

# MAKING THE MOST OF VIRTUAL DESKTOP INFRASTRUCTURE:

How the University of Portland uses flash storage to boost IT efficiency, cut costs and improve access to high-performance computing

Increasingly, resource-strapped K-20 education institutions must deliver quality education in an evolving technological landscape. Students and faculty expect ubiquitous access to their mobile devices on campus and a growing population of distance learners desire an education experience that mirrors in-class learning. Additionally, online assessments, labs and research initiatives are dramatically raising the bar for high-performance computing environments. It's a complicated and challenging environment for any IT department.

As the University of Portland discovered, virtual desktop infrastructure (VDI) helps education institutions support these complex IT environments; however, a successful VDI platform requires an advanced storage system to meet the speed requirements of students and faculty. Fortunately, all-flash memory provides a cost-effective and efficient solution.

## FINDING THE RIGHT FIT

While University of Portland leaders knew VDI was the right choice to support campus computing initiatives, they struggled to find a storage solution to support the school's complex environment. IT leaders' first choice — spinning disk storage — initially worked well, but was costly and couldn't support the school's burgeoning user base. Other storage solutions crumbled under the weight of people requesting desktops at breakneck speed. "At that point, we had about 300 dedicated users and 150 student kiosks — we couldn't give them reliable desktop access because the solution kept crashing," says Joey Houck, the University of Portland's infrastructure manager.<sup>1</sup>

In the end, the university tried four storage vendors before ultimately achieving success with Pure Storage.

"Pure Storage is a completely established and thoughtfully developed flash storage solution," says Houck. "We had never encountered that with other solutions."

Today, Pure Storage flash memory delivers countless benefits to the university, ranging from greater accessibility to simplified management to cost savings. It supports more than 300 of the university's dedicated faculty and staff, and services 150 desktop computers across multiple student kiosks and computer labs. That's good news for the University of Portland's smartphone- and laptop-wielding students and faculty, most of whom expect anytime, anywhere connectivity.

"Thanks to Pure Storage and a VDI environment, students can connect anywhere, from their dorm room using a laptop, from a student kiosk or even from our overseas location in Salzburg, Austria," says Houck. "By providing an excellent desktop experience for students and faculty, and giving them the tools they need to study and perform their job, they can be more effective, happier and more productive."

## STREAMLINED STORAGE BOOSTS IT EFFICIENCY

In the past, keeping the University of Portland's VDI environment up and running required the school's time-strapped, eight-person IT team to spend a couple hours every week on maintenance. However, Pure Storage dynamically distributes workloads and redistributes demand across all available capacity, freeing Houck and his team to focus on core competencies such as network upgrades and system security. In fact, Houck says he may go two or three months without looking at the system's administration console.

"With Pure Storage flash memory, we don't have to worry about the virtual desktop environment — it just runs," he says. "Desktops are people's lifeblood. You can't



do your job if your desktop isn't working, especially in a VDI environment. Having everything running and working well frees us to do more important things."

Another advantage of Pure Storage: simple end-user support. Previously, the University of Portland's IT staff would physically visit sites where users were experiencing difficulties with their hardware. Pure Storage allows the IT team to troubleshoot remotely. As a result, Houck says his IT team can now "take care of more people in a shorter amount of time; they can examine desktops via a Web browser wherever they are." The desktop technicians now work on 9 to 10 trouble tickets per day, when previously they were only able to tackle 6 or 7.

Houck says many storage solutions require lengthy deployment periods, complex migration processes, in-depth staff training and consultations with vendor representatives. Fortunately, Pure Storage proved to be an exception. "We set up our Pure Storage flash array in an hour and started moving machines onto it right away — that was all the training we needed," says Houck. "In fact, we've used the money we would have spent on storage training on other technologies."

### REAPING THE BOTTOM-LINE BENEFITS

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In addition to the perks of a productive IT team, Pure Storage delivers bottom-line benefits by eliminating the need for forklift upgrades and letting users upgrade their hardware and software every three years at no additional cost. In the past, the University of Portland's computer refresh budget could run as high as \$300,000 per year. However, with its new flash array, the university reduced its annual computer refresh budget by 20 percent.

*All quotes and information from a phone interview with Joey Houck conducted on October 13, 2015.*

## When the University of Portland implemented a Pure Storage flash array, it reduced its computer refresh budget by 20 percent.

"Pure Storage saves us quite a bit of money by supporting our use of VDI technology," says Houck.

Moreover, by supporting its VDI environment, Pure Storage helped the university reduce the number of computer labs needed by 33 percent. Not only does this cut hardware costs, but the school can repurpose these labs for classroom space.

### UNMATCHED SUPPORT

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While enhanced student satisfaction, improved IT employee productivity and sweeping cost savings are huge advantages, Houck is particularly impressed with Pure Storage's customer service. "The company is very hands on and proactive," he says. "That's what differentiates them from any other vendors."

In fact, Pure Storage continuously monitors the environment, predicting susceptibility to faults and fixing issues before they escalate. "The company will call me before I even notice there's an issue," says Houck. "I've never experienced that before with a vendor."

Houck says Pure Storage's greatest contribution is its support of a high-performance computing environment, especially as more education institutions turn to VDI to deliver quality education. Houck concludes: "If Pure Storage hadn't worked for us, our VDI environment would have been out the door."

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