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Virginia Commonwealth University School of Medicine

Secure Test Environment for Medical School

Industry | **EDUCATION**

IronKey Solutions | **IRONKEY™ WORKSPACE W300**

Region | **NORTH AMERICA**

Founded in 1838, the Virginia Commonwealth University (VCU) School of Medicine has maintained a reputation for excellence in teaching, research and health care. More than 700 students from around the world come to the VCU School of Medicine to pursue their M.D. and learn from the school's renowned faculty, many of whom are nationally and internationally recognized, and who represent more than 200 specialty areas.

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Jay Diener-Brazelle

Project Manager
for the Education Technology Group at
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For Med Students, IronKey Passes the Test

At the VCU School of Medicine, new technologies replace old ones every day. For instance, gone are the traditional computer labs outfitted with desktop PCs that have been a campus staple for more than 30 years. Computer labs have become extinct because no one uses them, now that every student lugs his or her own laptop to school.

This improved mobility ensures students always have the latest materials at hand. But when it's time to assess a student's knowledge, VCU's bring-your-own-laptop culture presents unique security issues. Because at VCU, medical students take all tests on their computers. Tests take place in a large campus auditorium where instructors can properly proctor the proceedings. More than 200 test-takers all take the same test at once, each on his or her laptop.

A milestone test for every second-year medical student is the Step 1 examination. This comprehensive test is administered by the National Board of Medical Examiners (NBME), an accredited medical assessment organization.

Standing in the Way of Success

"Every student has to pass the NBME Step 1 test to become a third-year medical student," explains Jay Diener-Brazelle, project manager for the Education Technology group at VCU School of Medicine.

But for dozens of students, security protections within the NBME Step 1 assessment proved problematic. Anti-cheating technology built into the NBME testing environment automatically detects if a student's system includes software capable of recording what's happening on screen – a concern in an age when students may be tempted to share or even sell exam content online. While discovering actual recording tools is rare on student systems, Diener-Brazelle discovered that roughly one out of every three students would be locked out of the testing environment simply because they own Apple laptops running MacOS Yosemite. The problem? Apple's Quicktime video software runs continuously as a background process in MacOS Yosemite, and NBME's detection engine characterizes Quicktime as a potential recording tool.

"Disabling Quicktime in Yosemite is a pretty involved process, and there's a risk of permanently damaging a student's system," says Diener-Brazelle, who with his team began brainstorming on another way to distribute the NBME testing environment. "The cleanest answer was to have all the students who own Mac laptops use a Windows system for testing. But we weren't about to purchase 70 Windows laptops just so students could take the Step 1 test."

'Problem Solved'

Then at a trade show, Diener-Brazelle came across IronKey™ Workspace W300 drives. These drives allow users to boot a fully functioning Microsoft Windows 8.1 desktop directly from a trusted IronKey USB flash drive. Certified for Microsoft Windows To Go, IronKey Workspace W300 drives transform virtually any computer – including Macs – into the user's own personal workspace capable of using all host system resources.

Diener-Brazelle bought a drive and ran the NBME Step 1 exam. "I realized I could run this exam on a Windows To Go system and control exactly what software is on it so there would be no conflicts," he says. "I loaded it on a Mac and verified I could take the exam. Problem solved."

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A Testing Environment that Works

After evaluating competing Windows To Go drives, Diener-Brazelle says he selected the IronKey drives because the brand is well known at VCU – "all our encrypted storage drives are IronKey" – and because, in many cases, "they're faster than the native hard drives in the systems we're plugging them into."

To equip the Mac users among the school's 212 second-year medical students, the Education Technology group purchased 70 IronKey Workspace W300 drives, plus a few more as spares. "At the beginning of the exam, everyone with a Mac is handed one of these devices," he explains. "They boot off of it, and we maintain complete control over the environment. It's fully secure and we collect them at the end. When they're in the Windows To Go environment, they can't even access the hard drive on their laptop."

The IronKey drives also come in handy for Windows system users, says Diener-Brazelle, because the NBME environment sometimes conflicts with Windows software, too. "Even among the Windows laptop users, we'll have problems," he says, "and 10 minutes before the test is not the time to sort out compatibility issues."

'Fast, clean and trouble-free'

The drives help create the environment Diener-Brazelle was looking for. "It's fast, it's clean, and it's trouble-free," he says. "I've had students come up to me and say, 'Thanks for setting this up. It made taking the exam really easy.'"

It's so easy, in fact, that the school will soon administer every test using the drives – not just NBME exams. "With the positive response we've received, we've decided that moving forward, this is how we're administering exams."

And in a kind of ironic technology plot twist, deploying IronKey Workspace W300 drives has in some way led to the return of something Diener-Brazelle assumed was gone for good: "Remember the computer lab? This allows me to build one on a flash drive."

For more information about IronKey Workspace W300, visit ironkey.com

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