

ITRENEW Case Study

Medical Group Virtualization



OBJECTIVE

Consolidation of physical storage and servers with a disaster recovery plan for a medical group.

APPROACH

Formulate an integrated storage solution with scalability under VMware vSphere 4 virtualized infrastructure using ITRENEW SDS Series Storage Solutions and dynamic and remote data replication.

INFRASTRUCTURE IMPROVEMENTS

- Consolidate multiple storage vendors for better management and simplified configurations
- Increase storage density for reduced power (73% overall reduction after decommissioning)
- Increase availability to storage LUNs through VAAI support and block locking
- Enable thin provisioning on the ITRENEW SDS Series along with deployment techniques allowed for increased utilization of storage volumes for an easy scalability path
- Simplify storage management and automated backup allowed for consistent disaster recovery

BUSINESS BENEFITS

- Increase data availability through virtual resiliency
- Implement remote disaster recovery to keep up and sustain productivity during hardware failures
- Reduce overall operating cost of IT infrastructure

BACKGROUND

A medical group with 5 branch offices and more than 200 physicians needed to migrate their existing IT infrastructure from the traditional configuration of physical servers connected to physical storage arrays using manual backup to tape to consolidated virtual servers and storage with automated backup and disaster recovery. ITRenew proposed a practical solution based on the M100 Storage Arrays in conjunction with IBM BladeCenter servers and I/O interconnects with VMware vSphere 4 that would offer the consolidation, scalability, and data protection that this medical group desired to ensure data is secured, backed up, retained, with the proper availability.

HARDWARE SOLUTION

Each of the 5 branch offices consisted of 2 IBM BladeCenter chassis' consisting of 6 server blades clustered together and 6 ITRENEW SDS Series Storage Solution consisting of 117TB of raw storage. Future expansion to 500TB through the addition of expansion enclosures.

SOFTWARE SOLUTION

BladeCenter Servers consisted of each blade running VMware ESXi clustering together the CPU and Memory resources pools. The branch office consisted of 18 VM's running various application and record management software.

DISASTER RECOVERY PLAN

ITRENEW's proposal was based on the SDS Series Storage Solution's support for VMware VAAI support and the VMware Site Recovery Manager (SRM) which is integrated into the Storage Array. Having the SRM and VAAI support dramatically improves the storage automation and lowers the resources consumption by allowing the Storage Array to use its own hardware accelerators rather than the ESX hosts.