



Nevro Corporation Selects vCloud Air with Silver Peak WAN optimization to Address Integration, Scalability, Performance and Regulatory Concerns

INDUSTRY

Medical device manufacturing

LOCATION

Menlo Park, California

KEY CHALLENGES

- “Two-company” culture impeded data integration.
- Regulatory requirements demanded privacy.
- IT personnel needed control, scalability and performance.

SOLUTION

VMware vCloud® Air™ is a secure, dedicated cloud owned and operated by VMware. Built on the trusted foundation of VMware vSphere®, the service delivers unified networking, common management and security, and the same reliability and performance you get with your vSphere environment. Silver Peak WAN optimization reduces the effects of WAN latency, and improves vCloud Air performance over distance. Data transfer speeds improve an average of 25X.

BUSINESS BENEFITS

- Seamless, instant access to the cloud
- 25X faster uploads with Silver Peak WAN optimization
- Scalability for future growth

With employees in Australia, Europe, and the United States, Nevro Corporation was looking for a robust, flexible, accessible cloud solution that could scale with the business. It also needed a secure platform that could meet the stringent regulatory requirements for its implantable medical device and associated patient and study data. Nevro, a young company building its IT infrastructure from the ground up, selected the VMware vCloud® Air™ platform based on its compatibility with existing VMware solutions, and Silver Peak for its ability to accelerate data transfer to and from vCloud Air.

Nevro is a growth-stage implantable medical device manufacturer focused on providing relief to those suffering from chronic pain. Headquartered in Menlo Park, California, and operating globally, Nevro is developing technology that delivers high-frequency spinal cord stimulation for pain relief.

The Challenge

Founded in 2007, Nevro's implantable medical device received European approval for leg and low back pain in 2010 and is commercially available in Europe and Australia. Now the company is conducting trials for new applications of the technology and for FDA approval in the United States.

Clinical trials, quality control processes, patient treatment and device diagnostics generate a tremendous amount of data, but Nevro didn't have a single platform on which the data could reside.

“When you're in startup mode ... things move so quickly that it's hard to formulate a real strategy in the technology space,” explains Jeff Wilson, Nevro's IT director. “It wasn't that there were struggles, but the infrastructure was geared toward people that were based in headquarters.”

As such, it was a “very U.S.-centric, somewhat chaotic” infrastructure that made it difficult for a geographically diverse workforce to access integrated company data. Nevro used Box to create a cloud-computing environment for far-flung field personnel, who needed to access files and upload critical data, but Wilson says there wasn't a formal strategy around folding data into the company as a whole.

“It led to almost a two-company culture; there are the people using Box doing their thing and the people here doing their thing, and it drove a wedge in between,” he explains. “Now we're trying to fold all of it back in so there is one set of data for the company that we're all working from.”

Nevro needed to consolidate its data infrastructure into a single cloud-based solution that would be accessible, flexible, and scalable while meeting regulatory requirements. That solution had to enable continuous data transfer from across geographic locations and make it easy to transfer existing data to the cloud to create a single repository of company data.

“The vCloud Air performance has been so overwhelmingly good, the integration into our existing platform has been surprisingly simple, and the people are so helpful, it’s hard to imagine a better vendor experience. When you deal with a large company like VMware, it’s great to have that sort of boutique hand-holding support experience coupled with great products.”

Jeff Wilson
IT Director,
Nevro Corporation

VMWARE FOOTPRINT

- VMware vSphere® 5 Standard
- VMware vCenter Server™
- VMware vCloud® Air™

APPLICATIONS VIRTUALIZED

- Tertiary and quaternary Read-Write AD servers
- Programmer databases for the US Clinical Trials (FDA Study)
- Legacy financial systems, distribution server and file services

PLATFORM

- Silver Peak VX-5000

The Solution

Wilson wanted to build Nevro’s data center in the cloud, but he needed more control over the data than solutions from Rackspace, Amazon, and Azure would allow. “We started virtualizing with vSphere onsite,” he says. “Moving to the cloud with vCloud Air was an obvious next step.”

When VMware announced the vCloud Air solution, Wilson had just hired another person, so he had more time to devote to addressing Nevro’s infrastructure requirements. “I said, let’s do a little bit of a pause [on choosing a solution] because I want to see where this is going,” he recalls.

Wilson saw several benefits to the vCloud Air solution, including speed and ease of deployment, ease of integration with existing solutions, and scalability for future growth. Security was also important due to a strict regulatory environment in both Europe and the United States. “Regulatory requirements dictate everything we do and how we do it,” he says. “All of our data needs to be handled gently because it has the potential to be personal. ...We have to be sure we’re safeguarding people’s rights.”

