hp storage

january 2003

business
blueprint

hp StorageWorks solutions for Lotus Domino

executive summary

Never before has Lotus Domino been so vital to the success of your growing business. As mail and messaging become increasingly critical, it is paramount to protect your data from system failures. But, protecting your data usually means costly downtime for backup and restoration.

The soaring volume of data transmitted by means of Lotus Domino messaging and collaboration environments can create critical storage and storage management challenges. Enterprises must cope with the high cost of expanding network storage capacity to meet escalating user demands, often without warning and with minimal downtime and impact to users.

HP enterprise storage solutions for Lotus Domino provide proven and integrated solutions based on industry best practices and pretested configurations. These solutions provide organizations with a single, centralized storage platform and the management tools needed to successfully manage even the largest Lotus Domino environments. By simplifying information sharing and ensuring the availability of key data, HP enables enterprises to reap even greater benefits than they previously thought possible.

- **Resilient**—The solutions provide best practices to maximize Lotus Domino availability.
- **Available**—Ultra fast recovery quickly restores businesses to operational mode.
- **Manageable**—Simplified implementation and management leverages the HP OpenView family of management tools.
- **Reliable**—Pretested, characterized solutions ensure consistent results.
- **Comprehensive**—The solutions take the guesswork out of deployment by including all necessary components—both HP and third-party, to ensure predictability and control.
- **Optimized**—Scripted examples, performance data, and best practices provide automated, problem-free deployment.
- **Serviceable**—The solutions deploy characterized, pretested components, resulting in simplified installation and support.

By providing tested solutions that include all the critical elements you need—server, storage, tape backup, management software, services, and more—HP helps you configure and implement a desired Lotus Domino solution, cut down the investment, and reduce risk. Each solution represents a fully tested, supported, and scalable Lotus Domino solution that provides a clearly defined service level.

> "We've seen speed improvements of 50 %because of Domino, ProLiant CPU speeds, and SAN storage. And the cluster configuration ensures that this business-critical application is always up and running."
>
> Thomas Bullinger, IT Communications Manager, Carl Zeiss

business needs

availability

A typical organization's top priority is to understand the needs of its customers and implement them in the form of dedicated products and services. Its goal is to provide optimum quality and maximum precision—while ensuring that customers receive excellent value for their investment. To do this, the organization must maximize the availability of its information infrastructure—especially messaging and collaboration because that is its link with the customer. The availability of this mission-critical application directly impacts a company's bottom line, and business continuity is a priority of IT departments. HP Lotus Domino solutions address the availability issues from the perspectives of hardware, software, and recovery:

- Hardware — The striping and mirroring capabilities of HP storage arrays can prevent data loss caused by hard drive failure. And, there are redundancies built into the arrays to eliminate downtime due to possible component failure. By adding the setup of a Storage Area Network (SAN), redundancies can be built in the configuration to keep availability at the highest level possible.

- Software — Microsoft Cluster Server (MSCS) setup allows application failover to help prevent server downtime. HP StorageWorks Secure Path software provides redundant path failover if the storage connection path is lost as a result of hardware failure.

- Backup and recovery — HP solutions provide backup with minimum impact to availability, and recovery within minutes, not hours. HP storage arrays also have a disaster recovery capability to enable geographically dispersed sites to fail over the Lotus Domino application.

scalability

In 1999, daily volume of email was 3.5 billion; now, in 2003, it is expected that daily e-mail volume will be over 9 billion.[1] With this tremendous growth rate of 36 percent per annum,[2] performance and capacity must scale to support Domino growth and not affect availability.

As messaging content becomes richer (attachments and enclosures) and more varied (voice and video integration), volume is exploding. Such growth requires an extremely scalable storage infrastructure. HP storage solutions address the scalability issues by providing capabilities to:

- Increase storage capacity online without downtime – you can "grow" virtual disks as capacity is required.

- Expand infrastructure by adding servers into an existing SAN environment.

---

[1] *CFO* magazine, "The Phantom Menace," June 1999

[2] Michael Overly's E=Policy: How to Develop Computer, Email, and Internet Guidelines to Protect Your Company and its Assets, American Management Association, 1998

manageability

Many businesses have come to realize that they are not using their resources effectively. The proliferation, and distributed deployment, of Lotus Domino servers and infrastructure throughout the organization result in downtime when trying to scale either the servers or storage.

