

St. Monica School



THE GLOBAL LEADER IN
CLOUD CLIENT COMPUTING

Case Study



Saint Monica School gets ‘Cool:’ State-of-the-art Computing and Reduced Carbon Footprint with Wyse Cloud PCs

Challenge: Build 21st Century Skills

Saint Monica School (SMS) is a private Catholic school in Berwyn, Pennsylvania with approximately 200 students in grades K through 8. Like most parochial schools, SMS doesn't have a big budget, but it needs to meet big expectations: parents demand that schools provide their children the education they need to succeed in today's highly competitive and technology-focused economy.



Several years ago, Tim Conners was one of those parents. At the time, Conners was the Manager of Platform Engineering at Children's Hospital of Philadelphia, so he immediately noticed that SMS's PCs were old, and learned that because the machines were unreliable, teachers did not make regular use of them in lesson plans. But the school's philosophy and the quality of its teaching staff won him over. He enrolled his daughters – and soon found himself the de facto head of the volunteer IT Committee for SMS.

“First, I just fixed what I could,” he says. “Even that took almost 20 hours a week.” Fortunately, the school was coming to the realization that it needed better technology, both to help attract new students and also to provide them a 21st century education.

Viewpoint

“We have some technologically savvy students in the school, and they love to test the system to see what they can do to it. With the Wyse cloud PCs, the answer is, ‘Nothing permanent.’ It's good for them to experiment – and to have limits.”

TIM CONNERS
VOLUNTEER IT EXPERT
SAINT MONICA SCHOOL





The IT Committee sought a solution that could support these goals with more reliable hardware, centralized control of desktop software, immunity to viruses, worms, and other Internet hazards, and conformance with the Children's Internet Protection Act (CIPA) guidelines. Based on his experience of working with thin clients, Conners considered a virtual desktop infrastructure (VDI) with thin clients, but when he learned about Wyse cloud PCs and Wyse Streaming Manager (WSM), he saw an even greater opportunity – one that would enable SMS not just to match, but to surpass the technical offerings at other schools.

The IT Committee explained to administrators that the new solution would look impressive and deliver exceptional functionality and reliability, maximizing usefulness in the classroom and minimizing the need for technical support. The cost effectiveness of the proposed change-over to Wyse cloud PCs sealed the deal: fundraising began and within a year the school was ready to roll out the new infrastructure.

Working Smarter

“The new infrastructure not only looks cool, it is cool - literally - because it's green technology... reducing our annual carbon footprint from 16 tons to just one. The green angle has helped our students get excited about the transition - and helping put our school on the radar for prospective applicants.”

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Solution

One Image + 50 Wyse Cloud PCs = 100% Availability

Today, SMS's 50 desktop computers have been replaced with Wyse R-class cloud PCs, which work just like regular PCs, but have no local hard disks, and get all software from a server or “cloud”. The SMS server delivers all the HDD capabilities to the cloud PCs using Wyse WSM over an encrypted Gigabit Ethernet backbone to provide a Windows software environment to 2 cloud PCs in each classroom, 19 in the school computer lab, and 6 in the library. The image includes Windows 7 with Microsoft Office, Internet Explorer, a wealth of plug-ins, plus a variety of educational programs designed to teach everything from typing to painting. SMS streams in educational content from Discovery, National Geographic, and other resources, using a SmoothWall School Guardian 2008 perimeter firewall system to help enforce Internet security in compliance with the CIPA best practices.

The school maintains just one software image, but students in 5th grade and up have their own logins and personal home drives where they can store their projects. Each grade has its own home drive, too, for class projects.

Implementation went smoothly. SMS' IT Committee had two pre-calls with the sales team and Wyse to help them design the details of the implementation and put together the requirements for their image. Then on Labor Day weekend, students helped members of the IT Committee remove the PCs and put in the new Wyse cloud PCs. “It just flowed,” Conners said. “By the end of the weekend we were ready to roll, and the machines were booting up in about 30 seconds. We showed the principal, Diana Thompson, how we could bring up the entire lab with just one command in no time. She claims she's not technical, but knowing how long the old infrastructure took to boot up, she was impressed.”



Managing the Cultural Transition

At first, the teachers at SMS were apprehensive, Conners recalls, about the Wyse cloud PC implementation. “With class time at a premium, teachers can’t take time to resolve technical issues, and they can’t afford to have a computer issue derail their lesson plans,” he explains. “The old infrastructure was problematic and unreliable, mostly due to its age. They’d had bad experiences with PCs in the past, and they weren’t confident that things would work.”

