

# Networked for Life & Learning

Success Stories on Improving Indiana Schools, Libraries and Communities Through Technology

October 2009

## A Bodyguard for Your Hard Drives:

### Centurion's Tech Solutions Protect, Control and Save

In the early 1990s, a graduate student in electrical engineering at the University of Missouri-Rolla (now Missouri University of Science and Technology) named Ron Wells grew frustrated with leaving his work on a lab computer only to find when he returned the next day that the hard drive had been altered, corrupted or otherwise compromised by mistakes in his absence. Wells was determined to find a solution, both for himself and for all users of shared computers that count on finding their computers in the same condition as they left them. A year of research, design, development, testing and modifying later, Wells had invented a unique blend of hardware and software driver applications that quite successfully made everything that transpired during a session go away instantly and completely upon reboot. The original reboot-and-restore technology had been born. News of his invention quickly spread by word of mouth to other universities and people began contacting him. Wells had been right. There was a market desperately clamoring for his product, even in the early 90s. Since then, computer usage has exploded.



#### "Mission-critical" solutions

In 1996 Centurion Technologies incorporated and began serving educational, library and government customers in five U.S. states. Today, Centurion sells award-winning hard drive protection solutions in all 50 states and in countries across the Americas, Europe and Asia. "Anywhere there's a mission-critical environment that has no tolerance for downtime on their computers, we are frequently chosen," says President Russell J. Bucaro. Such mission-critical customers include NASA, The Department of Homeland Security, all branches of the U.S. military, as well as police departments and ambulance services.

#### Education: the original and continuing focus

"Clearly, we've expanded from our educational origins into the government and commercial sectors," says Bucaro, "but education is our main wheelhouse." Fully eighty-five percent of Centurion's customers are in the field of education and use the company's Smart Shield Education and Smart Control Resource Manager programs. The first solution maintains workstation integrity by making system configurations unalterable and the second gives administrators the power to remotely control nearly every aspect of their workstations. The solutions are built on a modular platform with a base product and a range of utility modules that can be integrated with the base product. In nearly all cases, implementation is fast and seamless.

"We've spent the last year and a half totally rewriting the structure of our technology," says Bucaro. "With the new modular nature of Centurion, the customer gets an enormous amount of flexibility in choosing what he or she really wants and doesn't want. The customer doesn't have to buy a whole suite of products. They can phase more modules in over time if the need presents itself."

**"We generally find that our customers enjoy a speedy four-month to eight-month payback on the cost of our solutions ... Our products free up cash for a school district so that they can spend their money more wisely."**

**—Russell J. Bucaro, Centurion President**

With numerous students and multiple classes coming through their computer labs, completing projects, e-mailing and logging countless hours online, schools are a natural market for solutions such as Centurion's that protect machines and safeguard the work of students. Says Bucaro, "Kids are very resourceful when it comes to technology, and increasingly so, and will often try to impute their own knowledge and handiwork, so to speak, onto a computer. Over the course of time, sometimes time being a day, this can create a variety of serious problems."



#### Addressing a world of wrongs by preventing writes

Centurion's Smart Shield Education solution prevents those problems by disallowing the hard drive to be written to whether by user intent, user error or malware (short for "malicious software," any program deliberately created to perform unauthorized, usually harmful, actions that most often spread via the Internet). Administrators control what types of writes can and can not be made. In education settings, that typically means that the administrator prohibits all writes. For other Centurion customers, the administrator can be selective and tailor his or her control to the nature of the business. Upon reboot, all changes to the computer's administrator-established "status quo" immediately vanish.



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## Stops even zero-day malware and blended threats

Should a virus or other form of malware attempt to infect a computer, it is stymied before it has the opportunity for any nefarious effect. All forms of malware work by infiltrating the computer, implanting itself into the hard drive and writing its code into the hard drive. Anti-malware programs combat these intruders by way of an “antidote,” says Bucaro, “a piece of code specifically written to interject and intervene against a known malware code.” They work very well so long as the specific malware or family of malware preying upon a system is known and its code pattern or “signature” can be identified by the anti-malware program. But the more complex that malware code becomes, the more difficult it becomes to create the appropriate antidote. And then there’s the case of so-called “zero-day viruses” (malware written to exploit a system vulnerability as soon as it is discovered) and “blended threats” (malware that combine the functionality of different types of malware: viruses, worms, Trojan horses, etc.), examples of malware that are previously unknown and for which therefore no signatures exist that anti-virus programs can identify. With Centurion, none of that is a concern. Its reboot-and-restore solution is better than even the best nip-in-the-bud defense. Since no code is ever written, the virus never actually buds: that’s 100-percent, fail-safe protection.