This ineffective use of resources can result in lower performance, underutilized storage capacity, greater additional management resources, and an overall higher cost of ownership. HP storage solutions address manageability issues by providing a common management tool for all applications, storage, and devices on the network. All the device management tools are integrated into the HP OpenView platform, so you can easily manage your storage or any other device on the network. With a common SAN infrastructure and associated management tools, it is no longer necessary to segregate and deploy storage by operating system environment or by application. The total cost of operation (TCO) for storage can be dramatically reduced.

solution summary

HP offers storage solutions that facilitate successful Lotus Domino implementation.

maximize availability

HP designs backup and recovery solutions that maximize data availability by completing recovery operations within minutes, rather than the hours required for conventional restore methods. HP storage arrays have built-in mirroring technology and redundancies that dramatically reduce the risks of unplanned downtime.

ensure scalability

With online capacity additions, virtualization, and support for a SAN environment, HP storage solutions for Lotus Domino can be quickly scaled to meet the most demanding environments.

enhance manageability

By integrating the HP OpenView Storage Area Manager toolset with Lotus Domino and enterprise storage applications, HP delivers operational efficiencies that allow businesses to manage more data while reducing costs without increasing resources.

enable consolidation

HP allows enterprises to deploy the same storage solutions for Lotus Domino as for other strategic applications. Businesses realize significant economies of scale by consolidating multiple servers into a small set of high-performance systems. HP also provides centralized management tools and processes to simplify administration of heterogeneous consolidated SAN-based storage environments.

achieve rapid deployment

HP storage solutions are designed to be easily expanded and customized to satisfy the unique messaging and collaboration demands of any enterprise.

return on investment (ROI)

Downtime, even for planned backup and routine maintenance, can mean financial loss. A lengthy recovery of your messaging and collaboration infrastructure can have significant business cost. In the always-on e-commerce world, the impact of system downtime in lost transactions and profits is obvious. However, even for more traditional organizations, downtime and recovery can result in delays to order processing, customer contact, and supplier transactions—all of which can impact revenue.

industry	application	average cost per hour of downtime (US$)
Financial	brokerage operations	$7,840,000
Financial	credit card sales	$3,160,000
Media	pay-per-view	$183,000
Retail	home shopping (TV)	$137,000
Retail	catalog sales	$109,000
Transportation	airline reservations	$108,000
Entertainment	tele-ticket sales	$83,000
Shipping	package shipping	$34,000
Financial	ATM fees	$18,000

Source: Contingency Planning Research

solution description

The HP StorageWorks Rapid Restore for Lotus Domino solution delivers nearly instantaneous restoration of Lotus Domino environments on the HP StorageWorks Enterprise Virtual Array (EVA), and ensures the integrity of the recovered data. This is accomplished by combining the functionality of HP OpenView Enterprise Volume Manager (EVM) and HP OpenView Storage Management Appliance software with the capabilities of HP StorageWorks arrays to produce local replicated volumes.

Through the documentation of deployment procedures, test results, best practices, and a script kit, the solution simplifies the recovery process for a database administrator and saves hours of downtime as compared to traditional tape-based restorations. Additionally, backup and other operations can occur using the local replicated volumes, thereby offloading the production server.

value proposition

HP is the world's leading supplier of Lotus Domino installations, with a 42 percent Domino market share in the Windows market. HP also has experience in implementing and managing enterprise-class Lotus Domino environments, ensuring that the Rapid Restore solution:

- Maximizes your online processing time, allowing you to increase revenue.
- Delivers optimum availability for business-critical messaging.
- Automates your processes for better use of resources.

Only HP can:

- Provide pretested, fully configured solutions that match specific business requirements by integrating HP hardware, software, services, and support along with best-in-class partner offerings.

- Ensure data protection by integrating software, tape library, and storage; and by supporting optical libraries for long-term archiving.

- Deploy common interfaces for all storage management solutions, regardless of device or infrastructure. HP OpenView Storage Area Manager provides centralized tools for uniform management of disparate devices and on-demand allocation of unused capacity.

services

While technology is a key component of the Rapid Restore for Lotus Domino solution, technology alone does not solve complex business problems. Protecting your critical business operations takes some preparation. HP can help you design, build, and implement a solution that protects your entire environment—including planning, disaster tolerance, and recovery services. Contact your HP sales representative for more information.

for more information

To learn more about HP Rapid Restore for Lotus Domino and other Lotus Domino solutions, contact your local HP sales representative or visit:

http://h18000.www1.hp.com/products/storageworks/solutions/rrlotusd/

and

www.hp.com/solutions/lotus