

# HealthBridge Bridges the Gap Between Hospitals with Juniper Networks SSL VPN Solution



**Organization:**

HealthBridge provides reimbursement solutions to pharmaceutical manufacturers, biotechnology companies and medical device companies.

**Industry:**

Health care

**Challenge:**

Securely connecting multiple hospitals on the same network

**Solution:**

Juniper Networks NetScreen SSL VPN solution

**Benefits:**

- Remote access based on permission level
- Ease-of-use
- Single point of entry for users
- New hospital applications created

In 1997, 18 competing hospitals in the Cincinnati area came together in a grass roots initiative to develop the country's first digital healthcare Internet Service Provider (ISP), called HealthBridge. The hospitals' goal was to build an entity to allow collaboration between the facilities to improve the overall quality of patient care, while reducing each site's information technology (IT) services and support costs.

Today, HealthBridge serves approximately 7,000 physicians from The Health Alliance, Mercy Health Partners, TriHealth, Cincinnati Children's Hospital Medical Center, St. Elizabeth Medical Center, The Drake Center and other labs, transcription services and surgery centers. HealthBridge provides state-of-the-art technologies and secure IT services to the 18 area hospitals, as well as 30 clinical care systems.

HealthBridge.org, the member hospitals' Web portal, is designed to provide remote access to the clinical care systems, which includes Hospital Information Systems (HIS) lab systems, scheduling applications, fetal heart monitors, hospital-based Electronic Medical Records (EMRs), electronic chart completion and radiology images.

HealthBridge deployed its first remote access solution using a Cisco 3000 Concentrator virtual private network (VPN). HealthBridge envisioned a seamless, secure VPN

system that would enable physicians and their staff to log onto the Web portal to access the clinical care applications from anywhere at anytime.

However, the Cisco VPN generated significant IT process issues for HealthBridge. Because the Cisco solution requires VPN client software loaded on users' PCs, installation became a problem. Getting to and installing on the physician's personal computers was intrusive and training them to use the Cisco VPN process was another challenge. This hindered end-user adoption of HealthBridge.org. It became apparent and critical for HealthBridge to adopt a new and easy-to-use VPN solution.

**The Solution**

HealthBridge set out with specific goals for their new remote access solution. One clear requirement was to eliminate the need for a client device software download. Also, the Cisco solution did not allow for access controls for external and internal users, or detailed auditing and reporting capabilities – critical elements for the Health Insurance Portability and Accountability Act (HIPAA) regulations emerging at that time. The new solution would also have to continue to accommodate legacy applications, such as small mainframes, terminal access and middleware, such as Citrix.

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**Rodney Cain**  
HealthBridge  
CTO



After a thorough evaluation, HealthBridge selected the Juniper Networks NetScreen Secure Access 3000, a Secure Sockets Layer (SSL) VPN. The Secure Access products are hardened network appliances that leverage the benefits of secure access over the Internet as do traditional network security technologies, such as remote access IPsec VPNs and extranets, but in a more secure, less complex and lower-cost manner. Contrary to remote access IPsec VPNs, there is no VPN client software to install because the Secure Access appliances leverage SSL found in today's Web browsers for secure, controlled access. The result is a more cost effective, secure access solution that is easy to deploy and simple for end-users to operate.

Today, with the NetScreen Secure Access SSL VPN, a HealthBridge authorized user simply launches a Web browser and directs the browser to the URL defined for HealthBridge.org. Upon logging in and being authenticated, HealthBridge users gain access to all applications they are authorized to see in the same way as if they were physically in the hospital on the LAN.

"The NetScreen SSL VPN is the first technology that we have found that provides the level of remote access security necessary for the sensitive nature of healthcare data, as well as provides the flexibility and ease of administration necessary for managing a diverse network," said Rodney Cain, CTO at HealthBridge.

### The Benefits

The SSL VPN's access privilege management features provide HealthBridge IT personnel flexibility in defining authentication and authorization policies for various user groups, even distinct subgroups within the 18 member organizations. This enables HealthBridge administrators to provision remote access by need or purpose for each physician and their staff members, ensuring compliance with the HIPAA security policies and requirements.

"It's a huge advantage to us to have both external and internal users log into the SSL VPN appliance," said Cain. "We can control their network and application access at a much finer level with the SSL VPN than we have ever been able to do before. The SSL VPN is an ultimate gate keeper, acting as the front door for HealthBridge."

In the past, the radiology department had to print hard copies of their images to share with other physicians. This required physicians to be on-site to diagnose the patient's results. With the SSL VPN, physicians can connect into HealthBridge.org to review radiology images electronically from their office, home or another hospital - saving a trip to the office when on call. This ease of access to various healthcare applications for HealthBridge's customers has been so successful that they anticipate their remote access user base to grow from 500 physicians and their staff to more than 4,000 users by the end of 2004.

"The NetScreen SSL VPN is going to be a much bigger part of our operations, becoming a core part of our business," said Cain. "We are replacing the Cisco VPN and dial ups connections, which had limited the number of remote users we could have. Now, our user community percentage will grow with everyone coming through to the SSL VPN to access the HealthBridge.org network."

Through Juniper's SSL VPN, the 18 hospitals, nursing homes and their physicians can now access clinical reports stored in the network from anywhere, anytime in one place versus searching numerous proprietary portals. The single point of entry into a centralized database enables collaboration between the facilities to improve the overall quality of patient care.

HealthBridge also purchased the Juniper Networks NetScreen Secure Meeting product, a SSL-based appliance for secure, cost-effective online meetings and application sharing sessions. HealthBridge trainers have begun using the Secure Meeting product to hold training sessions remotely with physicians.

One result of the SSL VPN is universal access for physicians to HealthBridge's community-wide clinical messaging system. The combination of the 30 clinical care systems is the country's largest community-wide clinical messaging application, which sends six million lab, radiology, transcription and transcribed reports to physicians and nursing homes electronically.



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