## Seeing green by going green

The benefits of making system configurations unalterable—namely, maintaining workstation operability, eliminating downtime, saving valuable administrator time—are enormous, but it gets better. Much better. Centurion’s solutions can very quickly save customers money directly by decreasing energy consumption.

With Smart Control Resource Manager, Centurion’s comprehensive network security management solution, administrators save time and effort by remotely controlling filtering, password protection, downloads, updates, monitoring and more. Very importantly, administrators can even start up and shut down machines on a predetermined schedule or at will.

It’s a simple yet ingenious way of powering down workstation at the end of the day—something that organizations around the country fail to do on a daily basis. The significance of this is easily overlooked, but at the peril of wasting a lot of energy and a lot of money says Bucaro.

The Smart Shield Protections Mode screen is accessible directly through the client. Here, administrators control the basic on/off protection of Smart Shield’s reboot-and-restore technology.

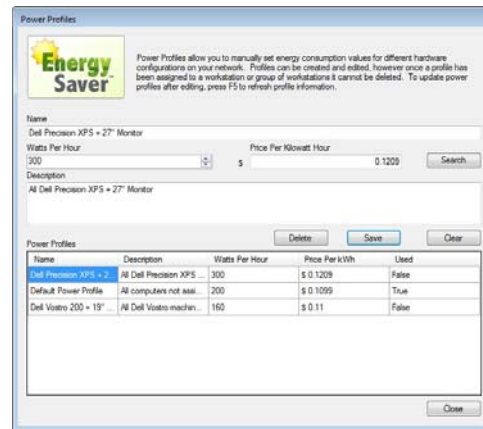


## A little case study in big savings

How much? To cite one example of how needlessly wasted energy can be transformed into cash to energize the bottom line, Bucaro points to a prominent university in New York state that decided to deploy Centurion’s Energy Saver on all its campus workstations. With nearly 700 computers and their accompanying monitors averaging a combined 450 watts per hour while idle, the university’s workstations were using 315,000 watts each after-use hour. At 13 cents a kilowatt hour, the university was spending \$40.95 an hour to keep the workstations running overnight with no one using them. After implementing Centurion’s Energy Saver, the university realized a whopping annual savings of \$108,000! (For anyone interested in seeing how much their own organization could save with Energy Saver, Centurion offers a calculator on their website:

<http://www.centuriontech.com/gogreen.php>.)

The Energy Saver module available with Smart Control Resource Manager offers the handy feature of enabling customers to track and document their energy consumption. The ability to report on energy reduction is important, says Bucaro, because some states allow school districts to recap money if they can prove they’re reducing energy consumption.



The Energy Saver Power Profile feature allows administrators to set specific power usage number for the various hardware configurations on their network. This allows for values in the energy savings reports to be highly accurate.

## PDQ on ROI

“While return on investment isn’t uniform because schools use their computers differently and power costs vary by locale, we generally find that our customers enjoy a speedy four-month to eight-month payback on the costs of our solutions,” says Bucaro.

“Sometimes the turnaround is less than that. When capital is in short supply, it’s common to hear that organizations just don’t have any money in their budgets. But organizations spend money every day, even in tough times. So the question really is, how well are you spending the money that you are spending? Our products free up cash for a school district so that they can spend their money more wisely.”

## Introducing Centurion’s classroom solution

“ScreenView, Centurion’s newest solution, enables a teacher in real time to monitor the students working on machines in his or her classroom,” explains Bucaro. “The teacher can see an unlimited number of screens on his or her computer and focus on any one of them that he or she wants and interact directly with the student. The result is that the education experience is enhanced and the teacher keeps greater control of the class.”

## Today’s market mantra: flexibility and cost control

Two of the “secondary” benefits of Centurion’s products after the primary one of protecting hard drives, namely that of customer flexibility and the potential for saving money through tighter energy control, seem to be particularly well timed right now because of the economy.

“As we look toward the future and listen to the market, we’re being driven by two things,” says Bucaro. “Our customers have a strong desire to add flexibility and customization to what they’re doing. Secondly, customers want to control costs.”

Fortunately for both Centurion and the market, the company is in the perfect position to deliver on both counts.

