly expensive. Because of the licensing issues, it's been impossible for our students to have this software on their home PCs," explained Cunningham. "Now we can provide them with the ability to access one of our desktops from their home PC, which is a huge and tremendously popular benefit."

Although the department usually buys more affordable software network licenses for its labs, the faculty will often purchase costly personal copies for use on their home PCs. With Pano VDS, the faculty now uses their home PC to access the same desktops they use during the day – eliminating the need for additional software purchases and allowing the IT department to better track licenses, needs and costs.

Another issue IT faced was how to handle visiting faculty. Since their exact arrival dates were often unpredictable, guests would often

end up with older, more problematic PCs. This resulted in hours of set-up time only to have a less than satisfactory user experience.

"Now, we just create an account, place a Pano at their desks and they're ready to go," Cunningham stated. "We had one visitor whose PC was running slowly, so we dropped a Pano on her desk and within 10 minutes she was up and running with a much better desktop. In the past, it would have taken me three to four hours to switch the PC for her."

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Another savings the AREC department has experienced since deploying Pano VDS is in electricity. Although individual departments don't receive an electric bill, the university recently hired a consultant to audit energy usage with the goal of helping the institution decrease power consumption by 25 percent. Although the baseline of usage has yet to be drawn, Cunningham has let the auditor know he estimates an annual savings in excess of 600 KWh with each PC that is replaced by a Pano.

"To get an idea of energy usage, I bought a few devices to measure kilowatts. In one lab, I plugged in five traditional PCs and five Pano devices," explained Cunningham. "Over the course of 10 days, the Pano desktops were using only a quarter of the electricity the PCs were using." Cunningham also explained that the meters measured the desktop PCs paired with flat panel monitors, as well as Pano devices paired with identical monitors. The difference in energy consumption would have been much more dramatic if it had only compared the PC to the Pano device without the monitors. Additionally, since one of the labs is on the top floor of an old building, the air conditioning was constantly running to maintain a temperature of 72 degrees Fahrenheit all year long to offset the heat produced by the traditional PCs. Now, with a lab full of Pano devices, the thermostat has been adjusted to run at 74 degrees during the day and 78 degrees at night – a much more comfortable temperature for users. During the summer months, Cunningham estimates the savings on air conditioning alone to be almost as significant as the power savings itself.

Looking Forward to Additional Deployments and Use Cases

The University of Maryland's AREC Department will continue to deploy more of the Pano VDS throughout their environment. Cunningham expects that there are many untapped benefits he and his department will realize over time – and many new capabilities he will be able to exploit.

Because management of the Pano VDS is centralized, Cunningham expects to save even more time on the maintenance and set up of lab desktops.

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