The new Wyse cloud PC infrastructure won them over almost immediately. “One teacher in particular seemed hesitant to use the PCs, so I doubted she’d take to the cloud PCs,” Conners recalls. “I was wrong. Just last week I learned she was having her students build wikis as a high-tech form of research paper. It turns out that once she realized she could rely on the Wyse devices, she started to use them with the same creativity and curiosity that she uses in approaching any other teaching resource.”

Recalling his first visits to SMS as the parent of prospective students, Conners says, “I was impressed by the teachers, and now that the technology has been brought up to the highest standards, I’ve been impressed all over again by the quality of the staff and the way they’re leveraging the new infrastructure to Teach students the skills they’ll need in the 21st century.”

Benefits

Cloud PCs Make SMS “Cool”

SMS’s primary goals were to attract prospective students and parents and to build the students’ technological expertise. The new system achieves both those goals, raising the bar for competing schools. Parents of prospective students see the white boards and the sleek, silent machines in the labs and classrooms, and feel confident that the school is committed to teaching children the technical skills they need. Parents of current students hear their children talk about building wikis and conducting Internet research.

“The new infrastructure not only looks cool, it is cool – literally – because it’s green technology,” explains Conners. “Our Wyse cloud PCs use 12% of the energy of a traditional PC, reducing our annual carbon footprint from 16 tons to just one, saving us approximately \$23,500 in utility costs each year, and keeping our labs from overheating. The green angle has helped our students get excited about the transition – and helping put our school on the radar for prospective applicants. The hope is that the technology itself and what it stands for attract favorable press in the local media”.

Other benefits aren’t as immediately apparent, but also deliver value for SMS: stringent security systems, reliability, and cost savings.

ROI factor	ROI calculation	Annual Cost avoidance
Reduced costs of hardware	A standard desktop costs \$900 compared to \$500 for a cloud PC	For 50 cloud PCs, hardware savings of at least \$20,000
Greater reliability	One desktop PC failed per day, on average. Only one cloud PC has failed since implementation, resulting in less than one hour of down time	Avoided many hours of downtime and repair time every week
Longer life cycle: 7 years vs. 4	Desktop units need to be replaced frequently, costing \$63,000 per four-year refresh cycle. Cloud PCs are likely to last 7 years.	Projected \$40,000 in hardware savings over 5-year period
Increased responsiveness	Deploying new software to desktop units used to take at least a week, now just 20 minutes	Same-day response to requests for new capabilities
Reduced administrative needs	20+ hours a week on administration of 50 desktops and laptops; now just 12 hours a month on 50 cloud PCs and laptops	Savings of more than 70 hours a month
Lower electricity consumption	12 Watt average power consumption means cloud PCs use only 12% of the energy that PCs require	For 50 PCs replaced by cloud PCs, annual power savings of \$23,500—and reduction of carbon footprint from 16 tons to one





State-of-the-art Security Helps Keep Kids Safe

As an IT professional – and a parent – Connors appreciates the endpoint security of the cloud PCs. “Protecting our children is job #1,” says Connors. SMS filters, logs, and reports on all Internet activity in the SMS network. Though students can search online using Google Safe Search, personal email, instant messaging, and social networking sites are blocked.

“The stateless nature of the Wyse cloud PCs means that even the latest, most sophisticated viruses – ones that can do damage even without administration rights – can’t gain any traction in the system,” explains Connors. “A simple reboot clears them out.”

Not only does this new system protect SMS students from the Internet, it also protects the cloud PCs from the students. Connors allow the children to manipulate the desktop on the cloud PC, knowing that as soon as the device reboots, order will be restored. “We have some technologically savvy students in the school, and they love to test the system to see what they can do to it,” he comments. “With the Wyse cloud PCs, the answer is, ‘Nothing permanent.’ It’s good for them to experiment – and to have limits.”

Reliable Machines Slash Administration Requirements

Connors no longer spends 20 hours a week just keeping SMS computers in action. He estimates that he now works on the system approximately three hours a week – and the nature of what he does there has changed.

“With the old desktop devices, I had a PC die each day,” says Connors. “I was always repairing something. But these days, when I go in, I’m just being proactive. I’m not fixing individual machines, because they’re not breaking any more. Instead I update the server with OS patches and a little administrative work.”

The new reliability of the system has built teacher confidence and inspired them to incorporate technology into their lesson plans. And if a teacher wants a new program installed, the IT Committee can do it easily. “Before, putting in a new program would have taken me about a week, and I would have had to run around campus, wake up all the machines, and push the updates,” Connors recalls. “It might have taken me a while to get around to it, and the teachers would have been reluctant to ask. But that’s all changed: recently I installed a new application and it took me 20 minutes to roll it out to all 50 cloud PCs.”

