



# Solving Healthcare IT Challenges Through the Public Cloud and VMware

VMware vCloud® Air™ customers in healthcare share their stories of how the public cloud enabled them to protect, extend, or replace their on-premises data centers.



# STORIES FROM THE HEALTHCARE IT TRENCHES

Across the healthcare industry, IT decision-makers at institutions both large and small are looking to modernize their infrastructure to remain agile.

While each organization's story is unique, collectively they showcase a particular opportunity for existing VMware vSphere® users to quickly realize the cost-effectiveness and operational efficiencies that the public cloud delivers – without compromising the investments they've made in their on-premises data centers or the ability to meet the diverse computing needs of modern medical research and patient care.

If you are running a vSphere-powered data center, the opportunity to deliver value with VMware vCloud Air, the secure public cloud for VMware workloads, has never been easier. Read on to see the opportunities that await you.





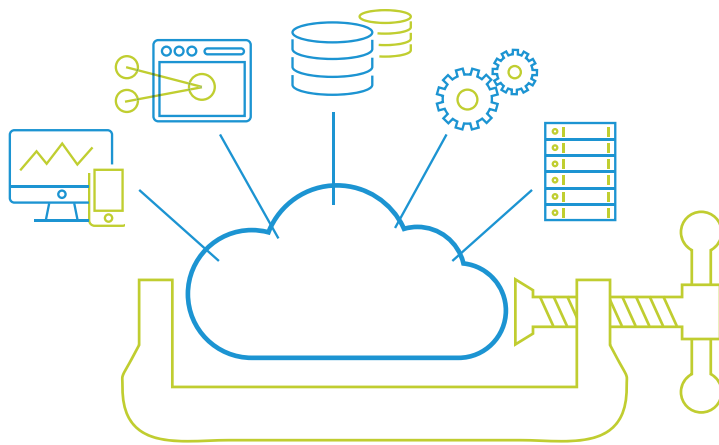
“The explosion in the healthcare industry’s reliance on cloud-based computing – coupled with the industry’s need to be flexible, collaborative, and consumer-focused – means that healthcare will inevitably adopt new ways of utilizing the cloud.”

CloudTech, “Why the healthcare industry’s move to cloud computing is accelerating,” 2016, [Web](#)





THE EXPLOSION OF DATA AND MOBILE DEVICES, ALONG WITH THE CONSUMERIZATION OF IT, HAVE PLACED UNPRECEDENTED PRESSURE ON HEALTHCARE IT RESOURCES.



*“With vCloud Air Disaster Recovery, we can protect our reputation and our community by keeping critical systems accessible and recoverable. It also gives us an easy option to comply with changing security and audit requirements for offsite backup.”*

- CHRISTOPHER FRENZ  
DIRECTOR OF IT INFRASTRUCTURE  
INTERFAITH MEDICAL CENTER



Digital innovation has transformed how organizations operate and opened up new opportunities to generate revenue and savings. But at the same time it has created new obstacles for IT teams in healthcare—obstacles that the public cloud can help overcome.

The cloud is simply no longer optional; it is a necessary component in delivering an agile infrastructure and enabling future-forward patient engagement and empowerment in today's complex healthcare landscape. Additionally, the cloud offers a rich opportunity to accelerate cutting-edge medical research and further secure patient data in the age of the Internet of Things (IoT).

