



Michigan Blood

Michigan Blood Selects Aerohive to Deliver Secure and Scalable Networking Solution

Challenges

- Establish wireless as primary access layer for entire healthcare organization to obtain greater efficiency and implement online health screening
- Enable wireless connectivity for mobile blood drives held in remote and challenging locations at up to 30 new sites every day
- Solve issues with in-building cell phone connectivity, especially in remote areas

Results

- Secure and reliable VPN for all mobile blood drive locations with Aerohive's Branch on Demand solution
- Flawless WLAN at headquarters and distribution centers, initiating wireless phones for critical communication with hospitals
- Greater efficiency and higher accuracy at blood drives, allowing laboratory staff to process donations on site and pave the way for online donor registration

About Michigan Blood

Founded in 1955, Michigan Blood is an independent, nonprofit blood bank that provides blood for 38 hospitals across Michigan's Lower Peninsula. Providing blood to local Michigan hospitals is a top priority for Michigan Blood, collecting over 120,000 blood donations each year at its nine permanent donation sites and more than 3,700 mobile blood drives annually throughout the state.

Headquartered in Grand Rapids, Michigan Blood is a provider of choice for dozens of Michigan hospitals. Blood is required on average for one out of every seven people admitted to a hospital, including patients receiving chemotherapy and radiation, as well as trauma victims, surgical patients and people with bleeding disorders.

Besides providing blood, Michigan Blood offers additional services including a nationally recognized marrow program, therapeutic apheresis, DNA tissue-typing, transfusion medicine consultations, and Michigan's first public cord blood bank.

With over 400 employees, more than 600 volunteers, as well as up to 30 mobile blood drives occurring daily, Michigan Blood is a 24/7/365 operation, and aims to deliver an extraordinary level of service excellence for its life saving products.

"In our world, it was imperative to have a controller-less solution with centralized management like Aerohive offers."

—Bob Eluskie

Director of Information Technology at Michigan Blood

The Challenge

Bob Eluskie, Director of Information Technology at Michigan Blood, leads an IT team of seven, which is tasked to ensure connectivity at all areas of the organization, both at headquarters and nine fixed office locations, as well as at all mobile blood drive locations, which on a typical day are operating at up to 30 unique sites across the state.

The largest hospital in Grand Rapids is located just down the street from the headquarters of Michigan Blood and the hospital orders blood products at any hour of the day for emergencies and critical needs.

To say that Michigan Blood is in the business of life and death is an understatement. Because communication is at the heart of its operations, it was critical that Bob and his team deploy a flawless network solution. Over the last several years, the organization began having issues with stability with cell phone connectivity, especially in remote areas, which prompted the organization to pursue alternative solutions.

Another challenge was addressing and deploying network connectivity at its mobile blood drives. Michigan Blood uses Blood Bank Computer Systems (BBCS), a complete software solution for the blood banking industry that manages information and risk management. Michigan Blood also runs a CRM tool, Donor Dialogue, which manages its entire donor recruitment process.

Registration information at mobile drives was inputted into a laptop and at the end of the day, thumb drives were transported to a lab where the data was transferred into BBCS, requiring additional steps, more work for staff, as well as assuming risk and greater chance of data loss.

Since donors at mobile blood drives account for 70% of total blood collection for Michigan Blood, it was imperative to drive efficiency and production by deploying a resilient VPN for each mobile site. In addition, with numerous mobile locations across the entire state, the solution needed to be cost-effective, as well as simple to manage and implement for non-technical staff and volunteers.

Mobile blood drives take place in a wide variety of challenging locations. Schools and churches host blood drives in small rural communities, often in basements and other challenging physical locations. Michigan Blood has four mobile buses that are driven to a variety of locations, including parking lots of malls.

At its Grand Rapids headquarters and at its fixed sites, Michigan Blood was having poor reception for corporate cell phones, especially in challenging building environments, especially cumbersome at its distribution centers where communication is vital. This was especially problematic when communication with hospitals and other distributors was crucial. Michigan Blood realized its need to extend and secure its corporate capabilities across the entire organization, and most importantly at all of its mobile drive locations.

The Solution

As Michigan Blood first started exploring possible networking solutions, it recognized the need for a high performance, highly available and secure enterprise Wi-Fi and branch routing solution, without the cost and complexity of a controller-based solution. A controller-less Wi-Fi architecture would enable no single point of failure, with flexibility for expansion, and superior branch performance at reduced cost.

Michigan Blood considered other solution providers, such as Meraki, Meru Networks and HP, but they entailed multiple devices or additional firewall requirements, while Aerohive was able to offer a simplified and secure networking solution for both its fixed sites and mobile locations.

"In our world, it was imperative to have a controller-less solution with centralized management like Aerohive offers. Controllers would add an unnecessary layer of complexity, and we do not have the luxury of transferring data back and forth. A secure VPN solution was vital for us to deploy at all our mobile blood drive locations," stated Bob Eluskie, Director of Information Technology at Michigan Blood.

