

Healthcare Platform Provider Implements High Availability Protection for SQL Server

SIOS DataKeeper™ provides simple, easy way to add HA Protection for SQL Server Replication Distributor

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- Kendal Van Dyke, Principal Consultant UpSearch



A leading provider of enterprise platforms for the home healthcare provider market relies on its SQL Server databases to provide fast, efficient service to its end users.

The Challenge

Many of the company's important applications rely on SQL Server running on a physical server in their on-premises data center. The IT staff decided to add a high availability (HA) solution to minimize the risk of downtime for this business critical application. They wanted to protect their SQL Server Replication Distributor – a central database required for managing and updating all SQL databases.

The company engaged UpSearch's SQL Server Replication experts to find a better way to ensure the distributor did not fail. "They needed a solution that would be cost-effective and enable them to maintain high performance of their IO-intensive SQL Server Replication Distributor and the applications

that rely on it," said Kendal Van Dyke, Principal Consultant at UpSearch. "They also needed to ensure the solution they chose could be implemented during a strict one-hour window without causing disruption to ongoing business processes."

The Evaluation

UpSearch reviewed the company's replication environment and identified several high availability configurations, which built upon the company's current production assets. First, they evaluated the benefits of moving the SQL Server Replication Distributor to a VMware environment and using Vsphere and vMotion to protect it.

However, the company did not have the SAN storage that these solutions require and vSAN was not a good fit for their needs. With this option, they would have needed to use solid state disk storage in every host to match the performance of their existing system.

UpSearch also evaluated the use of a RAID array with two hosts for redundancy but the cost and complexity of buying, implementing, and managing SAN storage was prohibitive.

The Solution

The company's best solution was to use Windows Server Failover Clustering to create a two node cluster using their existing server hardware, which was already equipped with solid state disk storage. By adding SIOS DataKeeper Cluster Edition software to their cluster, they eliminated the need for shared storage. SIOS software uses fast block level replication to synchronize local storage in both of the cluster nodes, creating a storage environment that appears to WSFC as a SAN. They connected the nodes directly using crossover cables and 10Gig NICs to eliminate the cost of a network switch and ensure the fastest possible replication for real time synchronization of the cluster nodes. "The SIOS DataKeeper solution enabled this company to use industry-standard WSFC software while eliminating the cost and complexity of buying SAN storage," said Van Dyke.

The company performed extensive testing of the proposed solution to ensure that the SANless cluster would perform fast, efficient failover and failback of the application and maintain real-time synchronization of the local storage as well as fast application response time.

Implementation without Disruption

By using SIOS DataKeeper software to create a SANLess cluster, they were able to simply pause their SQL Server Replication Distributor, bring the second node of the cluster online, and resume operation within their one-hour window. The system enables the company to protect their business critical application without adding complexity or slowing performance. "We recommended SIOS DataKeeper software because it was the only solution that could enable our client to move from a production environment to a fully supported Windows Server Failover Cluster – and to do so without disruption to business operations that rely on SQL Server," said Van Dyke.

About UpSearch

UpSearch is a global professional services firm and managed Microsoft Cloud and Database Platform Partner. On premise or in the cloud, the firm's Microsoft Practice provides as needed data consulting and managed services that enables leaders to protect, unlock and optimize data's value. The UpSearch network of companies and predecessor firms have helped leaders unlock potential since 1977. Learn more at: www.upsearch.com

About SIOS

SIOS delivers innovative software solutions that provide application availability and disaster protection for Windows and Linux environments.

Clusters Your Way.™

An essential ingredient in any cluster solution, SIOS SAN and #SANLess clustering software provides the flexibility to build clusters your way to protect your choice of Windows or Linux environment – and any configuration (or combination) of physical, virtual and cloud (public, private, and hybrid) storage – without sacrificing performance or availability. SIOS' unique #SANLess clustering solution eliminates both the cost and the single-point-of-failure risk of traditional shared-SAN storage.

Founded in 1999, SIOS Technology Corp., is headquartered in San Mateo, California, and has offices throughout the United States, United Kingdom, and Japan. Learn more at: <http://us.sios.com>

