

# MEDWEST HEALTH SYSTEM

## EMC VNX, EMC Avamar, and VMware deliver performance, flexibility, and efficiency for a growing multi-campus health system



### ESSENTIALS

#### Challenges

- Rapid data growth
- Increased demand for storage due to acquisitions, new clinical and administrative functions, and reporting requirements

#### Solutions

##### EMC infrastructure

- EMC VNX unified storage
- EMC VNX FAST Suite
- EMC Unisphere
- EMC Avamar deduplication backup software and system
- VMware vSphere virtualization solution

#### Key benefits

- Increased performance for critical medical applications
- Ability to create new servers in hours instead of weeks
- Reduction in backup times—from around-the-clock to three hours
- Reduction in document restore times—from more than an hour to two minutes
- Decrease in storage administrative time from hours to minutes

MedWest Health System serves approximately 160,000 people in Western North Carolina with a staff of 230 physicians and 2,100 employees across three hospital campuses and four outpatient facilities. The health system has seen its data assets grow significantly in recent years.

“Demand for increased storage is coming from several directions,” explains Greg Kopen, MedWest’s chief information officer. “We’re acquiring physician practices and inheriting their data. New clinical and administrative functions are going online. And the government’s “meaningful use” reporting requirements for electronic medical records are increasing.

“We needed to become more efficient with how we managed and protected our growing repositories of clinical and administrative information.”

### UNIFIED STORAGE AND DATA PROTECTION SOLUTION

MedWest has completely standardized on EMC unified storage across its multi-campus health system, replacing 100 terabytes of Dell EqualLogic with EMC® VNX® unified storage. EMC unified storage provides the performance and efficiency boost of the EMC FAST Suite, which includes FAST VP (Fully Automated Storage Tiering for Virtual Pools) and FAST Cache.

EMC unified storage runs MedWest’s McKesson Paragon hospital information system (HIS), which is fully virtualized with VMware® vSphere™, as well as Allscripts electronic health record (EHR) system, DR Systems PACS solution, and Microsoft Exchange and SQL Server. Approximately 60 percent of the overall environment is virtualized using VMware and Citrix. MedWest also utilizes EMC Centera® content-addressed storage for archiving PACS radiology images.

In addition, MedWest is replacing its Bridgehead and Tivoli Storage Manager tape backup software and systems with EMC Avamar® deduplication backup software and system. For further protection, MedWest replicates its Avamar backups between two Avamar data stores.

MedWest is also deploying EMC RecoverPoint, which will protect its VMware environment, McKesson Paragon HIS, and Allscripts EHR.

“When it comes to managing and protecting our information, EMC is always the first call we make. The products are rock solid—everything just works,” says Bill Driver, MedWest systems administrator.

### DRIVING RAPID GROWTH

The EMC FLASH 1st strategy, based on FAST Suite and Flash drives, is providing the performance and flexibility MedWest needs to grow. FAST VP ensures cost-efficient, optimized allocation of MedWest’s data across EMC unified storage’s Flash, SAS, and NL-SAS drives. Before, provisioning storage to run new applications or accommodate workload spikes was difficult and time consuming.

“FAST Cache gives us that extra boost we need during peak periods by automatically moving data to Flash drives,” says Driver. “And it gives us peace of mind knowing that when we add a physician practice or install an application requiring a lot of resources, we don’t have to worry about performance.”

MedWest also uses EMC Unisphere™ management software to centrally oversee its EMC unified storage infrastructure.

## MOVING TOWARD TOTAL VIRTUALIZATION

VNX is also an ideal platform for MedWest’s virtualized environment. Fully certified to support VMware and Citrix virtualization, VNX is allowing the health system to move aggressively toward its goal to virtualize 100 percent of the infrastructure.

Kopen notes, “I can typically have a virtual server up and running in a half day at most. That’s a huge customer service benefit. With virtualization and the VNX, we’re helping our hospital clinicians and administrators work faster and more effectively.”

MedWest has also realized significant savings from virtualization. For example, its new McKesson Paragon HIS application historically would have required purchasing separate physical servers for several test environments.

“Before VMware, we would easily have spent \$50,000 on multiple test servers for our rollout of McKesson’s Paragon HIS,” Driver says. “Instead, I purchased a single server for \$20,000 and spun up several test environments in hours. That allowed us to test longer and really fine-tune the application.”

Kopen remarks, “Once we went live, it was easy to tear down those test environments and reclaim the resources for other projects. From a utilization standpoint, our virtualized VNX infrastructure is phenomenal.”

## SPEEDING BACKUP AND RECOVERY

With Avamar protecting its physical and virtualized infrastructures, backup and recovery is much faster. The Avamar solution, equipped with integrated global, client-side data deduplication technology, facilitates fast, daily full backups for VMware environments, remote offices, enterprise applications, LAN and NAS servers, and desktops and laptops.

“We’re getting an Avamar deduplication rate of 98 percent and completing full daily backups in about three hours,” reports Driver. “Before, our backups were running around the clock—one would complete and another would kick off. Even restoring a simple document could take an hour or more. With Avamar, I can restore in about two minutes.”

Avamar is also helping MedWest save time and money. Driver explains that Bridgehead charged \$1,500 for each backup license. And MedWest’s tape supplier, HP, recommended that the entire library be replaced annually at a cost of \$30,000.

“I used to spend five hours weekly on backup administration, now I’m finished in five or ten minutes. Avamar gives us much more flexibility and freedom to back up what we want, when we want,” he says.

## OPENING THE DOOR TO EXPANSION

As MedWest continues to acquire new practices, partner with other health systems, and add new applications, storage is no longer an inhibitor to expansion.

“It seems every other week we’re asked to support new applications,” says Driver. “We now can get these environments set up within hours, and our internal clients are ready to go. Our infrastructure is no longer a bottleneck. EMC and VMware are allowing us to grow our infrastructure at the pace our management expects, so we can support our company’s strategic goals.”

### CONTACT US

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