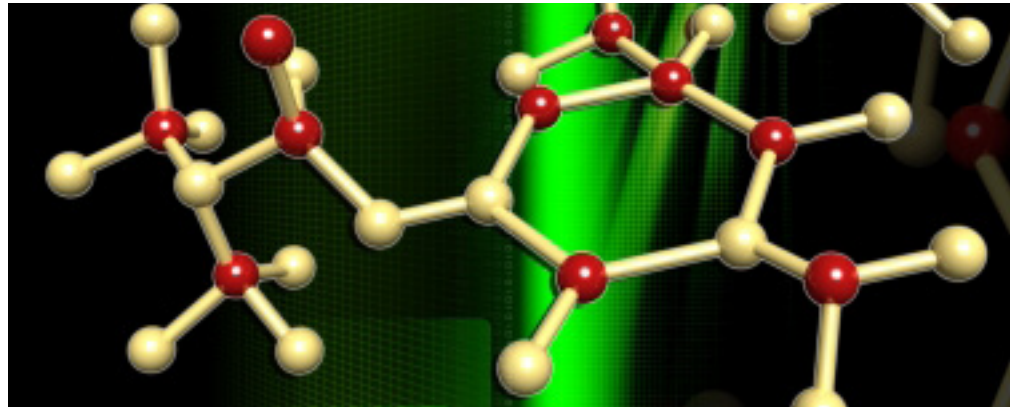


Delano Regional Medical Center Standardizes on Nexenta for VMware View for VDI Project



Key Highlights

Industry: Healthcare

Challenge:

- IOPS constraint created system slowness, leading to restricted end-user performance.
- Upgrades with legacy systems providers (NetApp, EMC) were too costly.
- Needed a disaster recovery solution with increased storage.

Solution: NexentaStor, with HA Cluster Plug-in

Benefits:

- Very fast IOPS allowed staff to dramatically increase performance.
- Company now could leverage existing hardware, saving \$\$\$ over legacy solutions.
- Newfound flexibility allowed company to scale up or scale down as business needs dictated.

Business Overview

Known throughout California and beyond, Delano Regional Medical Center (DRMC) is a full-service community and regional teaching hospital. DRMC serves 10 rural central California towns and is committed to providing an exceptional patient experience. With a total of 156 beds, DRMC is a privately owned, not-for-profit hospital with services including an Intensive Care Unit, a Sub-Acute Care Unit, a Medical Surgical Unit, a dedicated Surgical Pavilion, and an Obstetrics/ Gynecology Unit.

Handling growing volumes of medical data, DRMC needed to move its medical center's outmoded data storage and recovery environment into the 21st century without incurring massive new budgetary expenditures. DRMC had VMware View for its VDI project, but due to NetApp's IOPS limitations, end user productivity was waning.

Challenges

Delano Regional Medical Center was running VMware View on NetApp 2050 appliances but incurred serious performance issues that hampered end user productivity. IOPS constraint led to lower than usual end user performance. In turn, the less than optimal user experience cut down on application adoption. This, along with upgrade costs from NetApp and EMC, which were so high, put the entire VDI project in jeopardy.

The medical center, consisting of a community hospital and multiple clinics, was suffering from a severe data storage problem. The company was experiencing extreme system strain due to too many IOPS, thereby creating overall system slowness. Contributing to, and increasing, this problem was the inability to update all VMs at once (updates to more than 3 or 4 VMs slowed down the entire system). DRMC also needed a disaster recovery solution where at least 18 TB of data could be stored, accessed, and be easily recovered in case of data loss.

“We replaced NetApp 2050 with Nexenta for VMware View. This gave us the best IOPS solution for the end user experience for VDI, while maintaining budgetary sanity.”

—Keith Brennan, Network Specialist, Delano Regional Medical Center

For this option, NetApp wanted to implement a complete forklift upgrade, charging about \$120K (for its 3000 series), which was far too expensive. DRMC also wanted a solution that provided a High Availability cluster. And due to its limited staff, DRMC needed a solution that would provide high-level, no-hassle tech support.

Solution

DRMC did its due diligence in searching for a new storage solution provider. After pricing different options with several leading legacy system vendors (such as Dell EqualLogic, OpenSolaris, EMC, and others), the IT staff at DRMC chose to go with NexentaStor.

DRMC liked the fact that NexentaStor delivered a fully supported, out-of-the-box, hardware independent, commercial software package that functioned on industry standard servers. This allowed DRMC to leverage its existing hardware. The NexentaStor solution easily overcame the limitations of conventional legacy VDI storage solutions by dramatically minimizing random IOPS through:

- NexentaStor for cache write operations through SSDs
- Online compression of data
- Image management and provisioning with unlimited cloning capabilities
- Comprehensive back-up and recovery with unlimited snapshots
- Minimizing the amount of needed storage through inline deduplication

Software features, such as unlimited clones or snapshots, are part of NexentaStor and come with no extra charge. With a user base that is growing rapidly, especially in the area of VDI solutions, NexentaStor can help reduce VDI storage costs by as much as 75% over traditional legacy storage solutions.

High Availability Cluster Plug-in

A major component of DRMC's solution involved NexentaStor's HA Cluster Plug-in. This plug-in enables two NexentaStor instances to be configured as an active / active pair, which provided DRMC with high availability for shared storage, accessible from both appliances.

Business Benefits

The hardware-agnostic NexentaStor solution enabled DRMC to leverage its existing hardware into the new configuration. This meant time and money would not have to be spent on new machines unless the company wanted to expand, at which time it would only have to add to its inventory, not change the entire system. This enabled DRMC to avoid internal budget battles. DRMC knew it needed to upgrade its infrastructure to keep up with the increased volume of data it was accumulating. With NexentaStor, DRMC could achieve very fast IOPS, without emptying the bank.

This solution eased the work experience for the company's staff. Productivity increased, errors were reduced, and the system, as a whole, ran much faster. NexentaStor helped DRMC to effectively manage its data growth at a price the company could afford.

For DRMC, an additional key benefit with the NexentaStor solution was the flexibility it afforded. DRMC now can scale up or scale down its storage and IOPS, depending on business flows, using the best hardware for its budget.

System Configuration

- NexentaStor 3.0.5
- 2 Supermicro 825TQ, Xeon E5620, 96 GB RAM
- Intel X25 SSDs for L2ARC
- STEC Zeus Ram for ZIL Accelerator
- 22x 1tb Seagate Constellation ES
- 20x 300gb Seagate Savvio 10k.3 HDD
- DataON Storage DNS1600 JBOD
- DataON Storage DNS1620 JBOD
- NexentaStor HA Cluster Plug-in



Nexenta Systems is the leading supplier of enterprise-class OpenStorage solutions. Its flagship software-only platform, NexentaStor, delivers high-performance, ultra-scalable, cloud- and virtualization-optimized storage solutions.

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