VDI Enables Community College of Rhode Island to Deliver Computer Access Whenever and Wherever Needed

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>
> *– Steve Vieira, Chief Information Officer and Executive Director of IT, Community College of Rhode Island*

Organization:

Community College of Rhode Island (CCRI)

Virtual Desktop Users:

400, and growing to eventually supporting 4,000 concurrent users

Products:

ProfileUnity™ with FlexApp™

Overview

The Community College of Rhode Island (CCRI) is the state's only public comprehensive associate degree-granting institution. Its four main campuses and two secondary campuses serve 18,000 students, including many non-traditional students – 66 percent are part-time and 40 percent are age 25 or older. There is considerable demand for computing resources, which led the school to implement a virtual desktop infrastructure (VDI) so it could provide students with anytime, anywhere access to files and applications.

The Challenge

"The responsibility of our department is supporting users, not PCs," said Steve Vieira, CCRI's chief information officer and executive director of IT. "The key challenge for us was to find a better way to deliver services to our students, who are so limited in the amount of time they can spend on campus. A lot of our students hold down one or more jobs while attending classes. We know they are often completing assignments in the wee hours of the morning when our facilities are closed.

We recognized that it was absolutely necessary to find a secure way to allow students to access learning resources through their desktops, anytime and anywhere they needed."

The school's 3,800 student-shared PCs and laptops are available on campus between 8 a.m. and 10 p.m. The IT staff wanted to expand computer access but had its hands full simply keeping

the PCs up and running. Vieira saw a virtual desktop infrastructure as the practical solution for improving service to users while reducing support and cost.

"Supporting the desktop PCs and laptops was unsustainable. We can't go on having to replace 400 to 500 devices every year," said Vieira. "With VDI in place, all the replacement of hard drives, power supplies, etc., will go away."

The Solution

CCRI had limited experience with virtual desktops and selected Rhode Island-based Envision Technology Advisors (envisionsuccess.net) to provide expert guidance and implementation assistance. "It was very critical for us to get it right the first time; there was no other option. This is why we reached out to Envision from the start," said Vieira. "They have a proven track record in deploying desktop virtualization projects, and I would tell any other educational organization that they absolutely need to go down this path with an experienced provider who knows how all the infrastructure – software, hardware, storage, network – needs to comes together in order to be successful."

Based on Envision's recommendations, CCRI implemented non-persistent desktops running on VMware® View. The virtual desktops (400 at the start, which is expected to grow to 1,000 within the first year and eventually support 4,000 concurrent users) run from a Cisco® UCS network using NetApp® storage.

In the physical environment, all students had SkyDrive accounts to access files, and their identities and permissions were managed through Microsoft® Active Directory. CCRI significantly upgraded its profile management capabilities in the virtual desktop environment by integrating ProfileUnity with Flexapp from

Liquidware with Active Directory. ProfileUnity with Flexapp maintains user preferences even after virtual desktops are powered down, so when users log in to their next session, the nonpersistent desktops include any customization and personalization the user made.

"When we were planning VDI, our primary concern was about the user experience," said Vieira. "We wanted to save some things on the student's desktop image, like screen backgrounds, text size preferences, bookmarks, etc., instead of building it from scratch at every launch. I did a lot of research, and I saw that the VDI deployments that were successful were the ones that paid a lot of attention to the user experience."

ProfileUnity with Flexapp makes it easy for administrators to create images that are tailored to users and for students to further customize them. Admins create base images that can be customized for different user groups (e.g., students in the 8 p.m. Wednesday Literature 101 class). ProfileUnity with Flexapp's convenient filter management tool guides administrators through creating settings and permissions and making sure profiles are integrated with Active Directory.

ProfileUnity with Flexapp can also run independently of Active Directory and can be used with either physical or virtual desktops. After profiles are created, they are stored to the network, where users can access it on demand. CCRI uses ProfileUnity's FlexApp feature to allow students to virtualize and install their own applications. When users log out of a virtual session, their changes are saved and any folders that have been redirected or applications that have been virtualized are stored with them on a virtual hard drive. Everything is then instantly available at the next login.

ProfileUnity with Flexapp successfully enabled Vieira to meet one of his key goals – that students not notice the transition to virtual desktops. Because ProfileUnity with Flexapp harvested profiles from existing physical desktops and preserved screensavers, preferences, browser bookmarks, www. liquidwarelabs.com October 2012 access to files, and managed printer resources, CCRI students' experience was uncompromised and remained consistent during the changeover.

According to Vieira, there was one area where students did notice the change, but that turned out to be a bonus result. "After we went to virtual desktops students would say, 'Wow, what did you do to our machines? They're running great.' That was music to our ears, because we weren't expecting such an improvement," Vieira said. "Students noticed the change because it now takes three to four seconds to log into a virtual desktop, compared to approximately one minute to boot up a physical PC or laptop."

The Results

By virtualizing desktops, CCRI met its goal of giving students 24-hour access to their desktops, files and applications. By including ProfileUnity with Flexapp in the infrastructure, CCRI met its additional goals of providing a seamless transition for student as well as significantly improving the quality of the user experience.

However, according to Vieira, the student experience is just the tip of the transformation the college is undergoing. The IT staff is experiencing very positive benefits through easier management of users and applications as well as reduction of cost. The cost to support virtual desktops is approximately 40 percent less than the replacement cost for traditional physical desktops. CCRI also reports getting significant savings and improved value from its software licenses.

"ProfileUnity with Flexapp has been great for virtualizing applications. It gives me much more control over how I can manage my software," said Vieira. For example, virtualized software previously was kept on a single image. Students could be locked out of an application if someone else was using it. Now, administrators use ProfileUnity with Flexapp to create filters that improve access to software, and applications can be virtualized and included in each student's virtual desktop with FlexApp. "Now, I can lock down a piece of software and filter access to it by classroom, so everyone in that class will be able to use it. ProfileUnity with Flexapp makes it easy for us to do that because of its filters, and I feel like we're only scratching the surface of what we can do."

The improved flexibility has enabled CCRI to optimize the number of licenses it purchases, since applications can be easily shared across departments and different user groups. "Before, each department might buy a single application but would rarely buy the whole suite because it was expensive and they wouldn't need it all," said Vieira. "ProfileUnity makes it easy for us to manage licenses and to enforce rules. The cool thing is now we can buy the whole suite. Students can get the best the software has to offer, and I feel like for the first time we're finally getting full value for the software we paid for."