



**STRATEGIC
INTEGRATORS**

VDI FOR HIGH SCHOOL GRAPHICS LABS: A CALCULATED SUCCESS

Stonington Public Schools believes that all its students can achieve their dreams. That's why the school district continually invests in innovative and inspirational educational environments. In addition to delivering a pervasive Web-based curriculum to classrooms and libraries in its eight schools, the district has a lab full of high-end graphics and CAD workstations to prepare high school students for careers such as engineering and design.

When it comes to the IT infrastructure that supports these environments, Stonington Public Schools puts its faith in long-term partnerships that can deliver the most bang for its educational bucks. "I don't ever want to take for granted that we are spending taxpayer dollars," says Director of Technology Jason Jones. Consequently, he prefers to work with technology partners, such as Strategic Integrators, who can clearly lay out returns on investment and show that proposed solutions have been proven in the field.

PUSHING THE ENVELOPE WITH VDI

Jason and his staff of six oversee a distributed environment that spans seven buildings spread over 42 square miles. When it became untenable to maintain hundreds of desktops and laptops in a traditional client-server configuration, Jason looked to virtual desktop infrastructure (VDI) to reduce endpoint management costs and response times.

STONINGTON PUBLIC SCHOOLS



stoningtonschools.org



K-12 Education



Old Mystic, Connecticut



2,153 students
425 faculty and staff

RELATIONSHIP BENEFITS

- Access to other customers that had used VDI to distribute high-end graphics apps
- Cost-performance calculations
- \$18,000 per year saved in workstation upgrades
- Commitment to long-term partnership

"At approximately \$200 for each zero client, it was a huge cost saving.... The investment we made will serve us for a good eight to ten years."

— Jason Jones, Director of Technology, Stonington Public Schools

Since most of the Stonington schools' digital curriculum is Web-based, Jason's initial goal was to deliver a simple thin-client or zero-client desktop supporting basic browser use to approximately 75 percent of the district's 1,000 end points. It seemed easy enough; he had implemented VDI in a previous IT position. So he sat down to draft the request for proposals.

But then he realized that if he extended the VDI investment to the district's CAD and graphics workstations as well, he could reduce the annual cost of upgrading these workstations by \$18,000.

FIELD-PROVEN SOLUTIONS PROVIDE CONFIDENCE

At the time, no K-12 school districts in Connecticut had applied VDI to high-end graphics applications. So Jason sought out assistance from a vendor with customers that had already accomplished what he was trying to achieve. "The thing that's tough with public education," he explains, "is that you can't be 100 percent cutting edge and venture off into the unknown. You just don't have the resources to do that."

Strategic Integrators introduced Jason to users at architectural and technical colleges that were already delivering these high-end applications via VDI. "I learned what hardware they were using, some of the complications they faced, as well as the time it took them to get up and running," he recalls. "That made me confident that we could do it as well."

SHOW ME THE IOPS

The field-proven solutions, as well as a competitive bid, led Stonington Public Schools to select Strategic for the VDI project. The configuration included eight quad-processor hosts, each with 512 GB of memory and Fusion-io accelerators. Running VMware ESX and vSphere V6, the hosts can support as many as 750 end points. Two 48TB NexGen storage devices with ioDrive2 Duo cards store the desktop images and user data.¹

"I was familiar with NexGen, but combining NexGen and Fusion-io was something I had not considered," Jason says. "Strategic also gave me calculations on cost per IOPS. No other vendor—even the major hardware vendors I worked with—came forward with the numbers to convince me that I would get the cost-performance I wanted. That's what sold it for me."

To meet the needs of the high-end graphics applications, Stonington Public Schools installed an NVIDIA K1 GRID processor in each host. Each K1 GPU serves four virtual workstations, increasing each endpoint's graphics processing speed from 512 Mbps to 2 Gbps.

In addition to the performance improvements, Jason was pleased to see his cost of ownership tumble. "At approximately \$200 for each zero client, it was a huge cost saving," he says. "And with no moving parts, the virtual desktops will last three to four times as long as traditional ones. The investment we made will serve us for a good eight to ten years."

PARTNERSHIPS PREVAIL

Having started at the high schools, the VDI implementation is now extending to the district's middle and elementary school campuses. So far, 600 student, faculty and staff end points have been virtualized.

Jason has plans to expand the capacity of his virtual desktop infrastructure and looks forward to continuing to work with Strategic. "In the K-12 sector, it always seems to be about getting the lowest bid," he muses, "but my goal is to create long-term partnerships with our vendors. Considering the amount of time and money that we spend on these projects, I don't want it just to be about one transaction. I want partners who will get to know who we are and what we want, so that I can rely on them to go to bat for us when we need it."

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¹ NexGen brands are now the property of Pivot3. Fusion-io products discussed here are now Sandisk brands owned by WD.