



BlueCross BlueShield of North Carolina Credit Union Case Study: **Is Your Members' Financial Data Secure?**

By John Livesay



BCBSNC Credit Union is a seven million dollar credit union that serves the banking and financial needs of BlueCross BlueShield of North Carolina employees and families. Its mission is to provide an alternative to other financial institutions for cost effective, secure, and convenient financial services to their members on a cooperative basis. Located within its sponsor company's facilities at their Durham, NC Customer Service Call Center, BCBSNC CU has always enjoyed the available IT support services and infrastructure directly from BCBSNC.

However, BCBSNC CU envisions growing it's scope to serve the needs of BlueCross members statewide and prepare for the possibility of offering its services to members beyond BCBSNC employees. Its first major initiative was to expand services from traditional branch banking to more on-line banking services. Furthermore, they wanted to build a system that would allow access to typical branch office services in other BCBSNC locations, as well as enable future branch offices to come on-line easily and seamlessly. Finally, the system had to be very secure. This initiative would have an extremely high visibility with the BlueCross employees and BCBSNC CU board of directors, and there was no room for potential data compromise or service disruption. **"When you handle people's money, you don't want that information getting out onto the Internet"**, BCBSNC CU Manager Laura Williams emphasizes. "The responsibility and liabilities are too great." They needed the same security that a company like BCBSNC would implement, without the benefit of having deep pockets to invest in security like their sponsor company.





To make matters complex, BCBSNC CU found that to have the control and flexibility to grow and offer on-line services to their membership as they pleased, they would have to begin cutting their ties to the support and infrastructure they had enjoyed for many years from BCBSNC. Since their insurer required credit unions to maintain strict controls over their members' database and financial records, BCBSNC CU would have to continue maintaining their network file servers in house. Up until now, they had enjoyed the luxury of BCBSNC's network for Internet access and email. When BCBSNC CU required a dedicated T-1 for their on-line banking initiative, BCBSNC's own security measures would not allow the credit union to continue connectivity with their corporate network. BCBSNC CU would have to go it alone, without an IT staff, and without a single piece of networking or security product to start with.

BCBSNC CU turned to **Computer Service Partners** ("CSP") to assist them in building a new network and provide the day-to-day IT support for their operations that would allow them to begin growing their service offerings. CSP is a North Carolina-based IT consulting and support organization that already had a long history with BCBSNC. CSP also had strong IT focus in network infrastructure design, network security, and remote network management capabilities. Furthermore, they had local engineers who could respond to on-site assistance when needed. "CSP has been easy to work with, and I appreciate their attention to detail. I feel so comfortable, so safe, knowing they are managing our security," states Williams. CSP is also a member of the Ingram Micro National Service Network, and can provide nationwide on-site service coverage to their clients.

As a **Premier Cisco Systems Partner with a Security Specialization**, CSP consulted with Cisco Systems to design an infrastructure that would employ the required security needed, be easy to manage, offer expandability for future remote offices and other IP voice and data applications in the future, and still remain affordable. The same Cisco Systems engineers that worked with BCBSNC to design their multi-office 5000 node Cisco infrastructure would employ a very similar architecture to support a 10 user BCBSNC CU branch. All that technology, while staying within a reasonable budget for BCBSNC CU, seemed to be a daunting challenge. "Our board of directors demands the best with everything we do, and would not want to cut corners on security. Each board member is personally liable for any mistakes we make," remarks Williams.





CSP's solution began with a Cisco end-to-end infrastructure to provide the network connectivity, routing and security. A Cisco 1700 series router provides connectivity to the Credit Union dedicated T-1 line. The firewall is a Cisco PIX with a built in DMZ port that provides the on-line banking server a secure area for customer access and VPN capability for secure remote access. A Cisco Catalyst 3550 switch provides high-speed 10/100MB networking in the office with built in Power Over Ethernet capability for future IP phones or wireless Access Point deployments. All of Cisco's networking equipment shares the same IOS software across their entire product line to insure total interoperability. BCBSNC Credit Union already had a network in place that matched, in functionality and security, the network of their sponsor company. However, true to their mission, BCBSNC Credit Union wanted to further insure the services they provided to their members were secure.

BCBSNC Credit Union was not lulled into a false sense of security simply by deploying one of the industry's finest firewalls. They wanted to protect the servers and workstations that their customers depended on everyday for financial services. And they wanted to protect themselves against the unknown. But how do you stop something before you know what you are protecting yourself against? Cisco again had the solution - Cisco Security Agent.

Cisco Security Agent (CSA) provides threat protection for server and desktop computing systems, also known as endpoints. It identifies and prevents malicious behavior, thereby eliminating known and unknown ("Day Zero") security risks and helping to reduce operational costs. The CSA aggregates and extends multiple endpoint security functions by providing host intrusion prevention, distributed firewall capabilities, malicious mobile code protection, operating system integrity assurance, and audit log consolidation, all within a single product. And because CSA analyzes behavior rather than relying on signature matching, it provides robust protection with reduced operational costs.

With all this technology in place, the final piece to this solution was supporting an infrastructure that, until now, BCBSNC CU had never





managed. With **Computer Service Partners' OptiServe Managed Network Services**, CSP setup a secure VPN tunnel from their Network Operations Center in Raleigh NC to the BCBSNC CU network in Durham NC. From a remote data center, Computer Service Partner began monitoring the credit union's mission critical devices including the router, firewall, network switch and file servers. The Cisco Security Agent management server is hosted by Computer Service Partners, where policy updates and management can be monitored twenty-four hours a day. Almost immediately, with the CSA and monitoring in place, CSP began to observe exploit attempts on the Credit Union's network. CSA notified CSP of the exploits, and immediately took action to restrict any unauthorized activity. BCBSNC Credit Union never missed a beat. Actually, if it were not for CSA and CSP's constant monitoring, **they may have never known that an exploit had taken place at all.**

The final test came in the form of the Sasser Worm. Sasser is a worm that exploits Windows vulnerabilities, which with a buffer overrun it allows remote code execution and enables an attacker to gain full control of the affected system. To propagate, it scans the network for vulnerable systems. When it finds a vulnerable system, this malware sends a specially crafted packet to produce a buffer overflow, effectively causing the Windows computer to restart itself. BCBSNC CU's security system actually detected the presence of Sasser, but did not allow it to execute or propagate. While corporate networks around the world were crippled by the Sasser worm, BCBSNCCU remained operational and did not miss a beat. Most importantly, the small Durham credit union continues to enjoy the comfort that their member's information is protected against the next unknown threat, which may prove more damaging than the Sasser Worm.

BCBSNC Credit Union has taken the first step to deploying a mission critical system while providing an unsurpassed level of security and comfort for its customers and board members. For more information about how your financial institution can deploy the same level of security protection, contact Computer Service Partners at 919-424-2000.

