

Police-software developer captures HP-SteelEye high-availability solution to aid law enforcement

Versaterm Inc.



"We have yet to find a solution that can beat the combination of HP ProLiant servers, HP storage, SteelEye LifeKeeper software, and Linux on a price-performance, price-predictability, and price-reliability scale. The solution delivers quiet enjoyment."

– President and Chief Operating Officer Warren Loomis, Versaterm Inc.

Business need:

Versaterm provides police records-management systems and computer-aided dispatch systems. Historically, the firm has used HP servers and storage systems, and recommended them to its clients. The firm previously deployed the core product of its Versadex line for clients on Intel-based HP ProLiant ML370 and older-model ProLiant servers. These servers ran the SCO Unixware operating system and linked to an HP StorageWorks RAID Array 4100 (RA4100) system to manage the storage. The solution worked well; however, due to the phase-out of the HP RA4100 system, Versaterm sought a fast, resilient server and storage solution that would support a Linux migration, have failover capabilities, and fit within its IT cost projections.

Solution overview:

Versaterm deliberated over solutions from HP, IBM, and Dell – eventually choosing a combination of HP ProLiant servers, the HP StorageWorks Modular Smart Array 1000 (MSA1000), SteelEye Technology LifeKeeper software, and the Red Hat Linux operating system. The solution easily met Versaterm's criteria for failover, resilience, performance, high availability, and IT budgeting.



V E R S A T E R M

A trustworthy solution in custody

In law enforcement circles, London, Ontario has gained notoriety as a high-tech police force. There, police officers are using information technology to fight crime and manage all of their criminal investigations online. Across Canada in the far west, Vancouver police use a communication system in their police cars to access mug shots and other records with secured wireless technology. At the foundation of both systems is Versaterm software.

Reflecting many years of police systems experience, Versaterm products are complete, functional, and integrated, such as the latest generation of the firm's records-management system (RMS). At the core of the Versadex product suite, the RMS application fully integrates with both the firm's PoliceCAD for 911 systems and its mobile workstation (inside police vehicles) to ensure seamless information flow and unparalleled public-sector policing. Versaterm backs up its products with training, upgrade services, on-site implementations, and around-the-clock customer support to ensure its solutions are 99.9 percent available. Because high availability is crucial, Versaterm commands a resilient, reliable hardware platform on which to deploy its software.

With HP ProLiant servers, which can run both Oracle and IBM/Informix databases, Versaterm is able to match the solution to the client's budget and structure the IT environment to meet the law enforcement needs. Public-sector agencies are extremely cost-conscious. Police agencies trust HP ProLiant Intel-based servers to deliver pure performance at a good price.

Bulletproof technology in the crime fighters' arsenal

Versaterm sizes a client's solution based on the number of sworn officers, dispatchers, and records-management seats in that jurisdiction – typically using a pair of HP ProLiant ML370 2-way servers or ProLiant DL580 4-way





servers. Speaking for the Versaterm team, Supervisor of Internal Systems Derek Randall says, "The design and scalability of HP ProLiant servers enable us to deploy a server with one CPU and add a second CPU later to ramp up performance or make room for growth. Adding CPUs, disks, and memory are easy tasks with ProLiant servers."

Initially, Versaterm pondered a move to another Intel-based server and storage vendor; but the reputation, reliability, and high-powered processors of ProLiant servers drew them back. "We considered Dell and IBM," Randall recalls. "However, Dell systems aren't always configured in the tier-one category, and they don't always have the latest, greatest technology. We kept coming back to the fact that HP solutions are amazingly reliable – and backed by excellent technical support plus strong partner alliances. In our research, we saw no reason to move away from HP."

Another compelling reason that ProLiant servers retain the top place on Versaterm's list is because police groups don't have to worry about them draining support and maintenance resources. This is an important consideration, since small law enforcement agencies have little or no IT staff and the large ones contend with budget shortfalls. In some police precincts, an officer doubles as an IT systems administrator. Versaterm affirms that HP ProLiant servers are reliable, low-maintenance machines, and that "they lower the company's total cost of ownership (TCO) because they are easy to install, configure, and maintain." About 95 percent of the servers Versaterm uses internally are HP servers, including ProLiant server models DL360, DL320, DL380, and ML350.

A strict ruling on storage

In evaluating data storage products, Versaterm compared the HP StorageWorks MSA1000 system with an equivalent IBM storage unit, and ultimately decided to

stay with StorageWorks solutions. Versaterm also notes that, "HP rigorously tests, qualifies, and tunes its storage products to ensure integration with major business applications."

Such was the case with the MSA1000 system, the latest storage companion to ProLiant servers. The high-tech London Ontario police force uses the MSA1000 unit with HP ProLiant DL580 servers. "The HP StorageWorks Modular Smart Array 1000 provides us with an affordable, scalable, high-performance, fault-tolerant, Fibre Channel storage system to offer our customers," Randall says. "There is a lot of redundancy built into the MSA1000 system. The reliability of StorageWorks systems was why we elected to stay with HP, a solid storage vendor."

HP's vast array of storage solutions includes HP StorageWorks DAT and SDLT tape drives, which Versaterm deploys for its customers, depending on their budgets and needs. According to Versaterm, "HP StorageWorks tape drives are a nice convenience and cost saving because the team uses them in both HP ProLiant servers and HP StorageWorks storage devices."