Finally, Wilson simply trusts VMware. “I don’t lie awake at night wondering if they are going to disappear tomorrow. This is their core business,” he says.

Nevro launched the vCloud Air solution with Silver Peak WAN optimization in November 2013. “We have seen up to a 25X performance improvement with Silver Peak, and the integration has been surprisingly simple,” Wilson notes, especially when it came to transferring existing corporate data.

Wilson also notes that there’s a ‘solar system’ of people involved, not just his team. “We worked closely with VMware partner CDW and Silver Peak to make this a possibility,” he stated. With the help of CDW and Silver Peak WAN Optimization, which is a certified solution on the vCloud Air platform and a leader in Gartner’s 2014 Magic Quadrant for WAN optimization, Wilson has been able to quickly migrate Nevro’s tertiary active directory, distribution and file servers to the cloud, as well as a legacy financial system and two programmer databases. For example, the Clinical Database Management System, which is used to manage all clinical studies will be moved to vCloud Air to ensure higher availability and disaster recovery. Eventually, he says, “everything will either run on vCloud Air or run on a vSphere server and be backed up to vCloud Air.”

Business Benefits

Today, thanks to the vCloud Air solution, Nevro has an integrated IT environment. The data is hosted in one of the highly secure data centers VMware maintains, eliminating concerns about privacy and security. The solution is easy to manage, giving Nevro’s IT staff the control they need.

“Once we started working with vCloud Air, it was very nice to have the ability to quickly set up the VPN [virtual private network] tunnel, to add routers, and to pop in firewalls,” says Wilson. “If our R&D group suddenly realizes it needs to bring up these two servers for the U.S. study, it’s literally moments and they’re up and running with additional capacity provided by vCloud Air. There’s no back and forth with various vendors on hardware specs or what have you.”

Wilson also likes the way vCloud Air scales, and its impact on long-term facility costs. “In Silicon Valley ... real estate is at a premium,” he explains. “Scalability of the solution without any additional hardware costs or connection from a facility point of view, is important to me.”

High performance and low latency are also important. When Nevro deployed the vCloud Air solution, it found that performance was on par with its existing legacy file server. “But performance pretty much went atomic once we initiated Silver Peak,” notes Wilson, especially in the area of data transfer. Wilson wanted to disprove the notion that moving data to the cloud automatically means a performance hit, and Silver Peak hit the mark.

PARTNERS

- **Silver Peak** (www.silverpeak.com) is the winner of the TechTarget “Best of VMworld 2014” Award for networking and virtualization. Silver Peak is recognized for Unity, the new intelligent Wide Area Network (WAN) fabric that enables IT to monitor and control cloud connectivity across the enterprise and accelerate Software as a Service (SaaS) applications on any network. Silver Peak accelerates data between data centers, remote offices and the cloud, and is recommended for initial data migration, ongoing replication/synchronization, and multi-site, end user access to vCloud Air.
- **CDW** (www.cdw.com) is a leading provider of technology solutions for organizations of all sizes. CDW features dedicated account managers who help customers choose the right technology products and services to meet their needs. The company’s solution architects offer expertise in designing customized solutions, while its advanced technology engineers assist customers with the implementation and long-term management of those solutions.

For example, Nevro collects video testimonials from patients. Wilson could upload a 572MB video file to the cloud at a speed of 4 megabits per second; with the addition of Silver Peak WAN optimization that speed jumped to 100-plus megabits per second. Now, clinicians can access these videos to analyze patient data faster than ever. Together, the vCloud Air solution and Silver Peak make it fast and easy for Nevro to transfer existing data and add new data over time. “vCloud Air is the cake, and Silver Peak was the icing on the cake in terms of scalability and performance,” says Wilson.

VMware support services are also a plus. “I’m a small company that’s growing, and VMware is this enormous company, yet they’re still spending the time to really make sure I’m successful,” he notes. “When you deal with a large company like VMware, it’s great to have that sort of boutique hand-holding support experience.”

Looking Ahead

Long term, Wilson is focused on expansion. “I’m looking at where the puck’s going to be, so to speak, when we’re larger,” he says. “With everything in vCloud Air, if we have to move facilities or fire up international data centers, it’s like, so what? There’s no lengthy run-up time or double purchasing of infrastructure. It’s going to be very straightforward, and that’s when we’re going to be seeing a lot of money saved.”