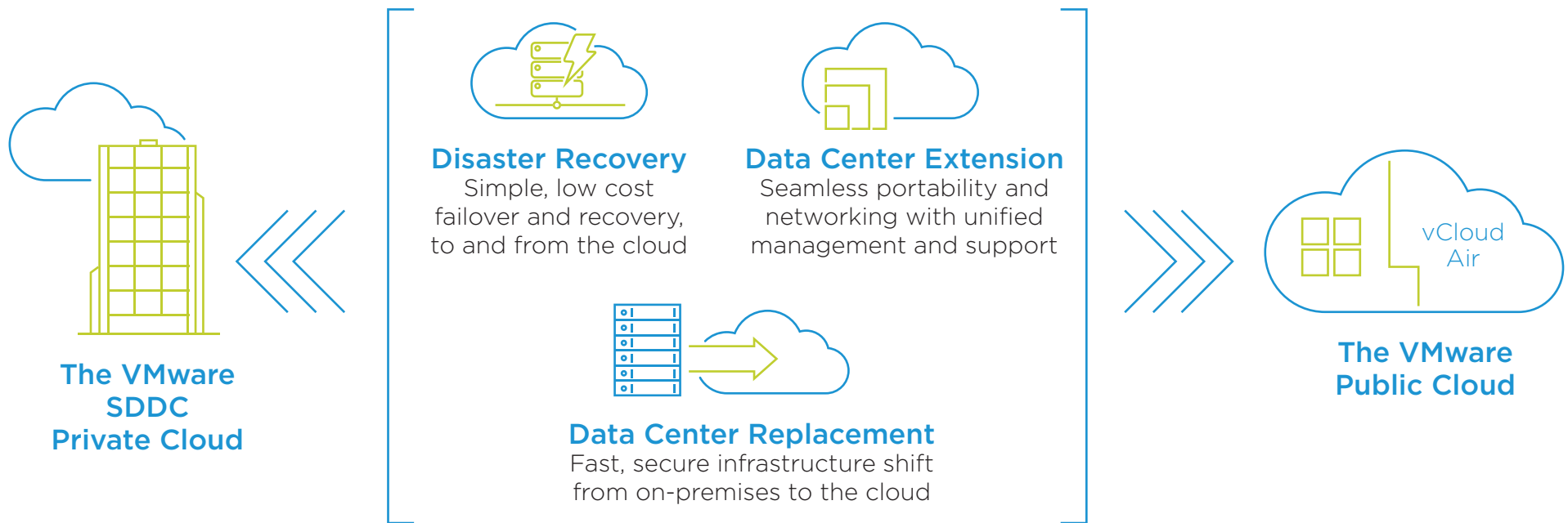
At VMware, we ultimately believe that a successful cloud strategy includes a hybrid cloud platform, delivering all the benefits of the public cloud without sacrificing investments made in the data center.



# VCLLOUD AIR PROVIDES A TRUE HYBRID CLOUD EXPERIENCE

Built on vSphere, vCloud Air provides healthcare customers with solutions for affordable disaster recovery, efficient and effective extension to the public cloud, or complete replacement of an on-premises data center in the public cloud.

## vCloud Air Enables



**Any Application. No Changes.**



# VMWARE IS A TRUSTED PARTNER OF HEALTHCARE ORGANIZATIONS THAT HAVE TURNED TO THE PUBLIC CLOUD TO MODERNIZE THEIR DATA CENTERS.

Select an institution to see how VMware helped them realize the benefits of the public cloud.



Leading  
Biopharmaceutical  
Company



 **IATRIC**  
systems



 **CREATIVE  
SOLUTIONS IN  
HEALTHCARE**



 **Interfaith**  
Medical Center



**HOLOGIC**  
 The Science of Sure



 **NEURO**



# LEADING BIOPHARMACEUTICAL COMPANY

## Getting Out of the Data Center Business

Dedicated to the development and commercialization of innovative therapies for patients with debilitating rare diseases, one leading biopharmaceutical company had reached an impasse with internal management of its data center capabilities. Adding additional storage had devolved into a labor-intensive affair, with weeks needed for hardware procurement and proper setup. All this effort was beginning to distract from core business innovation as well as overextending IT staff resources.

## How VMware Helped

After studying existing workloads and knowing future growth was on the way, IT leadership decided it just no longer made sense to keep investing in traditional data center hardware and that exploring cloud technology was key to reigning in both IT budget and staff labor.

Already customers of VMware, IT leadership decided to explore a hybrid approach to cloud utilization with vCloud Air, ultimately enjoying a quick, seamless integration. The IT team can now expand and contract its data center on demand with enterprise-grade public cloud technology. This frees resources to support more critical IT efforts that will better propel the organization's cutting-edge medical innovations forward.

## Results

- ✓ Refocused energies previously spent on data center issues to core business effort
- ✓ Gained the ease and flexibility of getting new storage within 48 hours as needed
- ✓ Saved thousands of dollars avoiding physical replacement of data center hardware

*"You can basically mirror what you currently have on-prem, move it out into the cloud, and basically get away from being inside the data center business."*

- STEVE FEDAN  
PRINCIPAL SYSTEMS ENGINEER AND  
IT ARCHITECT  
LEADING BIOPHARMACEUTICAL  
COMPANY



[Select Another Story](#)



# CREATIVE SOLUTIONS IN HEALTHCARE

## Improving Patient Outcomes and the Bottom Line

Based in Fort Worth, Creative Solutions in Healthcare provides nursing and assisted living facilities throughout Texas. As the company expanded, the challenge of keeping ever-growing patient data secure and ensuring compliance with HIPAA, HITECH, and NIST regulations was becoming a daunting task. Additionally, the group found the price tag for updating the physical infrastructure of their existing data center too expensive and was frustrated with periodic service outages at the co-location facility as well.

## How VMware Helped

After intense troubleshooting, the company decided to migrate from its co-located physical environment to the cloud to save costs, improve application availability, and update its core infrastructure to comply with HIPAA requirements. Creative Solutions in Healthcare turned to VMware to migrate quickly to a more robust infrastructure after testing another product that didn't fulfill all its needs.

