INTERFAITH MEDICAL CENTER PROTECTS PATIENT INFORMATION WITH VMWARE vCLOUD AIR

INDUSTRY
HEALTHCARE

LOCATION
BROOKLYN, NEW YORK

KEY CHALLENGES
- Enhance disaster recovery capabilities without building a secondary data center
- Recovery from tape backups was time consuming, unreliable, and difficult to test
- Comply with changing security and internal audit requirements

SOLUTION
Interfaith Medical Center needed a cost-effective solution to provide fast recovery for critical healthcare systems running on VMware vSphere®. The organization chose VMware vCloud® Air™ Disaster Recovery to improve RTO while meeting security requirements for patient data.

BUSINESS BENEFITS
- Safeguarding patient care by averting downtime in the case of a local disaster
- Improved RPO 6 times and RTO 4 times compared with tape
- Meeting security controls and audit requirements for offsite backup

With over 2.6 million residents, the New York City borough of Brooklyn has healthcare needs equivalent to the fourth-largest city in America. Interfaith Medical Center (IMC) is a critical safety-net hospital for the Central Brooklyn communities of Crown Heights and Bedford-Stuyvesant. The 287-bed teaching hospital and its network of ambulatory care clinics treat more than 250,000 patients every year.

Technology is playing an ever-increasing role at IMC as doctors access electronic health records from mobile devices. To ensure uninterrupted delivery of care, critical systems must always be available, even in the case of a local disaster. To enhance business continuity while avoiding the cost of a secondary data center, the hospital virtualized its on-premises server environment with VMware vSphere several years ago—then more recently looked to the cloud to modernize disaster recovery.

The Challenge

IMC was an early adopter of virtualization to overcome space, power, and budget constraints in its data center. The hospital has virtualized nearly all of its critical applications using VMware vSphere Enterprise Plus, including its core Meditech health information system that is the foundation for patient care and billing. Virtualization gave the hospital new options to improve application availability and performance and help nurses and doctors spend more time attending to their patients.

"Virtualizing our servers with VMware saved us approximately $2.03 million over a seven-year period, and we achieved 100% payback on vSphere in half that time," says Christopher Frenz, Director of IT Infrastructure, Interfaith Medical Center. "Without VMware, we'd need a lot more manpower, a lot more electricity and cooling, and a much bigger data center. VMware also helps us be more agile in deploying new projects, which is quite useful in a healthcare environment. We recently upgraded to vSphere 6, which went very smoothly and gave us an even better management interface."

As protecting its vSphere environment became more critical for IMC, the hospital wanted to supplement its tape-based disaster recovery (DR) strategy to improve IT resiliency. If a disaster had struck the hospital's data center, recovery would have been time consuming.

"We back up our data to tape every night, but recovering from tape can be a difficult and sometimes unreliable process," says Frenz. "We wanted another option that would make it easy for us to bring our environment back online quickly if there were a disaster."

To improve recovery objectives, IMC faced a choice: build or rent another data center, or find a cloud solution. "A second data center would not be readily affordable to a hospital of our size," says Frenz. "But we also can't afford downtime. We wanted cloud-based disaster recovery, and we needed it to be secure in order to meet our compliance requirements."

The Solution

IMC decided on VMware vCloud Air Disaster Recovery, a cloud-based DR service, based on its ability to mirror the hospital's on-premises architecture in the cloud. With vSphere-based failover, workloads in vCloud Air required no changes to IMC's network, security, or access controls.

"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," says Frenz. "It's also very easy to use, because the management tools are the same."

Virtual servers are now ready in the cloud, waiting to take over for critical applications within 15 minutes if a failure occurs in the hospital's data center. Replication at the hypervisor layer occurs automatically every four hours, six times faster than nightly tape backups. "With vCloud Air Disaster Recovery, our Meditech application servers, e-prescribing, medical coding systems, and file shares are constantly online, which is great from a business continuity standpoint," says Frenz.

vCloud Air is fully compatible with other VMware solutions IMC uses, such as VMware Horizon virtual desktops and vRealize management platform, giving the hospital a unified approach to data center management.

Business Results & Benefits

Using vCloud Air Disaster Recovery, IMC can bring systems back online in just 15 minutes, even if the on-premises application servers are unresponsive. "One of the advantages to running systems in a VMware vSphere environment is that we now have an elegant, cost-effective option for disaster recovery with vCloud Air," says Frenz. "Bringing just one system back online from the previous night's tapes would take at least an hour—four times longer than with vCloud Air. We still use tape just for extra redundancy, but vCloud Air Disaster Recovery gives us much better recovery capabilities for systems critical to patient care."

By keeping systems available and giving doctors BYOD access to patient information on VMware Horizon virtual desktops, the hospital is allowing its caregivers to work as efficiently as possible. Nowhere is this efficiency more apparent or more critical than the emergency room. "If the ER gets too full, we would potentially have to divert ambulances and send patients to other hospitals," says Frenz. "With vCloud Air Disaster Recovery, we're avoiding situations that could delay patient care and decrease admissions."

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CHRISTOPHER FRENZ
DIRECTOR OF IT INFRASTRUCTURE
INTERFAITH MEDICAL CENTER

VMWARE FOOTPRINT

• VMware vSphere 6 with Operations Management Enterprise

• VMware vCloud Air Disaster Recovery

• VMware NSX®

• VMware vRealize® Suite Standard Edition

• VMware Horizon® Advanced 6.1

• VMware AirWatch® Green Management Suite

APPLICATIONS VIRTUALIZED

• Meditech EHR, endoworks, e-prescribing and medical coding systems, radiology/cardiology picture archiving communications systems (PACS), glucometer software, X-ray and EKG systems

PLATFORM

• Windows

The hospital is also avoiding the cost of a secondary data center, keeping more of its budget focused on patient care. It can test failover as often as needed and at no extra cost, providing peace of mind that even if a fire or flood struck the hospital's data center, critical systems would quickly return to normal operation.

Looking Ahead

As its on-premises data center grows, IMC can easily protect more systems with vCloud Air Disaster Recovery to ensure consistent healthcare delivery and regulatory compliance. "With vCloud Air Disaster Recovery, we can protect our reputation and our community by keeping critical systems accessible and recoverable," says Frenz. "It also gives us an easy option to comply with changing security and audit requirements for offsite backup."

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