Organization
Berun Group, Inner Mongolia, China.

Challenge
In its existing infrastructure, the Berun Group faced the following storage challenges:

- Dispersed data storage, many storage islands
- Insufficient reliability and security of data storage
- Difficult to achieve business continuity
- Unable to meet requirements of high-performance apps such as databases
- Insufficient scalability of the storage systems
- Lack of data backup mechanisms

Solution
Infortrend's ESVA solution enhanced Berun's data storage with with:

- 8Gb/s Fibre Channel (FC) connectivity
- Storage virtualization
- Scale-out technology
- Prioritized volume accessibility
- Excellent data protection
- High hardware reliability

Infortrend ESVA Greatly Enhances Data Storage Operations of China's Berun Group

The Berun Group focuses on the development of natural resources such as gas and coal, and is the most well-known natural gas company in China's Inner Mongolia autonomous region. The company possesses China's largest methanol production base.

In 2009, Berun set up a comprehensive NC management platform, including many different aspects such as ERP, CRM, SCM, financial systems etc, greatly increasing the company's operational efficiency. In 2010, Berun opened new headquarters, which required a new high-end datacenter integrating many different technologies, serving as the centralized site for all of the company's IT systems and offering support for the company's business activities.

The Challenge: Establish Integrated Storage Platform that Meets Diverse Requirements

Berun's existing data systems included ERP, OA, email, website etc., forming a generally standard cross-platform, multi-system, multi-data type IT environment. Important business data was stored on a disk drive array, with some systems storing data on their own internal hard disk drives. With Berun's business becoming more diverse, the existing storage set-up had the following drawbacks:

- Data was stored dispersedly, with many isolated data islands
- Overall reliability and security were insufficient
- Achieving business continuity was difficult
- Systems did not meet the requirements of mission-critical applications such as databases
- Insufficient scalability
- Lack of data backup mechanisms

Reliability, performance and scalability demands were reaching new levels. In addition, the datacenter also had to make sure that IT resource allocation, sharing and utilization requirements for the coming five to ten years could be satisfied.

Based on Berun's existing and future IT operations, the following aspects were identified by Infortrend as critical for the company's datacenter storage improvement:

- Establish an integrated data storage platform:
  Resource integration is at the basis of efforts to increase storage utilization and is a key feature of modern datacenters.
- Achieve high utilization and reliability:
  The reliability and availability of data storage systems directly impact the service levels that can be provided by a datacenter.
- Meet all performance and scalability demand within a diverse business environment:
  Berun, as many other businesses, operates a wide array of applications involving many different types of data. Business growth brings with it constantly increasing demands for the allocation, service levels and operation of IT systems. Storage systems with high performance and flexibility levels are better able to meet current demand and have the flexibility to meet future business growth.

The Solution: Powerful FC SAN Based on Infortrend's ESVA Solution

Based on Berun's requirements, Infortrend opted for an FC SAN configuration built upon its industry-leading ESVA (Enterprise Scalable Virtualized Architecture) solution, offering high-quality data storage services.

ESVA is a high-end enterprise solution featuring scale-out technology, which enables users to scale their solution for extra capacity and performance without downtime. Based on a high-performance and redundant hardware platform, ESVA integrates storage virtualization, automatic load balancing, thin provisioning, and advanced disaster recovery technologies. The ESVA solution chosen for Berun offers 8Gb/s FC host connectivity for excellent SAN data transfer speeds.

Berun operates many applications, with many differences in terms of performance and latency. ESVA offers a unique and innovative QoS technology that creates separate virtual volumes for each application for which different priorities can be configured, ensuring that critical applications such as ERP always have access to the storage resources they need.

Considering the large number of applications, and the different demand of these applications in terms of data access and availability, Infortrend used both SAS drives and nearline drives for this project. SAS drives are deployed for mission-critical applications such as ERP, while nearline drives are deployed for applications that require large storage capacity. By using a mix of different drive types, Berun is able to reduce TCO.

In the future, Berun can also consider adding SSDs as another storage tier in the ESVA solution to satisfy applications with extreme performance requirements.

As one of the building blocks of the datacenter, the reliability of the storage systems is of extreme importance. Therefore, Infortrend delivered two identical ESVA systems for the Berun project to create data mirroring. With ESVA's volume copy/mirror features, data can be replicated between the two systems so that data is available even in the highly unlikely event of a system backplane failure. This design offers excellent data protection, ensuring all data can be recovered.

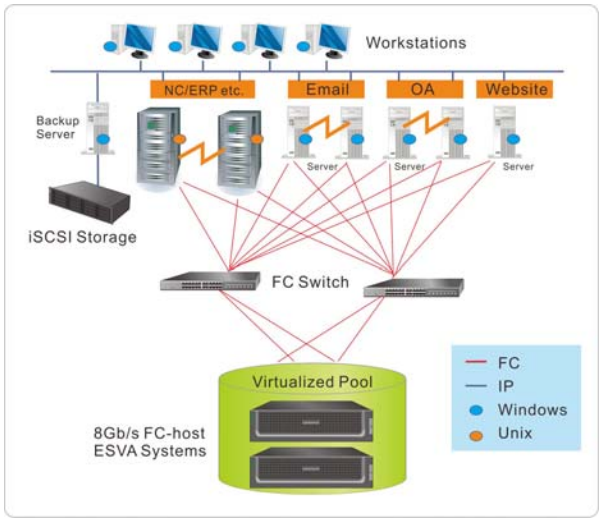
Besides these data protection features, Infortrend also designed a comprehensive and flexibly scalable data backup system for Berun.

The Benefits: High-Performance Data Storage Featuring Excellent Reliability

Opting for Infortrend's ESVA solution has provided many benefits to Berun:

- Secure and high-performance storage environment based on advanced concepts, mainstream technologies and mature products.
- Scale-out technology for excellent scalability and continuity.
- Easy capacity planning and management; high storage utilization ratio.
- No single-point-of-failure, delivering excellent system reliability and business continuity.
- Comprehensive design including data backup, fully ensuring data security.
- Existing equipment continues to be utilized to offer protection for previous investments.

With the help of ESVA, Berun has created a datacenter storage platform that ensures reliability and continuity of business systems. In addition, the new data storage solution has created a strong foundation that can serve future business growth of the company.



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