Saving on the Cost of Hardware

In addition to saving on administration and energy, SMS projects substantial savings on PC hardware. The average life cycle of a Wyse cloud PC can be 5-7 years, and the Wyse R-class models selected may last even longer. In contrast, the optimum desktop and laptop refresh cycle is 3 years, though in the education sector the average is 4 years.

The IT Committee costed out three-year and four-year refresh plans at approximately \$63,000, and compared that with the lower initial cost of cloud PCs and their longer lifespan. “I estimate that we’ll save roughly \$40,000 in hardware over the next five years with our Wyse cloud PC solution,” Connors says.

Time saving advantages

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Summary

Customer

- Saint Monica School, Berwyn, PA
- 200+ students in grades K-8

Challenge

- Attract applicants and build 21st century skills by incorporating more technology in curriculum
- Improve “green” profile of the school
- Reduce IT costs
- Reduce burden on volunteer IT experts

Solution

- Centralized virtual desktop infrastructure (VDI) with Wyse Streaming Manager (WSM) and Wyse cloud PC desktops

Results

- Impressed prospective applicants and enhanced education with cutting-edge technology
- Slashed carbon footprint from 16 tons to one, saving \$5,700 in power costs per year
- Projected \$40,000 savings in hardware over next 7 years
- Saved more than 70 hours per month of administrative time





Conclusion

Solving Performance and Maintenance Challenge Clears Path to Growth

The implementation has been so successful that the IT Committee is testing whether it can swap out faculty laptops for cloud PCs. “What I’d really like to do is move to a Wyse cloud PC infrastructure in my day job, where I’m dealing with 15,000 PCs. A great example is in call centers,” he says. “With Wyse WSM, I could provide users all the USB support, desktop, video streaming, and softphone functionality they need, with total reliability – and no issues with software or hardware. At SMS, when one cloud PC developed a hardware problem, I pulled a spare unit from a closet and had the new machine in place and working in under five minutes. It would be great to achieve that level of service in a call center, where it costs hundreds of dollars – if not more – for an employee to be out of action for an hour.”

Conners knows implementing VDI requires backend investment in infrastructure and patience during the transition period, but his past experience with Thin Client technology and now a successful implementation with SMS has convinced him that the right investment in the right VDI technology delivers excellent returns in longevity, predictability, and productivity, as well as reductions in cost and complexity.

“Back when I was in school, there were terminals and mainframes, the IBM XT was just coming out,” Conners recalls. “We didn’t have problems with viruses and students didn’t have to deal with software or hardware issues; we could just focus on our work. Now, our infrastructure provides the same kind of safe, reliable environment – but this time, with infinitely greater wealth of content and scope for much more creativity than has ever been possible before. Our Wyse environment satisfies parents, enhances teachers’ skills, and sparks the curiosity and love of learning our students need to succeed in today’s information-driven economy. The whole time our systems are running, we’re saving thousands of dollars that we can use to support SMS’s other programs. I’d wholeheartedly recommend a VDI solution with Wyse cloud PCs to businesses large or small.”

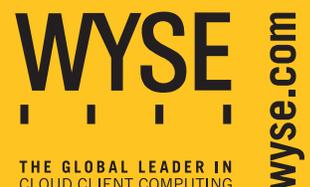
About Wyse Technology

Wyse Technology is the global leader in Cloud Client Computing. The Wyse portfolio includes industry-leading thin, zero and cloud PC client solutions with advanced management, desktop virtualization and cloud software supporting desktops, laptops and next generation mobile devices. Cloud client computing replaces the outdated computing model of the unsecure, unreliable, energy-intensive and expensive PC, all while delivering lower TCO and a superior user experience. Wyse has shipped more than 20 million units and has over 200 million people interacting with their products each day, enabling the leading private, public, hybrid and government cloud implementations worldwide. Wyse partners with industry-leading IT vendors, including Cisco®, Citrix®, IBM®, Microsoft, and VMware® as well as globally-recognized distribution and service partners. Wyse is headquartered in San Jose, California, U.S.A., with offices worldwide. More information can be found at www.wyse.com or by calling 1-800-GET-WYSE.

Cost saving advantages

“The power savings alone are compelling. “We’re eager to put this to the archdiocese.” With Wyse cloud PCs in all 212 parochial schools in the area, the archdiocese would save, at minimum, one million dollars every year in power costs alone.”

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