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Business

Bank responsible for national lottery business operation

Challenge

Install high performance, high reliability and high capacity data storage for the phone lottery-betting system

Solution

EonStor® RAID subsystems met the challenge for:

- high performance
- high reliability
- high capacity

Infotrend's EonStor® RAID Subsystems Aid Taiwan Sports Lottery to Hit a Marvelous Home Run

Last year, Taipei Fubon Bank won the operating concessions for Taiwan Sports Lottery. This year in May, Sports Lottery was officially issued and widely welcomed by sports fans and lottery fans. To provide better service, the lottery department of Taipei Fubon Bank is now actively planning to deploy phone and online lottery-betting systems. With outstanding technical advantages, Infotrend's RAID arrays were chosen as the storage for the phone lottery-betting system. They will aid Sports Lottery to achieve higher success.

"Information system is the key of lottery business," said Ruei Dong Yang, Vice President of Taipei Fubon Bank. "In the past, Charity Lottery could achieve great success because we set up robust IT system as the backbone of our operation. After we won the operating concessions of Sports Lottery, our lottery department immediately began to build the core of operation - a sports event information distribution system."

Ruei Dong Yang is known as the "Godfather of Lottery." From the early-time Patriotism Lottery, Scratch Card, Charity Lottery to the current Sports Lottery, Yang has never been absent from any Taiwan's lottery event and always played an important role. This time, Taipei Fubon Bank again beat its competitors in the specialty evaluations by a broad margin and won the operating concessions of Sports Lottery. Under the leadership of Yang, the IT team who had deployed the IT system for Charity Lottery again successfully implemented the system responsible for sports event information distribution within as short as six months. Completing this mission impossible marks a new record in Taiwan's lottery history.

Phone Lottery-Betting System Requires RAID Subsystems to Meet Performance, Reliability and Capacity Demands

Taipei Fubon Bank adopted the same sports event information distribution system as Hong Kong Jockey Club, the world's largest gambling institution. The system consists of various modules, including risk control, bills processing, prize dividing, physical distribution channel management, registered member betting and etc. Under the constant improvement by Hong Kong Jockey Club based on a long period of operation experiences, the software of this system is almost perfect. However, good software can bring the best effectiveness only when it is used with good hardware. Therefore, Taipei Fubon Bank was very careful in procuring hardware devices for the IT system. According to current legislation, users can bet on Sports Lottery only through physical lottery stations. It is expected that the Ministry of Finance will soon grant many other ways of lottery-betting, such phone betting and online betting. After the phone lottery-betting system is brought online, the large amount of voice data will lead to demanding storage needs. To meet the needs, Taipei Fubon Bank has to procure RAID subsystems providing more than 60TB of capacity to store phone recordings and captured image files.

"After the phone lottery-betting system is brought online, phone recordings will serve as the reference for prize dividing. The storage system we introduce into our IT infrastructure has

“After strictly testing the products of different brands, we found Infortrend's RAID array our ideal choice for data storage, whether in terms of security, reliability or scalability.”

- Ruei Dong Yang, Vice President of Taipei Fubon Bank



to be stable, reliable and can provide high performance, high scalability and large capacity,” says Yi Feng Chen, IT Manager of the lottery department of Taipei Fubon Bank. “Few products on the market can satisfy our needs. After conducting detailed survey, testing and verification, system integrator, SYSTEX, recommended Infortrend's EonStor S16F-R RAID subsystem. And it was our final choice.”

EonStor S16F-R is newly-released by Infortrend. This 3U, 16-bay RAID array features 4Gb FC host interface and supports SAS (Serial Attached SCSI) drives. The RAID controller engine with embedded 5th-generation ASIC400 enables S16F-R to deliver double the throughput than its predecessors. All hardware modules, including active/active controllers, dual-speed cooling fans, power supplies and BBUs, are all in fault-tolerant pairs and hot-swappable. The redundancy design effectively prevents the downtime caused by single point of failure. A single subsystem can be scaled through a connection with 3 JBODs. No matter how large the required capacity is, EonStor S16F-R can easily satisfy the need.

Powerful I/O Performance, Ensuring Smooth Transaction Even When 500 People Get Online At the Same Time

Taipei Fubon Bank installed two EonStor S16F-R RAID subsystems for the phone lottery-betting system. According to Chen, the two subsystems work well with the application server. It took IT managers only a very short time to fully deploy the subsystems and get them online. Moreover, they delivered impressive performance when engineers used test tools to simulate the I/O activities happening when 500 people get online at the same time per second. Without performing any delay or responding with any error messages, the subsystems fully satisfied Fubon Bank's demands for storage system performance.

Reliability of EonStor S16F-R also greatly impressed Fubon Bank's IT managers. Besides the commonly-used RAID1 and RAID5, EonStor S16F-R also supports RAID6, which can rebuild a logical drive even when two of its member drives fail. Since the situation that two member drives simultaneously fail is unlikely to happen, the protection of RAID6 enables the highest-level of data and system availability. To further reduce accident rate and ensure data integrity after accident, Infortrend develops proprietary DrvSmart and SysSmart technologies. These technologies are embedded in RAID controllers. They can predict potential drive failures and automatically do the repairing. When important components of the system malfunction, system will automatically shut down to prevent data loss. Chen said that the various advanced technologies provided by Infortrend have promoted the availability of phone lottery-betting system to 99.99%, making it comply with the regulation of BS7799.

About Taiwan Sports Lottery

In 2007, Taipei Fubon Bank won the operating concessions of Taiwan Sports Lottery granted by the Ministry of Finance. In early May this year, Taiwan Sports Lottery was officially issued. To provide more professional service than they once provided for Charity Lottery, the operation team invested a lot in introducing the advanced system developed by the world's largest lottery system provider, Gtech. Moreover, they worked with Hong Kong Jockey Club, the world's most successful Sports Lottery operation institution, to provide various betting targets (including NBA, MLB, Barclays Premier League, Spanish Premier League, and etc.) and betting ways for choice. At present, lottery fans can place bets through nearly a thousand of lottery stations around Taiwan. In the future, they will be able to place bets through virtual channels, such as phone and Internet. It is expected that Sports Lottery can improve Taiwan's social welfare and increase Taiwanese's interest in sports.

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