

# A European Legislature demands – and gets – remote, real-time replication and 100 percent capacity growth from its HP SAN

European Legislature

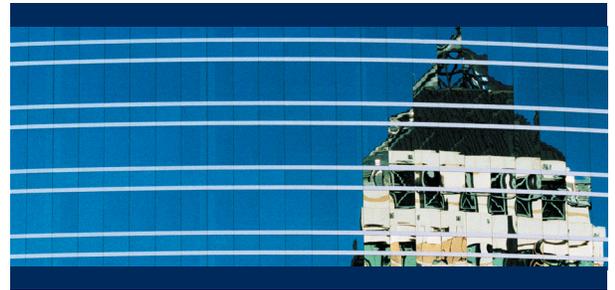


"Two sites with two backup units. Real-time, remote, fully redundant data protection. On-the-fly data restore. Push-button failover. Greater flexibility, lower storage costs, and improved ease of manageability...these HP StorageWorks Continuous Access software features are some of the reasons we chose HP over the other vendors."

– IT Manager for the European Legislature

A legislative body in Europe depends on communication and information technology to engage with its 10 million citizens. IT also helps the nation's 100-plus legislators make and amend laws. Additionally, these lawmakers count on a robust IT framework to scan, process, and store the 60,000 letters they receive by mail daily. While these tasks place tremendous demands on the IT staff, the legislature also faces several critical business needs.

Foremost is the need to grow storage capacity at a rate of 100 percent annually. Secondly, the European Legislature requires greater availability of applications with complete data protection in the event of sabotage or natural disaster. The legislature also needs a flexible storage configuration, which would adapt to new and changing applications while continuing to allow for easy management. They also want to lower overall storage costs and IT spending.

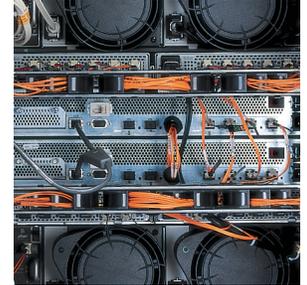
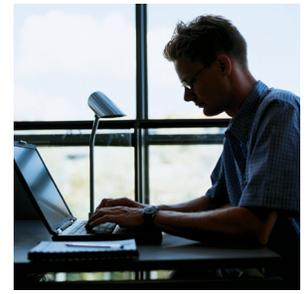


To meet such demands, the legislature undertook an ambitious upgrade of its IT systems – including the creation of a redundant network infrastructure, replacement of client and server hardware, and migration from Microsoft Windows NT to Microsoft Windows 2000 with Active Directory. For the solution's storage component, the legislature's IT Manager and his team replaced a cumbersome, distributed storage environment with an integrated, centrally managed storage area network (SAN) built around HP StorageWorks Continuous Access EVA software and the HP StorageWorks Enterprise Virtual Array 5000 (EVA5000) system.

The Continuous Access EVA solution is based on ENSAextended, HP's storage architecture for adding and unifying remote and heterogeneous components into a single storage utility through virtualization. The European Legislature's IT Manager explains: "We have two HP StorageWorks EVA5000 SANs situated on two separate sites. These support our technology environment with heterogeneous servers – HP ProLiant servers, Sun Microsystems, and IBM AS/400 – and operating systems, including Microsoft Windows 2000, UNIX, Sun Solaris, and AIX." Continuous Access EVA, a controller-based application, performs real-time replication between the arrays to provide the highest-level data-protection capabilities.

The SANs integrate with the HP StorageWorks Network Attached Storage E7000 (NAS E7000) system. This fusion of NAS and SAN reduces the need for expensive and complex integration and management so that all servers – including file servers – integrate into the SAN for complete centralized storage management. The IT Manager states, "Our new HP StorageWorks Continuous Access EVA-based solution meets all of our storage needs."





Among all the systems we looked at from IBM, EMC, and others – HP had the most complete solution, at an acceptable price."

