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– Huang Weicheng, Director of Information Center, Beijing Cancer Hospital

Beijing Cancer Hospital

FalconStor CDP protects critical data for advanced cancer treatment facility

Background

Beijing Cancer Hospital is one of the most renowned hospitals in China specializing in the field of cancer research and treatment. It has 790 hospital beds, 26 clinical departments, and 13 medical technological departments through which it treats nearly 2000 thousand new patients each year. The IT organization runs more than 30 servers to support various industry-specific applications such as health information systems (HIS), laboratory information systems (LIS), picture archiving and communication systems (PACS), and ultrasound imaging, as well as a highly structured electronic medical records (EMR) system.

Challenge

Beijing Cancer Hospital strives to be a leader in the area of health care informatics, but faces several obstacles. "Medical informatics provides great support for business development of the healthcare industry," explains Huang Weicheng, Director of Information Center. "Our HIS and patient data management systems help us tremendously with day-to-day operations. However, they also increase the need for reliable data protection."

The first IT challenge the hospital faces is explosive data growth. In the last decade, the hospital has accumulated huge amounts of medical data. For example, the PACS/RIS system in the Department of Medical Imaging has developed studies on diagnosis, staging, evaluation, and prediction of efficacy by combining various kinds of imaging methods, causing 8TB of data to accumulate over three years. Similarly, the EMR system collects huge quantities of patient data and data from various research projects, making it difficult for IT administrators to manage and back up all of it.

As the facility's business has expanded and data has increased, the IT environment has become more complex, with various types of databases and multiple versions of software running simultaneously. The hospital's IBM DB2 databases include four different versions; line of business (LOB) applications run on various Oracle databases; and several departments use Microsoft SQL Server including Microsoft SQL 7, SQL 2000, and SQL 2005. Due to the heterogeneous nature of the IT environment, the IT organization spends a great deal of time and effort on data search and recovery. Weicheng says: "Managing multiple different DBMS platforms and various software versions increases the complexity of database searching. It is like looking for a needle in a haystack."

Industry

Healthcare

Company Profile

Beijing Cancer Hospital is a major teaching hospital affiliated with Peking University. Founded in 1976, Beijing Cancer Hospital is a renowned and state-of-the-art Grade III specialized medical facility. Medical treatment and scientific research are key business activities of the hospital. Through three decades of development, it has performed and been responsible for more than 120 national projects and has received 5 national-level achievement awards. It invests continuously in IT to raise the level of cancer research and treatment.

IT Environment

- > Microsoft Windows Server 2000/2003
- > VMware ESX Server
- > IBM DB2
- > Oracle 8i, 9i, 10g
- > Microsoft SQL Server
- > Medical systems including HIS, LIS, PACS

Challenges

- > Explosive data growth
- > Heterogeneous storage infrastructure; databases from various vendors, multiple software versions
- > Needed to redesign backup infrastructure

FalconStor Solution

- > FalconStor® Continuous Data Protector (CDP) Storage Appliance
- > DiskSafe™ Agent

Benefits

- > IT staff can recover from outages with confidence
- > Minimizes the backup window
- > Helps IT department achieve RPO and RTO
- > Simplifies testing and DR verification
- > Enables fast, easy data management, backup, and DR

Case Study

Lastly, physical space is limited, and growing numbers of production servers have further reduced the floor space in the data center. The previous backup solution could not scale to meet the newly emerging requirements for backup and disaster recovery (DR), making a backup infrastructure redesign mandatory.

FalconStor Solution

As the hospital set about restructuring its backup infrastructure, it needed a solution that could provide storage optimization, protection from data loss due to hardware failures, remote DR, backup verification, and fast recovery. Moreover, the solution needed to integrate with the hospital's heterogeneous storage resources. It found the answer in the FalconStor® Continuous Data Protector (CDP) solution, which provides ongoing data protection in an open architecture that works with all major storage hardware, software, and connectivity protocols.

"Our IT organization has to build a comprehensive system and data protection framework to secure the business continuity and information assets," says Weicheng. "FalconStor CDP is a cost-effective solution that offers instant recovery, helping our IT staff to prevent data loss and reduce system downtime. It also relieves the backup window headaches that plague our IT staff."

Deployment Details

Focusing on the business needs of the healthcare industry, FalconStor Professional Services designed a unified, disk-based data protection solution for Beijing Cancer Hospital that included disk mirroring, periodic snapshots, and WAN-optimized replication. A FalconStor CDP storage appliance was deployed in the Fibre Channel (FC) SAN network, connected with the Gigabit Ethernet network and communicating via

iSCSI. DiskSafe™ agents and database agents were installed in seven Microsoft Windows Server machines in the production environment to deliver real-time data protection for critical business applications. Meanwhile, TimeMark® snapshots offer 100% transactionally consistent snapshots (up to 255 snapshots per LUN), for fast, granular recovery to multiple points in time.

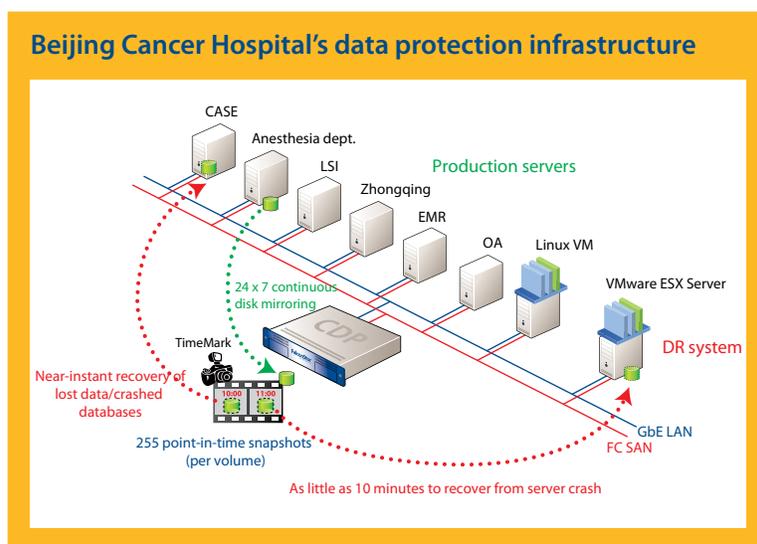
"The FalconStor CDP solution allows our hospital to implement an agile backup strategy," says Weicheng. "Our IT administrators can track any historical activity and perform a point-in-time recovery by mounting an application-aware snapshot on a virtual server and emulating the production server."

Business Benefits

By deploying the FalconStor CDP storage appliance, the Beijing Cancer Hospital has been able to overcome its backup and recovery headaches by streamlining procedures and preventing data loss caused by logical errors, database crashes, human errors, viruses and hacker attacks, and message system failures.

IT administrators can use the intuitive, web-based management console of the FalconStor CDP storage appliance with ease to establish backup strategies and schedules, perform testing, and access data, helping the company comply with recovery point objectives (RPO) and recovery time objectives (RTO). Instant recovery, the most attractive feature of the FalconStor CDP solution, helps the IT staff execute its DR strategy with complete confidence.

Overall, Weicheng is very impressed by the performance of the FalconStor CDP solution: "Several real-world scenarios have verified that FalconStor CDP is a cost-effective, trustworthy, and reliable solution for DR. We consider it a 'safety lock' that protects our information assets."



For more information, visit www.falconstor.com/CDP or contact your local FalconStor representative.

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