Sports Fans In Asia and Around the World Share in the Excitement of the 16th Asian Games with the Help of Infortrend's ESVA

Organization

International Broadcasting Center (IBC) of the 16th Asian Games, held in Guangzhou, China in November 2010.

Challenge

Large amounts of data to be stored and processed during Asian Games. The storage solution had to meet the following requirements:

- Large capacity to store 2,500 hours of HD and SD content
- Bandwidth of 800MB/s
- Excellent system reliability
- Comprehensive data protection

Solution

Infortrend's Fibre-host ESVA solution met the challenge with:

- Storage virtualization
- Large capacity and performance expansion capabilities
- Bandwidth of up to 1.3GB/s
- Redundant hardware design
- Excellent data protection features

The 16th Asian Games were held in Guangzhou, China from November 12 to November 27, 2010. The Games featured 476 events in 42 sports, contested in 53 competition venues. More than 10,000 athletes from 45 Asian countries participated in the event, which was managed by the Olympic Council of Asia. The Asian Games are the largest international sports competition in Asia and the second largest in the world behind the Olympic Games.

The IBC (International Broadcasting Center) of the Asian Games was responsible for recording video data of the games and its systems served as a source for searching and downloading data in order to produce and broadcast event programs. Broadcasting video formats used included HD (High Definition) and SD (Standard Definition).

China Digital Video, an Infortrend partner in China, was the exclusive supplier of IT systems and broadcasting technology services for the IBC. When planning was conducted for the core storage systems to be used for the center's applications, stringent requirements were put forward. UDSafe, Infortrend's major channel partner in China, proposed using Infortrend's ESVA (Enterprise Scalable Virtualized Architecture) to create a storage solution for the IBC. Following nearly two months of comprehensive tests, Infortrend's ESVA was chosen as the storage solution for the Asian Games.

Customer Challenges

Capacity

As the second largest sporting event in the world, a large amount of video content was expected to be created during the Asian Games. Therefore, the IBC required a large capacity to properly store all this content. The storage systems had to be able to store more than 2,500 hours of content. With the content including approximately 1,500 hours of 50MB/s SD content and 1,000 hours of 120MB/s HD content, the effective storage capacity had to reach 192TB.

Bandwidth

The storage solution of the IBC had to serve many different applications, including event recording, content editing, download services etc. In order to meet all these different needs, the solution had to be able to achieve a bandwidth of up to 800MB/s to ensure smooth overall operations.

Operational Stability and Data Protection

The Asian Games attracted the attention not only of sports fans in Asia, but from people around the world. Broadcasting operations were thus of great importance to enable sports fans around the world to experience the excitement of the Games. As a result, the IBC demanded that the storage solution would be extremely stable and reliable and would be able to provide excellent data protection and disaster recovery options.

Infortrend Solution: ESVA

The solution consisted of six Fibre-host ESVA arrays with a total capacity of 192TB, featuring significant room for capacity expansion. The solution could reach a continuous throughput of 1.3GB/s, satisfying the storage and backup application demand of the IBC.

"Infortrend's ESVA systems deployed by the IBC during the Asian Games have performed excellently as the storage solution for all event data, offering extreme reliability and strong performance. We are very satisfied with the overall performance of the ESVA solution."

- IBC representative, Asian Games, Guangzhou, China

Virtualization Combines Capabilities of Multiple Arrays

Infortrend's ESVA helped the IBC to create a high-performance SAN (Storage Area Network) configuration. Six ESVA arrays were deployed, and each array was connected to one expansion enclosure. Through ESVA's virtualization functionality, four arrays were combined into a main storage pool, providing consolidated performance and capacity for front-end applications. The other two arrays were combined into a storage pool for backup purposes. At the end of each day during the Asian Games, the recorded content of that day was copied to the backup pool to ensure data availability even in the event of failures in the main storage pool.

