A scientific research organization on Alaska’s remote North Slope, the Barrow Arctic Science Consortium (BASC) cannot afford for its data to be compromised. With hundreds of visits each year by scientists from around the world, BASC must meet some very unique security and availability requirements. As a result, BASC relies on security and data protection solutions from Symantec and VERITAS to protect the integrity of the business-critical research data stored on hundreds of laptops used by researchers. Despite growing data volume and increasingly complex needs of researchers, BASC has been able to avoid any IT headcount additions through more efficient management of its computing environment, thanks to Symantec, VERITAS, and Symantec Partner Advanced Internet Security.

Data Security, Integrity, and Availability

Organized in 1995, Barrow Arctic Science Consortium (BASC) is based in Barrow, Alaska and is dedicated to facilitating research and educational activities pertaining to Alaska’s North Slope and the adjacent portions of the Arctic Ocean. Information technology plays a critical role at BASC. All research is data driven, so data security, integrity, and availability are organizational imperatives.

Accurate research data must be readily available not only to on-site researchers, but also to scientists in other facilities around the world. As a result, compromised or unavailable data from BASC could have a significant negative impact on the worldwide scientific community.

The organization’s needs for ensuring information integrity are complicated by BASC’s unique physical and operational environment. While the organization does face traditional Internet-based threats such as viruses, worms, and hackers, it is also confronted with a variety of far less common challenges—such as laptops freezing in the harsh climate of the Arctic and static electricity that zaps media and can wipe out hours of research data in an instant.

Then there’s the operational structure of BASC. It has 12 full-time employees—including just one full-time IT coordinator. But during peak research seasons, hundreds of scientists—typically, graduate students—make the trek...
The Barrow Arctic Science Consortium uses Symantec and VERITAS to preserve and protect critical research data scattered across user laptops.

“Data protection is security, and data protection is backup and recovery. And while a security incident can knock you out and prevent you from doing research for a few hours or even days, losing data that the government has funded you millions of dollars to research and share can knock you out for months or even years.”

Bob Bulger
IT Coordinator
Barrow Arctic Science Consortium

up north, stay anywhere from three days to three months and use the BASC network and their own laptops, or loaned systems from BASC, to record and share the results of their research.

Of course, the researchers’ laptops are not always equipped with adequate security software or a backup program. In fact, their research software is not even standardized. Many of the researchers’ home university labs have created proprietary programs specific to their area of research. And, it’s not uncommon to find that temporary users of BASC systems have added their favorite games, music files, and other entertainment programs.

What’s more, since Barrow is the northernmost community in the United States, BASC must be a fairly self-sustaining organization. That includes its IT infrastructure—which makes information security and availability at BASC a formidable responsibility for Bob Bulger, the organization’s IT coordinator.

Symantec Provides Protection and Availability Solutions

To protect BASC’s IT infrastructure, Bulger relies on a variety of Symantec protection and availability solutions. This single-vendor approach is intentional, Bulger reports. “Our Symantec products have always been reliable,” he says. “And I’ve never heard a complaint about them. In fact, there are so many advantages to being a Symantec-based shop that I don’t even look at other vendors for security and availability solutions.”

However, as an increasingly busy one-man IT support shop, Bulger wanted more streamlined management of the IT infrastructure so that he could have more time to tackle more strategic issues—such as accommodating a large new BASC facility that is currently under construction.

Finding the Right Solutions Provider

Consequently, BASC began evaluating value-added resellers, looking for a partner with proven experience and expertise in security and availability solutions and integrations. Bulger also sought an organization willing to share their expertise, thus allowing him to better manage the infrastructure on his own.

After careful consideration, BASC selected Advanced Internet Security, Inc. (AIS) (www.advintsec.com). Headquartered in Colorado Springs, Colorado, AIS is a small, veteran-owned, value-added reseller and Symantec Enterprise Security Partner. AIS security experts combine technical knowledge, experience, and current training on a broad range of tools to design, develop, implement, test, and maintain secure, effective security environments for customers.

Bulger, who is pursuing SANS certification, singled out AIS for its depth and breadth of security expertise. AIS’ security engineering staff has earned Certified Information Systems Security Professional (CISSP) certification as well as Symantec Certified Security Practitioner (SCSP) status.