SteelEye LifeKeeper: a shield of protection

Versaterm previously used a manual failover system consisting of software and a switch in the RA4100 unit, which HP provided to protect the attached ProLiant servers. The system ensured that a second server would take over if one stopped functioning.

Needing similar or better capabilities with the ProLiant server-MSA1000 storage combination, Versaterm researched various high availability software products, particularly SteelEye LifeKeeper software. SteelEye Technology provides integrated solutions for high availability clustering, dynamic backup, and disaster recovery. The company's LifeKeeper software closely guards critical application services and data, while

preventing unplanned outages. "SteelEye has a history of providing effective clustering and high availability solutions," Randall says. "Since we implement a contained, isolated computing environment to provide key services with our call dispatch and records-management systems, robust failover is absolutely essential. After testing the SteelEye LifeKeeper software for six months, we knew it would answer all of our concerns for an economical, highly available solution to migrate applications from one server or storage unit to another server and storage system, in case of failure. With SteelEye LifeKeeper, we have automated failover within minutes."

The solution bailed out a police agency recently and prevented system downtime. While the Versaterm team wasn't able to pinpoint the actual problem based on the available data, the LifeKeeper software sensed that something went wrong with the raw partition and failed over. That incident further substantiates Versaterm's recommendation of LifeKeeper software to its clients. In addition, the firm installed the software on clustered ProLiant DL360 and ML350 servers for its own internal development activities.

Versaterm also emphasizes that HP and SteelEye make it easy to deploy their technologies jointly: HP provides a bundled solution of ProLiant servers and LifeKeeper software, which provides faster time to solution. Additionally, both companies tested their products extensively together to ensure smooth integration. Versaterm acknowledges that the "ProLiant-LifeKeeper-Linux solution makes life easy because it is easy to deploy, and HP and SteelEye provide wonderful technical support."

Versaterm took advantage of the expertise of HP professionals when first implementing the StorageWorks MSA1000. HP assisted the installation by providing the proper kernel version for Red Hat Linux and a patch for one of the tape drives. "The HP experts test these solutions fully in their labs, so they know the installation intricacies," Randall says. "Plus, HP is responsive: When they promised we'd have the patch for the HP StorageWorks MSA1000, it was here the next day. Anytime we ran into any glitches, HP and SteelEye were there to help us."

The Versaterm pros install the LifeKeeper software themselves, which they say is "simple to configure and use with an efficient graphical user interface." They

recently created some scripts to tie into LifeKeeper and provide an e-mail alert of any impending event.

Arresting software handcuffs downtime

As LifeKeeper polices the entire application stack, Versaterm is looking forward to the robust path management capabilities of HP StorageWorks Secure Path software. HP StorageWorks Secure Path software will give the Versaterm team another level of redundancy between the ProLiant servers running Linux and the controllers of the MSA1000 system. Versaterm concludes, "The automated failover capability of HP StorageWorks Secure Path software enhances fault tolerance and availability by providing no single points of failure in the storage system."



Company profile:

From its headquarters in Ottawa, Canada, Versaterm Inc. (www.versaterm.com) has developed and delivered police records-management systems and computer-aided dispatch systems to North American police clients since 1977. From the beginning, Versaterm focused on creating advanced information and management systems for municipal police agencies, ranging in size from 25 officers to more than 5,000. Because of its modern, open-environment tools, the privately held corporation has achieved an average, annual growth rate of 40 percent since 1998.

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Challenge

- Deploy a resilient server and storage solution within IT cost projections
- Ensure support for the migration from SCO Unixware to Red Hat Linux
- Implement adequate failover capabilities for servers supporting the call-dispatch and RMS environments
- Manage operational costs while securing innovative technology

Solution

Hardware

- HP ProLiant ML370 and DL580 servers for client implementations
- HP ProLiant DL360, DL320, DL380, and ML350 servers for Versaterm internal operations
- HP StorageWorks Modular Smart Array 1000 (MSA1000)
- HP StorageWorks RAID Array 4100 (RA4100)
- HP StorageWorks DAT, DLT, and SDLT tape drives

Software

- HP StorageWorks Secure Path
- SteelEye LifeKeeper software
- Red Hat Linux v.2.1 operating system
- SCO Unixware operating system
- Versadex suite of police applications
- Oracle 8i and 9i databases
- IBM Informix databases

HP Services

- Technical support
- Hardware warranty

Results

- The combination of HP ProLiant servers and the HP StorageWorks Modular Smart Array 1000 system easily meets Versaterm's criteria for a stable, resilient, high performance, cost-effective platform to handle specialized software applications.
- HP's collaboration with Red Hat Linux – in which the partners combine their engineering resources and expertise – ensures completely integrated, scalable, open-standards solutions based on HP ProLiant technologies and world-class support for the Linux operating system.
- SteelEye LifeKeeper software provides rich functionality for failover – and keeps critical policing applications available to users at all times.
- The low maintenance and high reliability of HP ProLiant servers – enabled by HP intelligent-management tools – allow capital-restrained police agencies to manage their maintenance costs, thus lowering their total cost of ownership (TCO).

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