MIC Business Solutions improves enterprise application performance and user experience with Infinio

MIBS accelerates Oracle, SQL and SharePoint workloads and eliminates I/O bottlenecks

Background

MIC Business Solutions, Inc. (MIBS), a wholly owned subsidiary of Mitsubishi Corporation (Americas), is a leading provider of consulting, system and network integration and development, and project management services. MIBS manages the information systems, such as SAP and Oracle, for customers in the global financial trading industry. The company supports customers in locations across the U.S., Canada, and Latin America.

MIBS' three-person server team manages the server and storage platforms in the VMware virtualized environment. Based in New York City, the data center team oversees day-to-day operations and supports end users.

Environment

MIBS' storage environment includes two Dell EqualLogic PS4100X storage arrays, which use iSCSI and have been in operation for three years. An additional EqualLogic 6100XS hybrid array, which includes hard-disk drives (HDDs) and solid-state drives (SSDs), was added a year ago, bringing the total storage capacity to 40 terabytes (TB). "Although we had high hopes for improving performance with the EqualLogic hybrid array, the solution, while costly, didn't give our system a significant boost," said T.C. Chen, senior system engineer for MIBS. "It can't support the full extent of projects we're planning to tackle in the future."

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T.C. CHEN,
SENIOR SYSTEM ENGINEER, MIBS

COMPANY

MIC Business Solutions, Inc.

INDUSTRY

Provider of IT services

BENEFITS

- I/O bottlenecks during peak performance hours eliminated

- Up to 99 percent SharePoint requests offloaded, reducing latency from 20ms to 5ms

- Eliminated the need to purchase additional expensive hybrid storage arrays

- Decline in IT support issues lets the team focus on revenue-generating tasks

The environment includes three VMware vSphere clusters, with a total of 12 Dell R720 and R730 host servers and 200 VMs. Oracle and Microsoft SQL Server databases support the company's financial trading system, Microsoft SharePoint provides document management for all employees, and electronic data interchange (EDI) enables data transfer with vendors and partners. MIBS also uses Citrix XenApp, which provides secure remote access to the trading system's graphical user interface (GUI) on Windows terminals.

Performance issues

Due to different enterprise applications with varying input/output (I/O) characteristics for read and write data requests, tuning storage to better handle the I/O traffic was impossible for the MIBS. In addition, spikes in I/O requests occasionally overlapped during "rush hour" resulting in a negative impact on application performance. Since the company serves the financial market, which closes daily at 4 p.m., these spikes were frequently caused by end-of-day report generation. When up to 200 employees ran reports at the same time, all pulling data from Oracle or SQL databases and competing for the same resources, the system experienced intermittent, random delays. When running a report took longer than usual, traders would contact support to complain about system instability.

After learning about Infinio at an IT industry show in New York, MIBS was immediately interested in using server-side cache as an innovative approach to improving storage performance. The software-only Infinio Accelerator required no additional hardware and was entirely non-disruptive, making it simple for MIBS to evaluate and implement. The team loved Infinio's ease of management and its clear GUI, and was drawn to the solution's potential for extending the life of the existing storage arrays. As a result of implementing Infinio Accelerator, MIBS could avoid a significant investment in purchasing and managing additional storage arrays.

The results with Infinio

A 30-day trial on one vSphere cluster with two hosts began on MIBS' test servers and gradually moved to its production environment that consists of four hosts and two datastores supporting 120 VMs. The acceleration of Oracle, SQL and SharePoint workloads delivered quick results of improved storage performance and better user experience. SharePoint workloads are consistently offloaded from Infinio's cache at very high rates. "With Infinio offloading up to 99 percent of SharePoint's I/O requests, all of our enterprise applications such as Oracle and SQL databases can run much better because they have more storage resources available to them now," said Chen.

For MIBS' infrastructure, Infinio's high cache hit rate reduces the company's I/O spikes and minimizes the chance of I/O congestion. MIBS has also reduced its storage latency, in some cases bringing it from 20 milliseconds (ms) down to 5 ms. Chen says, "Infinio prevents I/O bottlenecks from happening. We now have a more consistent user experience, fewer support cases logged and a more stabilized platform for all users."

To learn more about Infinio Accelerator, contact us at 617. 374.6500, visit us at www.infinio.com, or follow us @infinio.

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