VIF International Education Prepares for Explosive Growth with Move to VMware vCloud Air

User traffic on VIF International Education’s Learning Center, an online professional development platform for K–12 educators, grew by more than 500 percent in one year, but its on-premises IT infrastructure couldn’t keep up. This mission-critical service was running on a single server blade without power or network redundancy, leading to unacceptably high downtime. By moving to the VMware vCloud® Air™ platform, VIF gained vastly higher availability and near-unlimited scalability, improved resource utilization by 300 percent, and reduced its IT systems management workload.

VIF International Education builds global education programs that prepare teachers and students for success in an interconnected world. Based in Chapel Hill, North Carolina, the firm supports teachers, schools, and school districts with programs for professional development and curriculum, language acquisition, and cultural exchange. VIF is proud to be a B Corp, certified to meet specific standards for social and environmental performance. VIF is dedicated to developing globally competent citizens with the skills to thrive in an increasingly global marketplace.

Challenge
For most of its first 25 years, VIF operated primarily as a matchmaker between American schools seeking international teachers and foreign educators seeking engagements in the United States. Over the past five years, however, VIF’s fast-growing online professional development programs for K–12 educators have become a primary focus. The firm delivers these programs through the Learning Center, an online content management platform that supports a curriculum resource archive and an integrated social community. Teachers earn continuing education credits on the platform by creating new lesson plans for an assigned topic, using them in the classroom, then posting the plans and student work samples to the archive.
“I don’t have to worry about a hard drive failing. I don’t have to worry about a power outage. I don’t always have to be available 24/7. Now that those systems are running in the cloud, they’re about as stable as they can get.”

- Mark Haney
Senior Systems Engineer,
VIF Education International

The Learning Center user base grew to 1,500 by 2012, then exploded to 8,500 in 2013. Projections of growth up to 1,000 percent in 2014, with users in up to 60 countries, triggered an urgent reassessment of the platform’s strategic importance. “There’s a mind shift that occurs when a system you’ve treated as a cost center becomes part of an important revenue stream,” says Mark Otter, chief product officer. “You have to treat it differently.”

Solution

Working with its long-time IT consultant, Infranet Technologies Group, the VIF team initially considered moving the Learning Center’s physical infrastructure to a colocation facility to solve the bandwidth and availability issues. But their focus quickly shifted to cloud-based infrastructure-as-a-service platforms to better address scalability for growth. The team evaluated a local cloud services provider but ultimately selected the VMware vCloud Air service. The decision was based on the service’s proven performance, broad OS and application support, built-in suite of business continuity options, and, not least of all, their familiarity and comfort with the VMware vSphere environment.

Haney explains: “The fact that vCloud Air allows me to use the same vSphere interface to manage both our internal servers and our systems in the cloud just makes life a whole lot easier. I didn’t have to learn a new system and a new interface, and I didn’t have to teach that to anyone else.”

The VMware vCloud Air platform is a secure infrastructure-as-a-service public cloud built on the trusted VMware vSphere foundation. The service extends customers’ data centers into the cloud quickly and seamlessly, using tools and processes they already have.

“The ability to connect both their cloud and on-premises environments, and manage them with the same tools, was a big differentiator,” says Mark Weaver, an IT business consultant at Infranet. “The easy-on, easy-off capability was a big factor too. Some of the other providers were really pushing for a three-year term, and vCloud was much more flexible.”

In early October 2014, VIF cloned the virtual machines running the Learning Center platform and its public Web site and migrated them to the vCloud Air service. “It was about as painless as any migration I’ve ever seen at that level,” Haney says.
FIVE USE CASES FOR VMWARE VCLOUD AIR

1. Development and testing – Move bursty test and development workloads to the public cloud for affordable capacity, a consistent environment, distributed development, and convenient collaboration.

2. Extend existing apps – Accommodate seasonal peaks, gain geographic reach, reduce latency, free up data center capacity, or drive consolidation by extending existing applications on VMware vCloud Air.

3. Disaster recovery – Use vCloud Air as a secondary data center to store backup copies of applications and data.

4. Modernize enterprise apps – Evolve existing applications by breaking them into tiers, creating new Web and mobile front ends, making apps service oriented, or leveraging infrastructure APIs to add scalability or context.

5. Build next-generation apps – Build new cloud-native applications using next-generation application frameworks, platform services, mobile backend services, Spring Framework, or Linux containers.

Business Benefits

Moving to the VMware vCloud Air service delivered immediate operational benefits and helped VIF prepare for continued rapid growth.

Improved User Experience for Teachers/Customers

The Learning Center server, now running on the VMware vCloud Air service, performs better and consumes only a third of the computational resources as the same system running in VIF’s on-premises facilities. Haney shares an example: “We had 180 teachers on the local server the Monday before we went live in the cloud, and the CPU load was over 40 percent. It was going as hard as it could go. We had a similar event the next week after we were live on vCloud Air. This time we had more than 200 teachers and the system load sat at about 10 percent. The site is just phenomenally faster. That not only makes life easier for us, it makes the user experience better for our teachers.”

High Availability (99.95 Percent) with Low Burden on IT Staff

With the Learning Center and Web site running on the vCloud Air service, Haney no longer has to maintain the physical infrastructure that delivers these mission-critical services. “I don’t have to worry about a hard drive failing,” he says. “I don’t have to worry about a power outage. I don’t always have to be available 24/7. When I started here, the Learning Center server was going down every couple of days, often late at night. Now that those systems are running in the cloud, they’re about as stable as they can get. I have more time to focus on other things.”
Ready for Sustained Growth with Agile, Scalable IT System

With the vCloud Air service, the company can now easily scale its IT system to meet foreseeable growth. And this enables teachers globally to use VIF’s Learning Center to generate engaging learning environments where students can excel in core curriculum as well as develop valuable critical and creative-thinking skills. “Keep in mind that our intent is not to get to 10,000 or 12,000 users and stop,” adds Mark Otter. “We want to have a plan for 80,000 and 100,000, and we need to be able to quickly scale the available resource for that kind of growth. We want to be positioned to deliver whatever resource is needed to grow the business.”

Looking Ahead

Future applications under consideration for the VMware vCloud Air service include a test and development server that would allow developers to see how their code performs in the cloud environment. “We’ve also talked about expanding the Learning Center platform across multiple servers to improve performance,” Haney says. “And maybe moving the database to a separate server.” These and other initiatives will continue to power the growth of the Learning Center as a trusted professional learning community that supports educators’ new global attitudes, skills, and knowledge into classroom practices that immediately impact student learning.

For more information, please visit: VMware vCloud Air