

# MUNSON HEALTHCARE

## Health care system transforms patient care and business operations with ITaaS



### ESSENTIALS

#### Industry

Healthcare

#### Company Size

6,500 employees

#### Business Challenges

- Achieve high availability of critical clinical applications
- Improve reliability, efficiency, and agility
- Provide shared access of resources across two sites
- Scale to meet growing demand for IT as a Service offerings

#### Solutions

- EMC VPLEX Metro
- EMC VNX unified storage
- VMware vSphere
- Citrix XenApp
- EMC Infrastructure Solutions for Clinical and Business Applications (including Cerner EMR, NextGen, eClinicalWorks, Siemens syngo Dynamics, McKesson, MEDITECH EMR)
- Microsoft Exchange, Microsoft SQL Server

### OVERVIEW

Munson Medical Center, a 391-bed regional referral center, is part of the Munson Healthcare system, comprised of eight hospitals and five clinical centers located across northern Michigan. Munson Medical Center has been named 14 times to the prestigious Thompson Reuters list of 100 Top Hospitals. Munson Healthcare employs more than 6,500 people spread across more than 11,000 square miles.

### BUSINESS CHALLENGE

Due to space constraints, Munson Healthcare split its data center between its main hospital and a second facility nearby. The health care provider wanted to replicate its virtualized VMware® infrastructure between both sites to ensure high availability of critical applications supporting patient care and administrative systems, and comply with ARRA HITECH meaningful-use and HIPAA privacy requirements.

Munson Healthcare's IT organization also needed increased reliability, efficiency, and agility to expand its role as a provider of IT as a Service (ITaaS) offerings, such as electronic medical records (EMR), to a rapidly growing number of hospitals, physician practices, and laboratories inside and outside the provider's network.

Following a thorough evaluation of IBM and EMC solutions, Munson Healthcare selected EMC® VPLEX® Metro virtual storage to achieve both high availability and shared access of resources across both its sites.

Scott Dingman, a Munson Healthcare senior systems engineer, explains, "EMC had a detailed roadmap and vision for enabling storage virtualization and ITaaS, not just a short-term solution to fill a market niche. We also especially liked that VPLEX Metro featured distributed volumes, which IBM's offering did not."

### SOLUTIONS

Munson Healthcare transformed its infrastructure to further enable collaborative health care with a private cloud. The company replaced its HP SAN Virtualization Services Platform with EMC VPLEX and replaced its HP EVA 8100's with EMC VNX® unified storage. The VNX systems are configured with the EMC FAST™ Suite, which consists of FAST Cache and FAST VP (Fully Automated Storage Tiering for Virtual Pools), and performance and high-capacity disk drives. This combined caching and tiering solution, unique to EMC, improves storage performance and efficiency.

Approximately 66 percent of Munson Healthcare's infrastructure is virtualized using VMware vSphere™ server virtualization and Citrix XenApp application virtualization, with a target to reach 90 percent in the next 12 months.

VPLEX Metro enables active sharing and high availability of the health care provider's VMware infrastructure between the two data centers. Leveraging VPLEX Metro and VNX unified storage, Munson Healthcare will accelerate its journey to private cloud, which is essential to delivering ITaaS.

#### CUSTOMER PROFILE

## Results

- Increased availability of critical medical applications
- Eliminated downtime for storage upgrades from eight hours to minutes
- Improved agility to share resources and optimize workload performance
- Enabled business growth with IT as a Service (ITaaS)

Munson Healthcare's diverse ITaaS offerings include MEDITECH electronic medical record (EMR) applications, NextGen and eClinicalWorks electronic practice management, and McKesson hospital information system (HIS). The health care provider's private cloud also supports Microsoft Exchange and Microsoft SQL Server applications, Cerner, and Siemens syngo Dynamics picture archiving and communication system (PACS).

## HIGH AVAILABILITY FOR CRITICAL SERVICES

Since implementing VPLEX Metro, Munson Healthcare has achieved one of its most important goals: high availability of critical medical applications. The company's move toward "meaningful use" of its electronic health record is enabling caregivers to more easily and quickly access patient information and images 24/7, helping them to accelerate time to diagnosis and improve patient care.

Jeff Dyer, Munson Healthcare technical strategist, notes, "With VPLEX, we could lose a storage frame, or even an entire data center, and our physicians and nurses would not miss a beat. If workload grows at one data center, we have the flexibility to move services to the other site and maintain performance, as well as high availability."

VPLEX Metro also provides Munson Healthcare with non-disruptive upgrades and allows data migrations with just a few minutes of downtime, instead of up to eight hours, as in the past.

"We recently performed a code upgrade and none of our users even noticed," says Dyer. "VPLEX Metro really lives up to what EMC said it could do. And there's very little administration required—you just set it and forget it."

## DRIVING GROWTH WITH ITAAS

With VPLEX, Munson Healthcare has enabled greater agility, enabling its ITaaS offerings to handle continually growing demands from new physician practices and hospitals—from both inside and outside the health care system.

"We've added 45 physician practices consisting of 184 physicians in the last four years, and more doctors are coming to us daily," reports Dingman. "With ITaaS enabled by VPLEX, we can provide the services physicians need in a very timely manner and with minimal downtime. This brings the relationship between their offices and our hospitals closer, which leads to increased business referrals."

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Scott Dingman  
Senior Systems Engineer at Munson Healthcare

Dyer adds, "ITaaS helps physician offices reduce their costs, too, because they don't have to invest in equipment and IT staff. Instead, they can rely on us as a service provider and simply log into the EMR or practice management system without concern for where the physical resources are located."

Unlike other health care providers, Munson Healthcare has the flexibility to provide health care facilities and physicians with different options in the same application category, such as a Cerner or MEDITECH EMR.

## TRANSFORMING IT AND PATIENT CARE

EMC and VPLEX Metro have helped Munson Healthcare completely transform its IT organization, as well as the delivery of patient care. By ensuring high availability and ubiquitous access, VPLEX Metro and the cloud spurred greater use of EMR and other electronic clinical services, which improved efficiency and accuracy of treatment.

Dingman adds, "IT is no longer a budget drain. We're offsetting costs with revenue generated by our ITaaS offerings, and letting the clinicians concentrate on medicine. We're adding true value to the business."

Munson Healthcare also has proven there is more to such advancements than just technology. For example, IT has created new roles for its staff as business analysts who work with clinicians, administrators, and other users to clarify their objectives and requirements for new solutions.

"Today, IT can't simply throw technology into a data center and expect physicians and nurses to embrace it," advises Dyer. "We now have business analysts in our IT organization who work with the caregivers to understand their clinical requirements. It's then up to IT to translate those requirements into ITaaS offerings we deliver through our private cloud."

"It's essential to first make process changes and align IT with the business. That's been the key to the transformational impact we've made here."

## CONTACT US

To learn more about how EMC products, services, and solutions can help solve your business and IT challenges, [contact](#) your local representative or authorized reseller—or visit us at [www.EMC.com](http://www.EMC.com).

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