Configuring and Implementing a Secure IT Infrastructure

AIS worked with BASC to understand the organization’s environment, infrastructure, and user requirements and then spent 10 days at BASC helping Bulger configure (or in some cases, re-configure) and integrate their many security and availability solutions under the Symantec Enterprise Security Architecture (SESA) for more streamlined management.

Today, the following Symantec solutions help keep BASC’s IT infrastructure up and running efficiently and effectively:
• Symantec AntiVirus™ Corporate Edition software keeps BASC workstations and servers virus-free and ensures that any laptops lacking antivirus—that enter the BASC environment—are protected before they connect to the network. Symantec AntiVirus Corporate Edition software provides scalable, cross-platform virus protection for workstations and network servers throughout the enterprise.

• Symantec Event Manager for Antivirus provides Bulger a more holistic view of BASC’s security posture by consolidating and aggregating security event information. The application is a centralized, cross-tier, enterprise-wide logging, alerting, and reporting tool for Symantec antivirus and client security products.

• Symantec Gateway Security protects BASC’s Internet gateway and network segments from blended threats. Symantec Gateway Security combines a full inspection firewall with protocol anomaly and signature-based intrusion prevention and intrusion detection, virus protection, and content filtering.

• Symantec Advanced Manager for Security Gateways enables Bulger to centrally manage BASC’s security gateway deployments. It provides centralized logging, alerting, and reporting capabilities for Symantec gateway protection solutions.

• Symantec Ghost™ Solution Suite software makes it easy and quick to refresh BASC workstations in preparation for use by incoming researchers. Symantec Ghost Solution Suite is the industry’s most widely used enterprise PC management solution for Windows OS deployment, software distribution, migration, and PC retirement.

• Symantec Mail Security for Microsoft Exchange protects BASC’s groupware server against viruses, spam, and other unwanted content. It provides high-performance, integrated mail protection for Microsoft Exchange 2000/2003 servers.

• Symantec Premium AntiSpam keeps BASC inboxes spam-free. Symantec Premium AntiSpam is a subscription service powered by Brightmail technology and response that offers a spam detection rate of 95 percent and the highest accuracy rate against false positives (99 percent).

VERITAS NetBackup Provides Data Protection

BASC also leverages VERITAS NetBackup™ software to help protect the security and availability of research information. When visiting researchers arrive at BASC, VERITAS NetBackup software is installed on their laptops and is configured to back up regularly to a centralized backup server. Then, should a researcher’s laptop system go down for any reason, Bulger can recover its recently backed up data and, with the help of Symantec Ghost Solutions Suite software, quickly provide the researcher with a new, fully-configured laptop.

According to Bulger, the importance of both information security and data backup cannot be overstated. “These two pieces form the crux of data protection,” he says. “Data protection is security, and data protection is backup and recovery. And while a security incident can knock you out and prevent you from doing research for a few hours or even days, losing data that the government has funded you millions of dollars to research and share can knock you out for months or even years.”
BUSINESS VALUE AND TECHNICAL BENEFITS

- Avoided IT staff additions despite growth in users supported and backup volume
- Enhanced operational efficiency via centralized management of security and data backup and mentoring from AIS consultant

Symantec, VERITAS, and AIS are the Right Combination

Security and availability technologies from Symantec and VERITAS are key to ensuring that BASC remains a vibrant and successful logistics provider for Arctic science. And the expertise and unselfish support from AIS enable Bulger to leverage the organization’s IT infrastructure to its full potential.

“AIS didn’t just come in, integrate and reconfigure some software, and then leave,” he says. “They also helped me understand how each product really worked. They trained me so that when they left, I had the skills and knowledge needed to support the environment by myself.”

According to AIS, that’s just part of their job. “Sure, our goal was to make sure everything was properly installed, configured, and integrated,” explains Gary Cannon, president of AIS. “But we also realized how important it was for Bob to be comfortable providing daily management of the infrastructure on his own. We simply helped him get a better understanding of all of the tools he was already using.”

There’s nothing simple in that, though, Bulger adds. “Being a one-man shop most of the year, and without the budget or ability to hire another full-time employee, it’s important for me to be as efficient as possible. Our integrated security and availability solutions provide a more secure and manageable infrastructure that enables me to do my job better in less time. And knowing how to keep this infrastructure up and running is absolutely invaluable.”

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