

Virtual Desktops Create a Practical & Easy Learning Environment

When Jeff Christen, an instructor at Cornell University's Information Science Department, set out to develop a new business intelligence course, he knew two things were needed: several complex software packages and the ability for each student to use the software on a computer. He worried those two conditions were not going to be feasible inside a lab or that they would be cost-prohibitive for students. The solution he found was Amazon WorkSpaces, a cloud-based, virtual desktop infrastructure (VDI) that gives both instructors and students access to documents, applications, and resources through a fully managed, secure desktop operating system, which is located on a centralized server — simplifying the shared learning environment.

Putting the virtual desktop experience to the test

The goal of the course was to teach practical applications of business intelligence, something students could put on their résumés to demonstrate the technology in a real-world setting. For example, Christen needed the students to work in teams to determine the financial efficiency of the university's dining halls by using the software to build tables and dimensional models on the key performance indicators. Amazon WorkSpaces made this possible by allowing students access to the software from any location on their own device. "It gave us a ton of flexibility by not being tied to a lab. Students could show up at my office and they could pull out their laptop or iPad for full-access to the lab. We didn't have to schedule a meeting in a lab, it's more convenient for everyone." The virtual desktop also changed the lecture experience inside the classroom and allowed him to reimagine how students could learn using the technology. He could pull up Amazon WorkSpaces during class to provide live demonstrations and students followed along on their own computers in real time.

Christen installed the software into the Amazon WorkSpaces Application Manager. Any changes could be done within minutes and accessed by all of the students in the course. Prior to the semester each student received an email asking them to download an app that created a workspace on their device. Graduate students like Charmi Mehta felt successful before even starting the course because Amazon



WorkSpaces was easy to understand and made the class, "an amazing practical experience." Mehta recalls, "We got to work on real projects. These are projects I can add onto my résumé. I can actually speak about these programs to a potential employer and relate it back to the tools I



worked on in class. I can also explain the challenges of what problems and tools I used to achieve a solution. This is something I haven't had in any other class." The master's level course was such a success the department plans to increase enrollment in it to 100 students this coming fall.

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Success for virtual learning

The University of Maryland University College recently switched from their legacy online provider to Amazon WorkSpaces because they needed a virtual desktop that could stay with the student through their entire academic career. For example, a student using SPSS, the most popular statistical software package for data analysis, could maintain access. This helps the school to stand out from other online learning experiences and makes a student's education experience seamless. "This allows them to use the tools from the actual profession they want to go into," says Dr. Kara Van Dam, vice provost, the learner and faculty experience. Because the university teaches 80% of its courses online, a user-friendly experience was a must. "With our legacy vendor we had technical challenges, and students needed seven different passwords to complete homework assignments," says Greg Smith, associate vice president for Information Technology. Amazon WorkSpaces provided single sign-on, creating a simplified experience.

In the fall of 2016 the school created 14 courses for 3,200 students using Amazon WorkSpaces. They discovered students used the program four times as much as the previous system, and there were only 71 requests for help. "During that same time, our legacy vendors had four times the amount of support requests but were supporting one-sixth the number of users. It's a pretty telling story,"



says Smith. Fewer requests for help meant those in charge of troubleshooting started focusing on other areas of academics. This also made Amazon WorkSpaces a more cost-efficient solution. Using existing software in a shared licensing model reduced expenses and didn't put the burden on students to purchase the programs.

The first year was a success, and now the university plans to create 10,000 more WorkSpaces by this fall. Smith found the partnership formed with his engineers and Amazon Web Services was key to the transition. "For schools that may have a small IT staff, the partnership allowed for an easy transition to this new model for learning."

Practical for any academic institution

A simple, cost-effective, and easy-to-use virtual desktop makes learning practical and fun for students and instructors alike. As academic institutions look to expand their online learning model, Amazon WorkSpaces allows students to combine face-to-face interaction with online learning in an effort to stay ahead of technology. To learn more about Amazon WorkSpaces and how it could be utilized for your academic institution as well as its pay-as-you-go model, visit [Amazon WorkSpaces for Education](#).

