



## Hitachi Storage Solutions at Work

### University Hospital Center of Nancy, France

#### Industry

Health Care

#### Solution—Business Continuity/Backup

**Hardware:** Hitachi Thunder 9570V™ modular storage system, Hitachi TagmaStore® Workgroup Modular Storage model WMS100

**Software:** Hitachi Resource Manager™ utility package with the Performance Monitor feature and Hitachi HiCommand® Device Manager, Hitachi Copy-on-Write Snapshot, and Hitachi HiCommand Dynamic Link Manager software

“Our Hitachi SAN/NAS architecture helps provide the same peace of mind for our hard-working health care professionals that they strive to give their patients.”

—Francis Daul  
Head of Operations  
University Hospital Center



## University Hospital Gets Prescription for Transforming Health Care with Hitachi SAN and NAS Architecture

Being able to connect to the right information at the right time is critical to saving lives. For the University Hospital Center of Nancy, France, it means sharing timely data such as patient records and lab results in order to make informed decisions. Hitachi Data Systems prescribed a storage area network (SAN)/network attached storage (NAS) architecture to replace disparate systems and bolster data storage health.

Emergency room doors aren't the only things swinging open at the University Hospital Center (CHU) of Nancy, France. The hospital is seeking ways to quickly and accurately share patient-critical data electronically across its medical facilities in order to make informed decisions about treatments, billing, and patient care. Having the right information at the right time can be paramount to saving lives, time, and money.

### Diagnosing Data Access Ailments

Over the course of its existence, the hospital complex has sought innovative ways to provide health care. From actively managing a national poison control database to operating a 2,000-bed hospital center, CHU is focused on providing top-quality care to its patients and the surrounding community.

Hospital staff members rely on ready access to more than 900,000 patient records, digital images, lab results, and administrative files in order to do their

jobs, provide needed services, and perform vital procedures. Also, the organization processes a monthly payroll for 23,000 employees of area facilities, including 8,800 who work at the hospital center. These files were being stored on various and disparate systems across the organization, which hampered the fluid, timely—and error-free—exchange of medical documents and knowledge pools. And protecting critical files was not handled universally, as the hospital did not have an automated or centralized method for data backup, and backup windows were shrinking.

To seamlessly orchestrate consistent touch points between the hospital's many systems and to better protect crucial data, University Hospital Center IT Director Jean-Marc Virion wanted to make a paradigm shift toward federated systems and business continuity.

"By smartly fortifying and centralizing the hospital's storage architecture, we have the opportunity to optimize the way we provide health care to our community," Virion says.

### Prescribing SAN and NAS Architecture

Virion's requirements to centralize hospital storage were twofold: build a SAN to foster greater access and security of the data lifeblood, and introduce a NAS cluster to consolidate and integrate administrative file servers.

"We were hoping to adopt these two storage technologies to ultimately provide the resources our health care professionals require," says Francis Daul, the hospital's head of operations.

The existing IT infrastructure included 4.7TB of data storage housed across Hewlett-Packard servers running Microsoft Windows Exchange Server 2003 and IBM® AIX® servers running Oracle 8 and 9i applications for nearly 30 hospital medical and administrative databases. Backups were housed on a StorageTek (now Sun StorageTek) tape library.

The hospital's IT team knew that the SAN/NAS architecture would enable heterogeneous coexistence of the Windows and UNIX operating systems, as well as improve backup capabilities. Daily backups for the poison control database required three hours.

To begin the storage transformation at University Hospital Center, Daul worked with vendor HEXALIS, which operates in France. The new design was based on Hitachi modular storage and software.

### Administering a Hitachi Storage Transfusion

Restoring vitality to the hospital's storage composition began with implementation of a Hitachi Thunder 9570V™ modular storage system, which enables both SAN and NAS to harmoniously reside within one storage system. An HDS-NetApp® Enterprise NAS Gateway solution and two McDATA Sphereon 4500 switches completed the initial framework for this extensive open-source environment. As a result, the hospital IT team was immediately able to consolidate file servers, build centralized storage pools, and automate backup functionality.

To safeguard the architecture now installed and remove the pressure on resources, Daul and HEXALIS injected a healthy dose of Hitachi software into the infrastructure. Hitachi HiCommand® Device Manager software gives IT administrators the dexterity to easily and centrally manage, configure, and monitor storage resources from a single point of control. Hitachi Copy-on-Write Snapshot software mitigates data replication woes for the hospital with nondisruptive, logical snapshot functionality, and rapid restore abilities. Hitachi Resource Manager™ utility package with the Performance Monitor feature provides essential functions that enable the full feature set of, and performance management and troubleshooting for, individual Hitachi storage systems. In addition, Hitachi HiCommand Dynamic Link Manager software improves access to and

## Providing Storage Performance Peace of Mind

“The decision to consolidate our file servers on the cluster NAS has significantly simplified administrative tasks, and the SAN’s performance has already had an instant impact on application availability,” says Daul.

The hospital is enjoying instant success as well. All of its crucial resources, such as radiology and poison control databases, are protected by continuous and automated Hitachi data replication services. The backup of the poison control databases was dramatically reduced from several hours per day to approximately 30 seconds per week for cold backup only. Also, the radiology services application is interrupted for less than a minute per week to carry out cold backup to the tape library.

Model WMS100 offers a lucrative fast lane along the Hitachi modular storage road map, with investment protection and tremendous flexibility to scale vertically and horizontally. With cost-effective SATA drives, support for RAID-1, RAID-5, and RAID-6 levels, and a plethora of advanced software functionality, model WMS100 will enable the community hospital in Nancy, France, to connect people and information in new and pervasive ways for more informed health care decisions.

“When patients are ill, they are not thinking about the details of treatment, they just want to be well. In turn, our staff doesn’t want to worry about accessing or backing up a document, they only want to get the information they need at the right time from any location. Our Hitachi SAN/NAS architecture helps provide the same peace of mind for our hard-working health care professionals that they strive to give their patients,” says Daul.



“Since the implementation of our Hitachi SAN/NAS architecture, the hospital has connected 3,300 workstations to the network and allotted private storage on the network for 1,000 users. Better yet, all of the hospital’s users now have real-time access to almost three million files—from any workstation.”

—Jean-Marc Virion  
IT Director  
University Hospital Center

availability of storage paths to Hitachi storage systems by redistributing the load from one path to another in the event of path failure. The automated backup ingenuity afforded by Hitachi Data Systems provides worry-free protection and availability for critical data files.

“Since the implementation of our Hitachi SAN/NAS architecture, the hospital has connected 2,600 workstations to the network and allotted private storage on the network for 850 users,” says Virion. “Better yet, all of the hospital’s users now have real-time access to almost one million files—from any workstation.”

A year after the Hitachi Data Systems implementation, CHU staff is happier still. Why? Because the delivery of health care was made easier with the secure yet free-flowing exchange of accurate documents needed to serve hospital constituents. Daul and Virion reinforced the business continuity even further, by adding a Hitachi TagmaStore® Workgroup Modular Storage model WMS100 to the SAN to replace the Sun StorageTek tape library with disk-to-disk backup technology.

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