

REGIONAL SUPERMARKET CHAIN CASE STUDY



Leading US regional supermarket chain deploys VirtualWisdom to monitor its SAN to help ensure 100% data availability

VirtualWisdom chosen after a comprehensive, two year search for the most cost-effective SAN optimization solution

Overview

This award-winning large regional grocer is a privately-owned full service Supermarket Chain with over 150 retail outlets, and over 15,000 employees.

To support the supply chain infrastructure, the Information Technology team must provide extremely high levels of application availability for payroll, pharmacy, financials and merchandising, including the very critical credit card and warehousing system. With data growth exceeding 20% per year and pressure to maintain profitability in a hyper-competitive market known for thin margins, the data storage team is expected to help contribute to the financial success of the company.

IT Environment

The IT staff supports over 200TB of online data in its main data center. Storage is primarily IBM DS8000s, and secondarily, NetApp Filers. Cisco MDS switches support 192 SAN ports. VMware ESX hosts are widely deployed, though not yet supporting the primary SQL database and mail servers. Like many IT departments, especially in the retail sector, this team is challenged with tight budgets and with getting more and more performance out of existing hardware assets and personnel. The IT team's success is measured by two metrics: keep the data available, and control costs to help contribute to the bottom line.

Solution Evaluation

The IT team was challenged with tight budgets and with getting maximum productivity from

Challenges:

- Pressure on IT staff to do more with existing CAPEX and OPEX budgets
- Availability requirements of business critical applications dictate the need to predict problems before they escalate to application slowdowns or outages

Solution:

- Virtual Instruments
VirtualWisdom Jumpstart kit

Customer Benefits:

- With VirtualWisdom, causes of potential application slowdowns can be identified and corrective action provided before users are even aware of a problem
- Productivity of existing staff is maximized, to ensure that issues are quickly identified and remediated without wasted time

"Most of the storage management products out there are operational in nature ... covering resource and capacity, but they can't tell you what's happening with the SAN."

UNIX and Storage
Administrator

REGIONAL SUPERMARKET CHAIN CASE STUDY



existing resources – hardware, software, and personnel. To do this, IT knew it must be proactive; it had to avoid problems and anticipate issues before the application owners felt the pain. The only way to do this without increasing the staff size was to find some way to proactively automate the monitoring and analysis of the SAN to ensure application availability.

The company looked at several solutions, including the SAN management tools from their system, switch, and storage vendors, and settled on Virtual Instruments' VirtualWisdom in early 2011. The company wanted a solution that was:

- Capable of seeing physical layer issues in the SAN to help predict problems before they became serious
- Flexible, so reporting and alerting could be tweaked to ensure that the staff would not be bombarded with meaningless data, but would not miss critical events
- Easily implemented in stages, allowing them to meter the degree of sophistication in their SAN management architecture, as resources allowed
- Simple to deploy. Not heavyweight and expensive to buy and deploy, like many SRM solutions on the market
- Focused on performance and not just a resource utilization manager

In the final analysis, the IT team was able to demonstrate to management that with the availability of VirtualWisdom, some of the previous years' inefficiencies and slowdowns could have been mitigated or eliminated.

Role of VirtualWisdom – a proactive approach

A proactive approach to system availability was required, and in early 2011, this IT team deployed the VirtualWisdom Jumpstart Kit, a lower cost entry-level solution from Virtual Instruments. VirtualWisdom sees loss of sync, link resets, packet discards, aborts, code violations, SCSI reservation conflicts, and CRC errors and can send alarms for out-of-bounds conditions. Two examples of VirtualWisdom value:

Multipath coverage

VirtualWisdom reported that one link from the ESX was experiencing a Loss of Signal (LOS). This was not being picked up by the Cisco or the ESX server monitoring tools, even though they would get ten or twelve LOS's in a short period of time. Further investigation uncovered a dead path. Though this wasn't causing a problem, if left uncovered, it could easily have resulted in an outage if left un-remediated.

SCSI reservation conflicts

SCSI reservation conflicts are a normal part of the SCSI protocol, and they are not actually errors. The SCSI protocol uses the reservation to allow exclusive access to a LUN. It does this to prevent data corruption should there be competing devices for the same LUN. But problems occur with excessive reservation conflicts, which is what VirtualWisdom uncovered. Though this team has not yet implemented the VirtualWisdom ProbeVM, they were able to identify the physical hosts and ultimately, the VMs responsible, and remediated the issue before it became serious.

Lessons Learned

When asked what he would recommend to new VirtualWisdom customers, the UNIX and SAN Admin remarked that he was very pleased with the cost-effectiveness of the Jumpstart configuration. He recommended considering it for a cost-effective way to get into the VirtualWisdom family.

*"We started with the
VirtualWisdom Jumpstart Kit.
It was perfect ... had
everything we needed."*

UNIX and Storage
Administrator



25 Metro Drive, Suite 400
San Jose, CA 95110

Sales Information
sales@virtualinstruments.com

Customer Support
support@virtualinstruments.com
www.virtualinstruments.com

©2012 Virtual Instruments. All rights reserved. Features and specifications are subject to change without notice 01/12