Michigan Blood deployed Aerohive's Branch on Demand office network solution, selecting Aerohive BR100 routers for all mobile locations. Michigan Blood has also equipped sales staff with Aerohive BR100 routers to work easily from home and to test connectivity at site locations for mobile blood drives. The Aerohive BR100 touted 'work anywhere' mobility, enterprise Wi-Fi, VPN, routing and security, essential for Michigan Blood's challenging mobile blood drive requirements. Branch routers from Aerohive enabled the IT staff at Michigan Blood to run as many remote office VPNs as easily as they would a single location, with the same level of security as its corporate network, critical for any healthcare organization that manages strict requirements for privacy and data integrity.

In addition, Michigan Blood uses the Aerohive BR100 and BR200 routers with 4G connectivity as backup to the primary MPLS connectivity. Future initiatives include replacing PRI circuits at three smaller offices with Aerohive branch routers using 4G service or cable Internet, reducing considerable cost for the organization.

Michigan Blood implemented Aerohive AP330 access points for its headquarters and fixed site locations. The AP330 is targeted at high capacity enterprise environments, chosen for its high performance and reliability.

Michigan Blood is also using HiveManager from its headquarters to monitor and manage its access points and routers across all its mobile and fixed sites. Its simple user interface makes it easy for Michigan Blood to make changes, conduct firmware upgrades or manage policy configurations remotely.

A key mandate for Michigan Blood is flawless connectivity, especially crucial for the healthcare industry. A critical feature in Aerohive's distributed architecture is the RADIUS server support built directly into the Aerohive operating system, HiveOS. This feature eliminates the need for remote directory services to support 802.1X authentication as well as eliminating the need to distribute additional RADIUS servers at each remote location. As Bob explains, "We wouldn't have deployed Aerohive at Michigan Blood without the enterprise class features its solution offered."

Active directory support from Aerohive is also essential for Michigan Blood. With numerous types of devices, and an increase in BYOD for volunteers and staff, the organization needs to not only be able to connect seamlessly to the network, but with same authentication and security as a corporate implementation.

The Results

Aerohive has enabled Michigan Blood to provide centrally-managed secure branch-office connectivity at all of its mobile blood drive locations, as well as a resilient and robust WLAN for its fixed site and headquarters locations.

The ease of deployment, paired with excellent customer service from Aerohive, were indispensable for Michigan Blood, which often has volunteers or non-technical staff setting up a blood drive in a remote location. A toolkit was created so it is easy for anyone to set up a mobile workplace. For example, Michigan Blood buses are frequently driven to the heart of Amish country where modern conveniences like electricity are not available. However, once an Aerohive router is plugged in on the bus, the router discovers the HiveManager automatically and is centrally managed, allowing staff to save time and work from anywhere.

Another huge asset for Michigan Blood has been implementing a resilient and robust wireless network at its fixed site locations, where often in-building cell phone service was unavailable or unreliable. Michigan Blood activated iPads as SIP phones to run on the WLAN at three of its most crucial distribution locations. This allowed employees to receive critical calls from hospitals at any hour of the day regardless if they were sitting at their desk or roaming throughout the depths of the buildings. The wireless phones managed through HiveManager and Aerohive APs enabled Michigan Blood to take advantage of enhanced Quality of Service (QoS) features. Most critically, the devices worked at any location in the building, with no worry about poor reception that they might experience on corporate mobile phones.

For its mobile blood drives, now that sales staff can visit prospective donor site locations in advance to verify connectivity, increased efficiency and greater productivity are established for the organization. Donor services staff and volunteers are able to save time and achieve greater efficiency with secure VPN connectivity at each mobile drive. Quite significantly, Michigan Blood has doubled the number of donor registrations from wireless devices over the last four months, providing convenience and efficiency for donors and the organization alike. Over 92% of donor registrations at mobile blood drives are now performed wirelessly.

Since the Aerohive deployment, laboratory staff now assists directly on site at larger mobile blood drives because they can connect to corporate applications like BBSCS, allowing staff to conduct donor processing on site, mitigating risk and error. Now, once the blood returns back to a lab, the blood production and testing process can begin immediately without delay of additional data entry required previously.

Apheresis donors are connected to a specialized machine that draws blood, filters out needed components, and returns the rest of the blood to the donor. These donors are now provided iPads to view TV wirelessly during this specialized donation process which often extends the donation time. Guest access is also provided via a captive web portal.

Michigan Blood is also pleased with the low investment cost of the Aerohive solution. Because Michigan Blood can 'pay as it grows', the organization has a fully scalable solution and only needs to acquire additional APs or branch routers as warranted.

Well Built for the Future

With wireless infrastructure in place, the organization has plans in the coming year to move to an Electronic Donor Health Questionnaire (eDHQ), allowing donors to provide donor history online or with a wireless tablet device at blood drives. Michigan Blood is also exploring additional solutions using Aerohive devices as a remote bridge router to connect its fixed site locations.

With solutions from Aerohive, Michigan Blood now has greater efficiency with higher production, without compromising security, performance or availability.



Contact us today to learn how your organization can benefit from Aerohive wireless LAN architecture.

Aerohive Networks, Inc.
330 Gibraltar Drive
Sunnyvale, CA 94089

toll free 1-866-918-9918
phone 408-510-6100
fax 408-510-6199

www.aerohive.com
info@erohive.com
CS-Michigan Blood