**Continuous Access EVA provides superior data protection at the best price**

Given the legislature's responsibilities, data protection is critical. "It is very important that we protect against sabotage and natural disaster," says the European Legislature's IT Manager. "HP StorageWorks Continuous Access EVA software provides ongoing, real-time backup for all critical data between our two redundant data centers, which are 700 meters apart and connected by rapid data transmitting fiber. Should a disaster occur, we can accomplish failover at the push of a button. No other supplier could provide anywhere near its functionality at this price. HP StorageWorks Continuous Access EVA software was one of the main reasons we bought HP."

Beyond disaster protection, HP StorageWorks Continuous Access EVA software also takes care of another important task. The IT Manager explains: "Sometimes members will inadvertently delete information. We don't have time to walk to control rooms, and perform manual data-restore operations. With the new system, we don't have to – we can restore files on demand or 'on the fly.'"

**Complete virtualization with NAS-SAN fusion**

The legislature also enjoys the cost savings and management efficiencies of locating all storage into a single pool. "The HP StorageWorks EVA5000 system allows us to pool the storage from all of our application platforms," says the IT Manager. "This makes our data very accessible internally."

The legislature attaches its file servers to the SAN, as well, overcoming a nagging limitation faced by many organizations that try to virtualize all their storage into a

single pool. Networking file servers together requires a special protocol contained in a NAS cluster – which is typically separate from the SAN. However, with the NAS E7000, file servers can link to the SAN. "Our HP StorageWorks NAS E7000 system is fiber-attached to the EVA5000-based SAN," the IT Manager continues. "That means we can backup the data it generates as rapidly as we do our application data."

This HP NAS-SAN fusion provides the legislature with the best of both worlds. By itself, NAS clustering lacks the pooling and virtualization features of the EVA5000 SAN. Connecting the NAS and the SAN together solves this problem. "It is ideal when you have a system that combines file and print servers with servers running applications such as Oracle and Microsoft Exchange," says the IT Manager. "Additionally, we're doing this between buildings 700 meters apart. Other suppliers didn't offer us a NAS cluster that could cover this distance."

**Adapting to an unpredictable, rapidly changing environment**

The legislature's IT team must adapt to data growing collectively at a rate of 100 percent per year and unforeseeable new applications. Recently, for example, Parliament decided to make available, via the Internet, videos of all debates in both chambers along with the proceedings of its three principal committees.

"Adding capacity now is a matter of dropping disks into slots on the HP StorageWorks EVA5000," the IT Manager explains. That makes it easy to support the video project, as well as the storage needs of individual members. "In the old environment, members had a limit of 100 MB of personal file storage space," the IT Manager says. "Now we can provide them as much as they need, because it's so easy to add capacity."

At the same time, the Continuous Access EVA software simplifies storage management. The IT Manager states, "We no longer have to keep track of spare data in 60 different servers. It's all in one big pool of data manageable via one console."

"Our new HP StorageWorks Continuous Access EVA-based solution meets all of our storage needs. Among all the systems we looked at from IBM, EMC, and others, HP had the most complete solution – at an acceptable price."

To back up data under the previous distributed system, IT staff worked off prioritized lists indicating which data received the most changes. Now, with Continuous Access EVA and the EVA5000 system's simplified manageability software – including Lite Touch and eventually, HP StorageWorks Snapshot for Virtual Controller Software (VCS) – all backup is managed in a single location and stored on a centrally located, automated HP StorageWorks MSL5026 tape library.