Ultimately, the organization gained the technology and control to achieve HIPAA certification and improve application availability while reducing the IT budget by one-third. The company has also been able to extend its capabilities to the cloud and implemented a sophisticated electronic health record (EHR) system, including electronic prescriptions and online physician orders, improving staff agility and patient care.

## Results



Enjoyed 90% reduction in trouble tickets



Accelerated application deployments



Cut CapEx by one-third



Enabled HIPAA certification and compliance with other healthcare regulation

*“vCloud Air has been a total game changer in our company, and I think it's going to be a total game changer for the entire industry.”*

– SHAWN WIORRA  
CTO, CISO  
CREATIVE SOLUTIONS IN HEALTHCARE



[Select Another Story](#)





# HOLOGIC, INC.

## Making International Expansion Easier

A leading global healthcare and diagnostics company, Hologic strives to make advances toward greater clinical certainty thanks to cutting-edge diagnostic technology and solutions for breast and skeletal health and gynecologic surgery. Driven to achieve incremental and transformational progress to improve patients' lives, Hologic was beginning to struggle against the pressures of some of its international expansion. The logistical hurdles and costs to install physical data centers in some markets had become a distracting challenge and threatened to impede growth.

## How VMware Helped

After struggling with how to effectively extend reach into several new locations, IT leadership was convinced that making the leap to the cloud could be the key to effectively scaling for the future. After considering several options, the team elected to use vCloud Air as the vehicle to realize their new chosen path. Ultimately, IT leadership is pleased that their highly virtualized data centers have allowed them to serve end-users faster and with greater flexibility—and saved thousands of dollars in both real estate and hardware. The ease of cloud computing has ensured this global company can easily extend into more markets, making it poised to help transform many more patients' lives.

## Results

- ✓ Eliminated necessity for physical data center locations abroad
- ✓ Saved thousands in CapEx and OpEx
- ✓ Enjoyed faster service for end-users

*"We are using vCloud Air in our European and China sites supporting our exchange environment and...vCloud Air helps us support areas where we can't have physical hardware."*

– JIMMY NGO  
SENIOR SYSTEMS ADMINISTRATOR  
HOLOGIC, INC.



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# IATRIC SYSTEMS

## Scaling Up in Grand Scale

Comprised of an impressive team of more than 300 information technology specialists, Iatric Systems has produced advanced, practical technology solutions for more than 1,300 hospitals and counting. Though committed to bringing together just the right mix of products, services, and partners for their individual clients, Iatric Systems had reached an impasse in data center management. Determined to both intelligently expand and future-proof their infrastructure, IT leadership sought to explore the benefits of cloud computing as increasingly complex client solutions loomed in the horizon.

## How VMware Helped

After extensive vendor investigation, the Iatric Systems team selected vCloud Air to transform their data center structure because it supported their vast legacy systems and newer applications as well. ISO, HIPAA/HITECH, and Business Associate Agreement Standard certification also helped IT confidently assure customers about the security of patient data, day in, day out.

IT staff now enjoy the increased flexibility and agility with which they can approach their customers' business problems, and the resulting speed with which they can transform client infrastructure. This allows hospitals to focus on what's most important—patient health and care. Additionally, with the need for new hardware so drastically reduced, the team enjoys having to do fewer client installs on-premise.

## Results

- ✓ Improved customer service by reducing time necessary to deploy customer solutions
- ✓ Gained the flexibility and agility to better respond to ever-evolving, dynamic client solutions
- ✓ Elated to be able to free customers from expensive hardware purchases and maintenance

*“vCloud Air has given us a solution that is cost-effective, that is secure, that is robust, that is scalable, but it's something we can also implement very easily and rapidly for the customer.”*

– SHON BARRIER  
VP OF INFORMATION  
TECHNOLOGY SERVICES  
IATRIC



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# INTERFAITH MEDICAL CENTER

## Securing Patient Care No Matter What

Interfaith Medical Center (IMC) is a critical safety-net hospital in the New York City borough of Brooklyn, treating more than 250,000 patients in need every year. Always aggressively seeking technology to help ensure uninterrupted care and to control costs, IMC had already virtualized its on-premise server environment with VMware vSphere several years ago; however, the hospital now needed to provide fast and secure recovery for the critical healthcare systems running on vSphere.

## How VMware Helped

IMC enjoyed the many benefits vSphere had granted, especially the over \$2.03 million dollars in IT-related savings the hospital had netted since installation, as well as a newfound agility for deploying new projects. Protecting critical functions of the vSphere environment had become increasingly important to IT decision-makers since key systems involving both patient care and billing had been virtualized.

