There was a time when the term "The Hudson River School" provided a great joy for art enthusiasts. It brought to mind a group of renowned mid-19th century American landscape painters. Thomas Cole, Asher Durand and others produced breathtaking romantic scenes that glorified the past.

Today, "Hudson River school" has a completely different meaning. Yep, we're talking about Touro College of Dental Medicine, which shares a campus with New York Medical College. It is the first new dental school to open in New York State in half a century. Located in Valhalla, the college not only provides state-of-the-art dental education; it has the mission of making high-quality dental care available to the surrounding community. Citrix and NVIDIA technology are key platform components.

Healthcare and dentistry share similar challenges

Citrix technology is proven in the healthcare provider market. Highly mobile clinicians and caregivers depend on it. That also makes it perfect for the needs of a dental school and dental clinic.

Dentists need secure access to electronic health records (EHRs). They must securely transmit sensitive patient files. Access to information is highly scrutinized. Complying with government regulations is top-of-mind. Perhaps most important is delivering and managing evolving technology for an ever-changing mobile user base.

Touro's IT team — comprised of experts from Hudson River CIO Advisors — chose Citrix Workspace as the dental school's virtual technology platform. Throughout the facility, the simulation laboratory, and the operatories, and virtual desktop infrastructure (VDI) stations are connected to HP thin clients.

Citrix + NVIDIA: virtual images that focus on the future of dentistry

The two companies have been working together for years to bring the power of NVIDIA virtual GPUs to Citrix Virtual Apps and Desktops environments. The result has been financial and user satisfaction benefits in managing GPU-accelerated virtual desktop infrastructures, including more efficiency and cost-effectiveness than what was possible with the physical infrastructure equivalent.

Ten of Touro's hyperconverged appliances are equipped with NVIDIA® Quadro® Virtual Data Center Workstation (Quadro vDWS) software and NVIDIA® Tesla® M10 GPUs. This technology enables users to get a workstation-like experience — high-performance rendering and simplified desktop management. This enables faculty and students to design high resolution 3D models of teeth and facial cavities even on thin clients and easily collaborate with colleagues on patient care.

Citrix App Layering alleviates the need for making new master images

Touro users — administration, faculty, students in various stages of learning and aspiring dentists in need of different applications for their studies — have diverse requirements. Couple that with an involved list of licensing and compliance requirements. Add the fact that dental software often has very strict and costly per-user licensing, so the IT team must be very selective about which groups of users get access to what applications. The net result is that the IT environment is complex, to say the least.

Citrix App Layering separates the management of the operating system and apps from the infrastructure. "Citrix App Layering is magical. I can't imagine how people manage their image update process without it," explains Mike Schreibman, co-founder and managing director, Hudson River CIO Advisors. His team manages 30 layered applications for the dental school, yet only has to patch one copy of the Windows OS.

"Having Elastic Layers enables us to deliver apps with strict licensing restrictions to only the appropriate users," he adds.

Learning and providing care onsite

Dental students typically learn the art of patient care in-house. First and second year students work in an environment with 115-workstations outfitted with dental dummies. They practice drilling the mannequins' teeth and learn by providing risk-free care to these willing "patients" in preparation for the real thing. Interaction with live patients begins in the third year of education. On another floor, technology plays a greater role: 81 workstations (with more planned) feature dental chairs, three monitors and two thin clients. This area, the Touro Dental Clinic, opened its doors in January 2018. Ultimately it can serve over 400 patients daily.

Scalability is key

Many healthcare provider environments are enterprise-level. While the Touro College and University system has 38 colleges in the United States and 90,000 students, the dental school is small by comparison. Touro College of Dental Medicine has 342 students today. The school is expected to quickly grow to as many as 600 students, faculty, and administrators.

Citrix VDI technology will support this incremental growth. It will enable the IT team to quickly provision more apps, add new features, handle new software releases, onboard new students and manage other aspects of a bigger user community. The result is workstation-like performance of graphics-intensive 3D dental applications. Now students can take their VDI sessions with them on thin clients and pick up where they left off from anywhere on campus, be it simulation labs to dental workstations to their on-campus clinic. At the same time, IT can cost-effectively scale VDI to address the growing student population.

Outsourced IT

Hudson River CIO Advisors, a managed service provider is responsible for all of the IT associated with the dental school. The team's role includes design, engineering, deskside support, server and network infrastructure, and all matters relevant to technology in Touro College of Dental Medicine. The only IT-related function Hudson River does not manage is the Active Directory, which is managed by Touro College and University System.

Today's Hudson River Valley Landscape

Today, the Hudson River Valley and the Hudson River School paintings still bring joy to art enthusiasts. Now there's something new on the horizon that makes people smile broadly, too: the Tuoro College of Dental Medicine and its Dental Clinic!

Follow Kathy Holoman on Twitter.

Follow Touro College of Dental Medicine on Twitter.

SHARE

Tagged under:

- Citrix DaaS

- Experience & Productivity

- Healthcare

- Healthcare IT
- NVIDIA
- VDI & DaaS
- Virtual Desktop Infrastructure (VDI)
- Virtualization