

Organization

A major Chinese broadcaster based in Jiangsu province, one of the most economically advanced regions in China

Challenge

JSBC sought to adopt a new storage system to cope with increased video editing workload. JSBC's needs included:

- High storage bandwidth and scalable capacity to manage future growth
- Low latency to support a smooth editing process
- Uninterrupted operations 24x7

Solution

Infortrend's ESVA F60 solution met the challenge with:

- High data availability
- RAID 6 protection
- Scalable capacity
- Easy management

Infortrend's ESVA Solution Successfully Helps Manage Increased Video Editing Workload at China's Jiangsu Broadcast Center (JSBC)

With China's Jiangsu Broadcast Center (JSBC) experiencing significant business growth, increases in storage capacity and performance were needed for the non-linear editing operations of the company's editing department. The main storage equipment originally used by the editing department - the HP StorageWorks 8100 - was no longer able to meet demand for capacity and performance scalability. In its search for a new and better solution, JSBC conducted a series of stringent performance tests on Infortrend's ESVA system, and, as a result of the excellent results the ESVA system achieved, JSBC decided to adopt this system to replace the HP StorageWorks 8100.

The Challenges: Achieving High Storage Bandwidth, Scalable Capacity, Low Latency and 24x7 Availability

The main application in the IT environment of JSBC's editing department is non-linear video editing of high-definition and standard-definition content. For this application, the storage system needs to feature large data transmission bandwidth. The storage bandwidth required by the existing editing environment already reached 800MB/s. As the department's non-linear editing system continues to grow, JSBC set a bandwidth requirement of 1.2GB/s for its new storage system.

JSBC's newly added channels and programs have also increased the workload for the editing department, and its demand for storage system capacity is increasing accordingly. Therefore, the editing department focused on system capacity scalability in the selection process for a new storage system. They examined not only the maximum capacity supported by the system, but also the potential performance issues that can come along with capacity scaling – hoping that increases in storage capacity would be accompanied by similar increases in system performance.

The new storage system would mainly be used by JSBC to support non-linear video editing; therefore, it had to be able to respond quickly to data requests. The editing department used specialized testing tools to ensure that the latency time of the storage system's responses would be below 400ms.

The material produced by the editing department serves as a source of information for all programs broadcast by JSBC, making the storage system a critically important component. To ensure that this material is continuously stored and that the editing system functions in a stable manner, the storage system had to maintain uninterrupted operations 24x7.

The Solution and Its Benefits: ESVA F60 Ensures High Data Availability While Providing More than 1.4Gb/s Bandwidth and Less than 15ms Latency

Infortrend and UDSAFE, Infortrend's major channel partner in China, jointly conducted a detailed analysis of the application environment of JSBC's editing department. Following this analysis, they decided to use Infortrend's new ESVA F60 scalable virtualized storage system to design a SAN solution. Each of the three ESVA F60 systems is linked to an expansion enclosure. Through virtualization, the three sets of physically independent storage systems are consolidated into a single storage pool and collectively support the performance and capacity demands of multiple front-end hosts.

"This is the first time we have used a storage system that delivers such low latency. Even storage systems supporting FC drives have much higher latency than the ESVA system."

Jiangsu Broadcast Center

Scalable Virtualized Architecture Easily Meets Performance Demands

ESVA is based on a scalable virtualized storage architecture, providing superior bandwidth and the ability to efficiently process simultaneous data requests. The ESVA storage systems adopted by JSBC all feature Infortrend's newly developed ASIC667 RAID engines and provide 24GB cache memory and twelve 4Gb/s FC host ports. ESVA combines high-end hardware components with automatic load balancing technology to deliver outstanding performance.

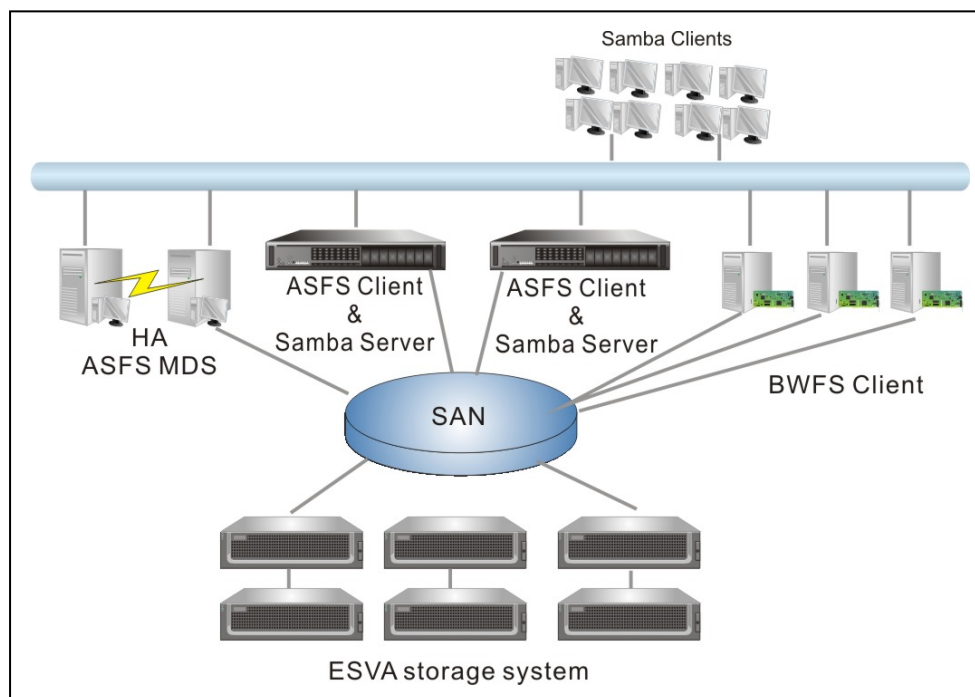
Redundant Hardware Design Offers Strong Data Protection

Each ESVA system adopts a completely redundant hardware design, preventing any single point of failure. The hardware-based RAID 6 data protection is able to ensure data integrity even during the simultaneous failure of two disk drives. The volume copy/volume mirror functions of the ESVA solution automatically create full data copies to protect core data. System users can also make snapshots to retain data images of any given point in time. When errors occur, users are able to choose a recovery point and restore the data to its status at that time.

Simple Management Exceeds Expectations

From the perspective of the front-end host, the storage pool consisting of multiple ESVA systems is one logical drive that provides large-scale capacity. Through an intuitive interface, users are able to conduct centralized management of multiple ESVA systems. RAID level configuration, capacity allocation and data protection can be completed in just a few simple clicks.

JSBC's new ESVA storage systems have consistently maintained stable and high-performance operations. With several hundred workstations simultaneously engaged in non-linear read/write editing, the ESVA systems with RAID 6 protection are able to continuously offer bandwidth of 1.4GB/s. Data request response latency is consistently held at around 15ms, much shorter than the 400ms originally required by the application environment.



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