IMC knew it needed to supplement its existing tape-based DR strategy to improve IT resiliency and ensure uninterrupted patient care and truly secured patient data. Instead of building or renting a data center, decision-makers decided to further partner with VMware to seamlessly implement vCloud Air. vCloud Air allows IMC IT to fully mirror the hospital's on-premises architecture in the cloud, enabling critical systems to be back up and running within 15 minutes if disaster strikes, and infusing confidence in the hospital's infrastructure from the ground up.

## Results

- ✓ Safeguarded patient care by eliminating chance of downtime in case of disaster
- ✓ Met security controls and audit requirements for offsite backup
- ✓ Improved RPO 6 times and RTO 4 times compared with tape

*"We wanted our virtualized infrastructure to be exactly the same in the cloud as it is on premises, so compatibility and security were big factors in going with vCloud Air. It's also very easy to use, because the management tools are the same."*

- CHRISTOPHER FRENZ  
DIRECTOR OF IT INFRASTRUCTURE  
INTERFAITH MEDICAL CENTER



[Select Another Story](#)





# NEVRO CORPORATION

## Healing the Fractures of International Growth

A medical device manufacturer founded in 2007, Nevro Corporation had grown to encompass employees spread across three continents. Explosive customer growth had resulted in a corresponding uptick in valuable data; however, this rich new trove of information wasn't easily sharable or accessible across different offices. Nevro Corporation leadership recognized they needed to address the growing sense that they were "two companies" instead of just one and find common data center technology that could unite workers everywhere and unify the collective customer experience as well.

## How VMware Helped

With the passionate desire to unify its far-flung IT personnel, Nevro Corporation decided to seek a robust, flexible, accessible cloud solution that could truly scale with the business. Decision-makers ultimately selected the vCloud Air platform based on its compatibility with existing VMware solutions, and also because it could meet the stringent regulatory and security requirements for its implantable medical device and associated patient and study data.

Now that everyone across the globe is on the same technology page, Nevro is executing a sound strategy with an infrastructure geared for everyone's ease and success. The group is relieved knowing they have a platform that will let them scale at ease, ensuring painless future growth.

## Results

- ✓ Achieved 25% faster data transfer speed
- ✓ Secured seamless, instant access to the cloud
- ✓ Ensured proper scalability for projected future growth

*"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 product."*

– JEFF WILSON  
IT DIRECTOR  
NEVRO CORPORATION



[Select Another Story](#)



# TEST DRIVE VCLLOUD AIR WITH A HANDS-ON LAB

See for yourself what VMware vCloud Air, the secure public cloud for VMware workloads, can do for you and your healthcare institution. With these self-paced labs, you can get a lab up and running in minutes with full technical capabilities and without installing anything new on your existing hardware. No installation or credit card required.



**vCloud Air Introduction** Learn to deploy a virtual machine, migrate your onsite vSphere environments to the public cloud and back again, and explore basic networking with vCloud Air.



**Data Center Extension** Explore low downtime migrations for a seamless hybrid experience and key networking features such as isolation with micro-segmentation.



**Disaster Recovery** Learn how to use vCloud Air as a disaster recovery target including failover, reverse failback, point-in-time recovery, and automation with vRealize Orchestrator; all using your vSphere Web Client



# VMWARE VCLOUD AIR: THE SECURE PUBLIC CLOUD FOR VMWARE WORKLOADS

Experience for yourself what the institutions featured in this eBook have discovered: When you combine the benefits of your existing vSphere environment with vCloud Air, the result is a true hybrid cloud that is scalable, portable, and agile enough to meet your organization's ever-expanding infrastructure needs.

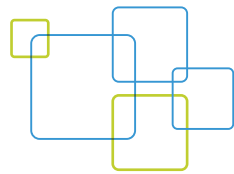
vCloud Air extends your on-premises virtualized networking to the cloud, enables common management and security, and the same reliability and performance you expect from your internal data center.

As customers who have made the switch can attest, vCloud Air is the right choice for minimizing risk and maximizing return on investment.



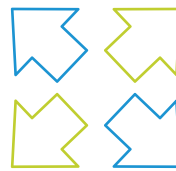
## SECURE

Runs on the vSphere infrastructure you already know and trust, supported by a ISO/IEC 24001 certification



## COMPATIBLE

Manage both onsite and offsite healthcare environments the same way, with no changes required to your application



## VERSATILE

Supports more than 5,000 applications and over 90 operating systems certified to run on vSphere



## RELIABLE

Get built-in high availability and the same level of performance from the platform you know and trust



## WORLD-CLASS SUPPORT

Only one place to call for business essential support—VMware

Learn more about vCloud Air. [Visit vmware.com/cloud-services.html](https://www.vmware.com/cloud-services.html).