Redundant Hardware Design, High-end Data Protection

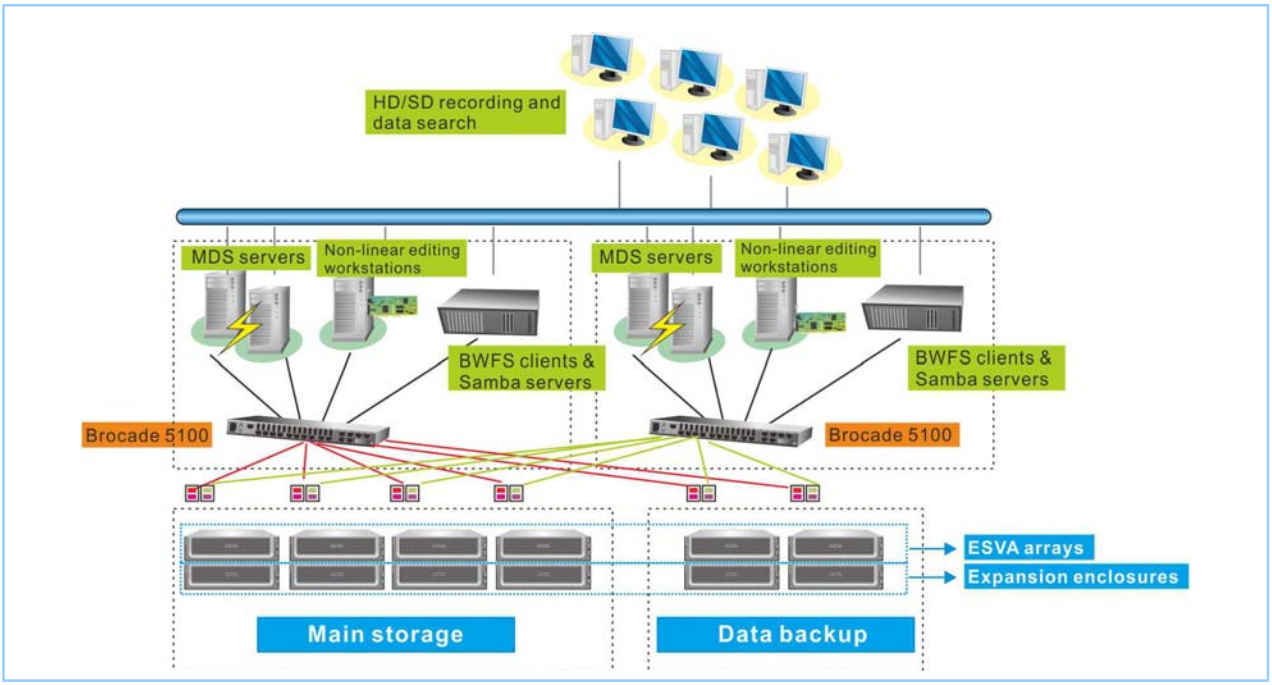
Each ESVA array featured a redundant hardware design, eliminating any single-point-of-failure. The RAID 5/6 technology adopted by the ESVA arrays ensured that they could overcome two simultaneous disk drive failures without any data loss. With the volume copy functions, full data copies could be deployed across the two storage pools to ensure data availability. ESVA also included snapshot technology, which provides instantaneous point-in-time copies, to give the IBC even more options for data protection.

Centralized Architecture Meets Performance Demand

ESVA provided superior bandwidth and combined processing power. The ESVA solution deployed for the Asian Games featured a total of 12 PowerPC CPUs, six ASIC667 RAID engines, 24GB cache memory and 12 4Gb/s FC host ports. These excellent hardware components, paired with the combined processing power and automatic load balancing technology of multiple ESVA arrays, provided a superior performance. Before the Games had even started, Read/Write tests with 40 recording workstations and 12 non-linear editing workstations had shown that the four ESVA arrays of the main storage pool delivered a continuous throughput of 1.3GB/s in a RAID 5 configuration.

Easy and Convenient Management

ESVA enabled the IT administrators at the IBC to centrally manage multiple ESVA arrays through its management suite SANWatch, a Java-based GUI. RAID configurations, data protection and other key settings could all be achieved with only a few clicks of the mouse, simplifying management tasks and ensuring high efficiency for the IT team in the pressure-packed two weeks of the Games.



About the Asian Games

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