The 11th National Games of China Deliver Real-time Information Broadcasts with Infortrend's ESVA Solution

Organization

With a total of 10,991 athletes from 46 teams joining 33 kinds of sports competitions, the 11th National Games of China were the largest in the Games' history.

Challenge

To capture, record, edit, render, share and distribute more than 1,900 hours of event information, the International Broadcast Center (IBC) required a FC-host storage solution delivering more than 1,600 MB/s of sustained Write performance, great reliability and more than 40TB of capacity.

Solution

Infortrend ESVA F60 storage solution met the challenges with:

- *Outstanding throughput power*
- *High availability hardware designs*
- *RAID 6 protection*
- *Highly scalable capacity*
- *Easy management*

The National Games of the People's Republic of China, also known as the All China Games, is the most premier national-level sports event of China. Since 1959, at mostly four-year intervals, there have been 11th events held in total. The latest event was held in Shandong from October 16 to October 28, 2009. With a total of 10,991 athletes from 46 teams participating in 33 categories of sports competitions, the event was the largest in the Games' history. The main venues for the competitions were located in Jinan, while many secondary venues were located at regional centers scattered across Shandong.

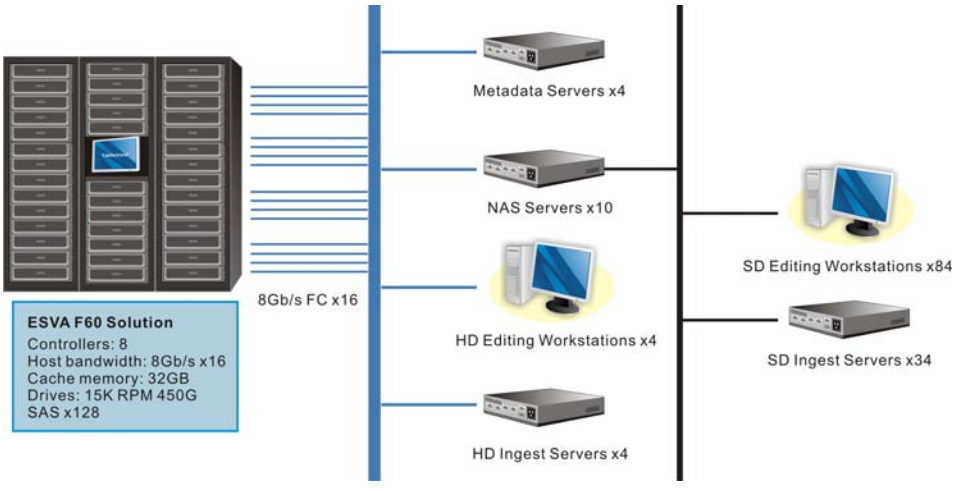
The Challenges: Performance, Reliability and Capacity

To achieve prompt event information sharing, the International Broadcast Center (IBC) of the National Games constructed a powerful information system. 38 capturing servers collected SD and HD input streams from more than 60 venues located at 17 regions in Shandong. 90 editing workstations were responsible for editing and rendering the captured data. After the post-production was done, the finished images were widely distributed through various broadcast channels for real-time access and download. The distribution channels included websites, Digital Video Broadcasting (DVB), IPTV, mobile phones, televisions, radios etc.

To fit into this challenging environment, the storage solution for the IBC was required to meet the following demands:

- Deliver more than 1,600MB/s of sustained Write performance to handle heavy SD and HD streaming workloads
- Provide high reliability and redundancy to ensure high data availability
- Accommodate more than 40TB of capacity to store a great amount of event information
- Provide Fibre Channel (FC) host connectivity to be integrated into the FC SAN

Solution Topology



> *"As a premier national-level sports event, the National Games received wide attention. We took great responsibility to provide reliable backend support. In the demanding environment, Infortrend ESVA served well as unified storage to accommodate event data for the IBC system. We were very satisfied with its great reliability and performance."*
>
> *-- National Games Organizing Committee*

The Solution: ESVA F60

After performing thorough tests, the National Games chose the ESVA F60 solution to support data storage for the IBC. Combined in a single storage pool, four F60 storage systems, each connected to an expansion enclosure, worked together to provide the following features to satisfy the demanding requirements at exceptional efficiency:

- Outstanding throughput power through sixteen 8Gb/s Fibre Channel (FC) host ports
- Maximized system productivity with distributed load-balancing technology
- Redundant, hot-swappable controllers, power supplies and fans
- Hardware-based RAID 6 protection
- A total of 42TB high-performance SAS storage
- Multiple systems consolidated into a single storage pool for easy configuration, monitoring and optimization through an intuitive management interface

The Benefits: Sustained High-Speed Processing of 1,900 Hours of Event Information

In the 50 days of IBC operation, Infortrend's ESVA solution delivered more than enough performance, reliability and capacity to store and protect about 1,900 hours of multi-media content for high-speed broadcasts. Running at more than 2,000 MB/s Write performance optimized for high sustainability, ESVA storage significantly facilitated the process from capturing to on-air, even when simultaneously handling multiple uncompressed HD and SD streams. With RAID 6 protection and high availability hardware designs, ESVA storage also provided high fault-tolerance, which ensured that workstations were able to continuously access data of full integrity during failure of hardware components and up to two drives. To the surprise of IBC IT managers, administration on these powerful systems could be easily done on a centralized, user-friendly management platform. Thanks to Infortrend's trustworthy solution, the IBC brought every memorable moment of the National Games to audiences without any delays.

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