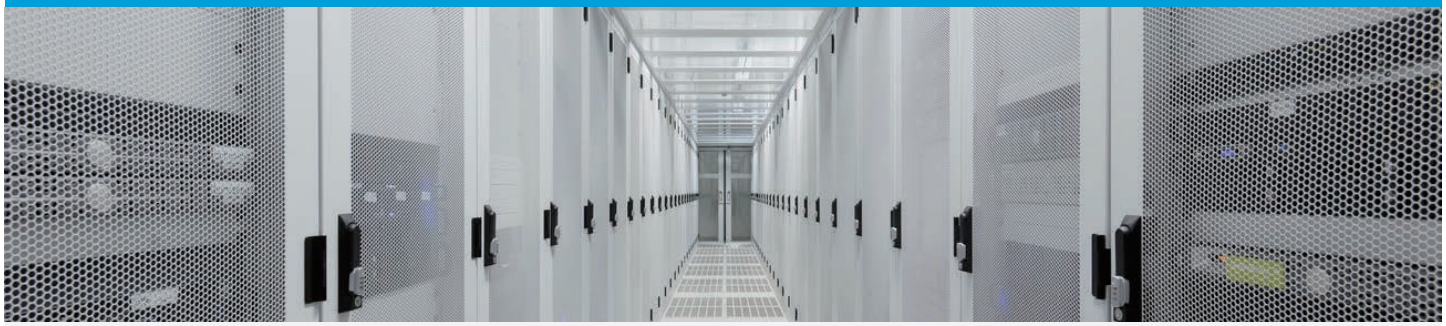
Samsung resolves virtual server issues for MNJ Technologies Direct

Reseller MNJ Technologies Direct trusts Samsung AutoCache to reduce I/O and storage costs



Company Overview

MNJ Technologies Direct is a full-service technology reseller with 100 employees running VMware View® virtual desktops. It serves enterprise businesses, government agencies and educational institutions in the United States, and also sells products online.

Customer Needs

The company found that, during periods of heavy user activity, the I/O demands of the virtual desktops were straining their back-end storage system. However, the investment necessary to provide the IOPS that the desktops were demanding was more than the company wanted to spend.

"We saw that the I/O demands were saturating our storage pools that were allocated to the desktops. One solution could have been to rearrange the pools and use a higher class of storage for the desktops, but that would have been at the expense of our server farm performance," explained Jim Brice, director of IT at MNJ Technologies Direct.

"I would need to move server IOPS to lower-class devices to ensure the desktops operate at an acceptable rate. My other alternative, of course, was to buy additional spindles of a higher-performance disk at a substantial expense. Neither option appealed to us."

MNJ Technologies Direct also wanted to avoid purchasing additional servers to increase the density of virtual machines per host. And, after further analysis, Brice realized that most of the I/O was repeat I/O, or very common I/O blocks.

He investigated the built-in caching provided in VMware View, but found it somewhat limited. "VMware View has a maximum cache of around 2 GB reserved on each host," explained Brice. "Although that helps significantly, it really is not enough for the number of users we have and our planned growth."

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AutoCache met performance SLAs with less DRAM while reducing expenditures considerably

Solution

MNJ Technologies Direct next looked into virtual caching solutions. The first caching product analyzed proved to have data inconsistencies and other issues. The company then evaluated the Samsung AutoCache™ solution, which it had recently started to include in its software offerings to its customers to resolve their virtual server performance issues.

"We were so pleased with how remarkably easy AutoCache was to deploy and how well it worked that we immediately scrapped the first caching product and went with AutoCache instead."

- Jim Brice, director of IT, MNJ Technologies Direct

"After acquiring some solid-state drive devices, which we deployed into our HP® blade servers, we found AutoCache was far and away the best caching solution," Brice added.

An AutoCache feature that has particularly impressed MNJ is its user interface and associated output of available statistics.

"The statistics are easy to obtain and allow you to see at a glance how AutoCache is functioning and what it's doing for you," said Brice. "There are very important metrics on the reduced IOPS levels and the higher percentage of cache hits we're getting. This greatly reduced the amount of I/O in the back end, thus freeing up I/O for other purposes."

"With AutoCache operating at the server level, I can get away with using larger and slower disks on the server, which are markedly cheaper. Any time I can avoid using the more expensive, higher-performance spindles, I'm saving money."

From the MNJ end users' perspective, AutoCache has delivered consistent around-the-clock performance. They don't see slowdowns during the busier times in the day, especially in the early morning hours when everyone is booting up.

"By enabling additional storage capacity, I can take two or even three hosts out of my cluster and no one will even notice," said Brice. "That means something to me, because I don't have to work nights or spend my weekends on maintenance tasks; I can get it done during the workday."

And when asked about the AutoCache value-to-cost proposition, Brice emphasized, "It definitely pays for itself. I was able to increase IOPS while avoiding the cost of purchasing additional high-speed spindles. I expect the cost savings will be even more evident when I've added another 100 users to the system.

"The bottom line is that AutoCache has enabled us to continue to grow the number of virtual machines we have without needing additional infrastructure investment. AutoCache paid for itself immediately and will pay for itself again as we expand."

- Jim Brice, director of IT, MNJ Technologies Direct

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For more information

For more information about Samsung AutoCache, visit www.samsung.com/semiconductor.

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