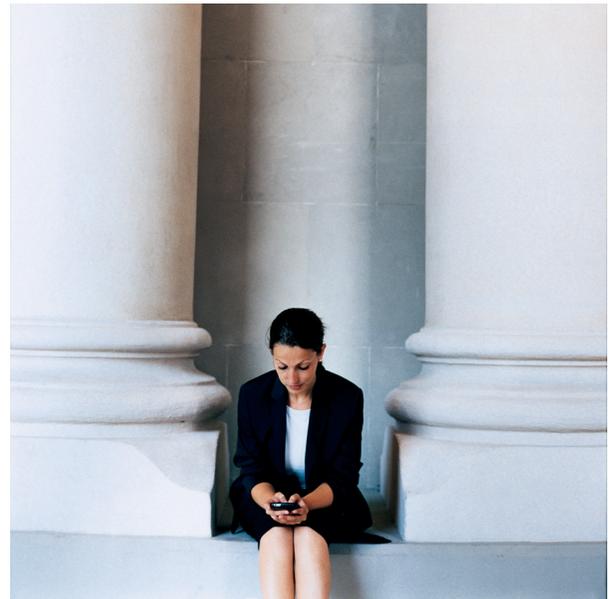
**Savings from virtualization and ease of management generate substantial savings**

The European Legislature commissioned Macarthur Stroud International, a market analysis firm, to study the economic impact of the legislature's new HP storage infrastructure. The firm projected considerable cost savings, due to virtualization and easier management.

- The EVA5000 system will double disk capacity utilization. By configuring storage into a centrally manageable pool, the legislature can expect to double disk capacity utilization to 70-80 percent.
- NAS-SAN fusion will increase file server utilization and reduce the number of Microsoft Windows file servers by 50 percent. Without the HP solution, the legislature's file servers would run out of storage capacity, even though their processors could still handle much more load. The NAS-SAN component of the HP platform eliminates this glaring cost inefficiency by adding file servers to the storage pool.

- Ease of management will reduce storage workload. The centralization of backup management and elimination of many labor-intensive backup tasks will reduce storage management workload by 20-30 percent.

Cost saving is important, but not the primary aim for the European Legislature. "Our goal is to engage more with our citizens," says the IT Manager. "Communication and IT systems are increasingly important tools to enable this. Now we have the storage infrastructure that allows us to support – as well as fully protect – any new initiatives as they come our way."



**Organization profile:**

Communication and information technology are increasingly vital to a legislative branch of a European government. (The European Legislature asked to remain anonymous for legal and security reasons.) The legislature's 100-plus members represent more than 10 million citizens. Through the mail alone, they receive 60,000 letters per day, which must be scanned, processed, and stored in the legislature's information system – and that's just a part of the large and rapidly growing data demands on its 45-person IT staff.

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## Challenge

- Grow storage capacity at an annual rate of 100 percent
- Provide greater availability of applications with complete data protection
- Employ a flexible storage configuration that adapts to new and changing applications and enables easier management
- Lower overall storage costs and IT spending

## Solution

### Hardware

- HP StorageWorks Enterprise Virtual Array 5000 (EVA5000) system configured as a storage area network (SAN)
- HP StorageWorks NAS E7000, connected to the SAN with fiber
- HP StorageWorks MSL5026 tape library
- HP ProLiant servers
- Sun Microsystems servers
- IBM AS/400 systems

### Software

- HP StorageWorks Continuous Access EVA
- HP StorageWorks Snapshot for Virtual Controller Software (VCS)
- Microsoft Windows 2000 operating system
- Sun Solaris operating system
- IBM AIX operating system

## Results

- The HP Adaptive Enterprise vision allows the European Legislature to expand its data-storage infrastructure easily and cost-effectively.
- HP StorageWorks Continuous Access EVA software on EVA5000 systems allows for remote, fully redundant, real-time replication of all of the legislature's critical data.
- The HP StorageWorks Enterprise Virtual Array 5000 (EVA5000) virtualization feature allows IT staff to manage all data from a single console, rather than 60 servers. Pooling and vRaid striping will double disk capacity utilization.
- NAS/SAN fusion increases file server utilization, allowing the legislature to reduce file server count by 50 percent.
- Storage management workload will decrease by 20-30 percent.
- Going forward, great flexibility in adapting to growing storage demands and unforeseen new applications, due to ease of adding and managing new storage capacity.

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