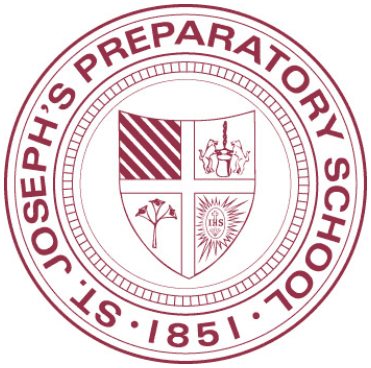
Case Study: FireCast™ in Education

How St. Joseph's Prep School uses FireCast to keep their public terminals up and running

Summary

After deploying a new web-based educational software suite, information technology staff at St. Joseph's Preparatory School became concerned that the computers installed throughout their Philadelphia, PA campus might be used in ways not becoming to the school's Catholic tradition. Having experimented with a variety of commercial and in-house software solutions, the school chose to deploy FireCast kiosk software on their public terminals to filter inappropriate content and prevent unauthorized tampering. After 6 months of public deployment, the school's staff agrees that FireCast has saved them time and money by virtually eliminating the random crashes and vandal-related problems that plagued their old Windows-based terminals.



Introduction

Keeping the computers up and running for a school of 1,000 teenage boys is clearly not a job for the faint-of-heart. But this is exactly what Marc Dolbier, Information Technology (IT) Director at St. Joseph's Preparatory School, does every day. Founded in 1851, the school's urban campus in Philadelphia, PA spans several city blocks, and technology plays a large role in keeping students, teachers, and parents in touch. With high-speed Internet lines, sophisticated networking and a myriad of powerful servers, St. Joseph's is able to deliver state-of-the-art education services to a network of 350 computers. As Dolbier notes, "we believe that access to technology not only improves our efficiency, but also improves the quality of our education program."

The Problem

Unfortunately, many of the computers set up for student use were not always available due to frequent software crashes and tampering by students. Prior to the introduction of FireCast software in August 2002, all of the school's computers ran on either the Microsoft Windows or Apple Mac OS platform. This was a serious problem for Dolbier and the rest of the IT department. "Apple and Microsoft both make great operating systems for the desktop, where you know that the computer user is going to be responsible for maintaining the system or be timely in reporting any problems to the IT staff." However, for the school's 1,000 students, this is not the case, as Dolbier explains. "Our computer clusters and the public terminals deployed across the campus take a lot of abuse, and each computer can be used by a dozen different people over the course of the day, so it's hard to say who is directly accountable for the problems that we encounter." As an example, a typical public access terminal used to access St. Joseph's Apple PowerSchool portal can be used by students, faculty, administrators and even visiting parents to check grades, create assignments, and schedule events. And any number of individuals might use the terminal in the course of a given day. Yet each time a new user approaches, they expect to find the same standard interface and software that functions as if it was just installed. "This is something that we had a lot of problems with," Dolbier notes. "Without locking down the system, students would move programs around and change settings. But even after we added security measures and locked the system down ourselves it proved to be too unstable, and would crash from time to time for no apparent reason." To compound the problem, without any remote management software, there was no way to tell which of the 350 computers needed attention throughout the day.

The Solution

The solution to the problems came in August of 2002, as Dolbier was preparing for the 2002-2003 school year. Given a limited budget and a small professional staff to manage the school's IT assets, he researched several methods for improving the security and performance of his public terminals. Abandoning the Windows platform in favor of the more stable Linux operating system, Dolbier found that there were few packaged solutions that would meet his needs. "There are a lot of great distributions out there, and even a few education-focused ones, but none had the lock-down features and remote management capabilities that we were looking for." Instead, he began to experiment with a home-grown system that would meet his exact needs. However, this effort proved to be very time consuming and was not cost effective. Ultimately, Dolbier contacted WireSpring to inquire about its FireCast line of Linux-based kiosk software. Attracted by the suite's Linux operating system and remote management capabilities, he realized that FireCast would provide the features that he wanted without any further modifications.

"[FireCast] has really solved our problems. Our systems are more reliable, and with the remote management software we can fix problems as they occur."

Mark Dolbier, IT Director

The FireCast software suite is composed of two products, FireCast OS and FireCast ClientCenter. FireCast OS is a Linux-based operating system that includes a completely customizable user interface, a secure, locked-down browser, and robust automatic maintenance tools. FireCast ClientCenter is a web-based remote management tool that allows administrators to monitor and service FireCast OS-powered devices from any web-enabled computer. Designed explicitly for managing networks of interactive terminals, ClientCenter makes it easy to schedule content, change system settings, and send remote control commands-all without ever leaving your desk.

Once Dolbier confirmed that the FireCast suite would meet his needs, WireSpring engineers and graphic designers worked with him to implement a few additional features. "One significant problem that we encountered before was with PowerSchool's logout function. If, for example, a user logged out of the system and then the next user hit the browser's 'back' button, any content the first user was looking at would be displayed. Obviously, this was something that our teachers were concerned about, since students and teachers use the same terminals." To combat this problem, WireSpring's designers added a new logout button to St. Joseph's custom user interface. When the button is pressed, FireCast ends that user's session and removes any browser history, cookies, cached images, and other files that are accumulated while using PowerSchool. For computers located in the classrooms, the locked-down browser was configured to only display the school's PowerSchool portal, making it impossible for students to browse the Internet or perform other unauthorized tasks.

Despite only having a few weeks to locate, test and deploy a finished product, Dolbier was able to implement FireCast before the start of the school year with only a few minor hiccups. Some initial difficulties involving the school's proxy servers were resolved with a remote software upgrade. In the process, WireSpring also added new troubleshooting tools that enable support representatives to

diagnose and correct problems without on-site intervention. "WireSpring's support staff has gone beyond our expectations. They have helped us with issues involving many aspects of our public terminal project, even those not directly related to their software."

Conclusion

Today, St. Joseph's employs nearly 50 FireCast-powered terminals across their campus. These systems are used to access the PowerSchool portal as well as to provide public internet access in a cybercafé-like setting. The terminals have been virtually immune to both system crashes and hacker attacks, though Dolbier notes that this hasn't stopped some of the more determined students from leaving their mark. "Some of the students have removed keys from the keyboards and re-seated them to spell out words." The school plans to solve this problem by replacing the standard keyboards with vandal-resistant steel models. With regard to the FireCast software, though, "it has really solved our problems. Our systems are more reliable, and with the remote management software we can fix problems as they occur."

Dolbier estimates that FireCast has saved his staff over 240 hours of work – in the first six months alone.

Although Dolbier did not immediately identify his opportunity as a 'kiosk project,' his search convinced him that FireCast kiosk software would help solve his problems. He estimates that his IT staff is saving at least 10 hours a week that would have been spent fixing and reconfiguring PCs. This adds up to more than 240 hours saved over the first 6 months, or nearly 3 man-months per year. On top of that, students and faculty now have more consistent access to the PowerSchool system, allowing the school to take greater advantage of its existing technology investment. Even after recently celebrating its 150th anniversary, St. Joseph's deployment of powerful new tools like FireCast shows that the school is likely to be an innovator for years to come.

For More Information

With industry-leading reliability, security, and flexibility, FireCast is the premier solution for organizations who are serious about deploying a high-availability public access application. If you need help planning your next kiosk project, or if you would like more information about how FireCast can work for you, contact WireSpring at:

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