“After working with Hitachi Data Systems for a year and seeing the elite solutions that the HDS project team specifically designed for our environment, we are convinced that HDS storage products provide exceptional performance and 100% availability. We have also experienced firsthand the leading-edge capabilities and technological maturity of HDS disaster recovery and local data replication solutions.”

China Unicom Shandong Subsidiary Company

Shandong Unicom: Subsidiary of China United Network Communications Group Co., Ltd.

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Hitachi Data Systems Helps Shandong Unicom Build High-performance and Highly Scalable Cloud Storage Architecture

As a major player in the informatization of China’s Shandong province, Shandong Unicom now has 17 city-level subsidiaries and 149 province-level subsidiaries. Drawing on its extensive network coverage and significant capital, Shandong Unicom provides high-quality, content-rich information and communications services to many millions of customers. To support overall efficiency and enhanced billing services as well as meet the demands of future business growth, Shandong Unicom chose a storage solution based on the industry-leading capabilities of Hitachi Virtual Storage Platform.

About Shandong Unicom
Shandong Unicom is a subsidiary of China United Network Communications Group Co., Ltd. Driven by telecom reforms initiated by China’s Ministry of Industry and Information Technology, National Development and Reform Commission, and Ministry of Finance, Shandong Unicom was formed as a full-service telecommunications provider by merging the former Shandong Netcom and the former Shandong China Unicom.

Project Background
After the merger of China Netcom and China Unicom, Shandong Unicom planned to build a BSS4.0 (billing support system) comprising a new customer relationship management (CRM) system, a partner relationship management (PRM) system, an integrated real-time online billing system, an integrated acquisition system and a service provisioning system. The goal was to enhance the company’s overall efficiency and introduce new capabilities that could support new billing services and meet the demands of future business growth. Indeed, the new BSS4.0 system was intended to play a critical role in supporting the company’s development by enabling value-added services, enhancing business competitiveness, improving management and operational efficiency, and ensuring more effective collaboration with business partners.

However, in planning this vital, next-generation platform, Shandong Unicom faced a number of key issues:
■ Ensuring the performance, reliability and scalability of the overall infrastructure platform
■ Consolidating legacy storage equipment with the new system while also enabling central management and seamless allocation of storage resources
■ Guaranteeing data security
■ Integrating the data center’s future growth with appropriate cloud infrastructure

High-end Storage Platform Supports the Ideal Data Center
Shandong Unicom wanted to develop a comprehensive new platform that would not only meet the requirements of its new BSS4.0 system, but also fully utilize the storage resources of the old system and enable lifecycle management after data center consolidation. To meet these requirements, Hitachi Data Systems proposed its high-end Hitachi Virtual Storage Platform (VSP) with a SAN fabric switch and a comprehensive disaster recovery solution.

“We are very satisfied with Hitachi Data Systems’ technological strengths and prompt customer service. With its advanced storage products and solutions, not only are we now able to deploy new business systems without hassle, but we’ve also established a robust disaster recovery architecture. Of all the storage vendors we evaluated, only HDS could provide such a comprehensive storage solution.”

China Unicom Shandong Subsidiary Company
High Performance and Reliability for Billing Support System

The new BSS4.0 requires the highest levels of reliability and performance. After reviewing a number of storage vendors, Shandong Unicom recognized that Hitachi VSP is the world’s leading open platform and can flexibly connect with multivendor storage. With its unrivaled reliability, capacity, performance and availability, VSP is uniquely equipped to provide the stable and continual support that Shandong Unicom needs for its heavy workload. VSP also offers the industry’s highest scalability, complemented by rich functionality and comprehensive disaster recovery solutions. For instance, Hitachi remote data replication software provides timely and accurate data replication between the production and disaster recovery site. The asynchronous Hitachi Universal Replicator software uses journal volumes and a unique “pull” technology to overcome short-term outages in the data path, and the performance and latency limitations of traditional asynchronous replication methods. With this best-of-breed technology at its service, Shandong Unicom now enjoys significantly stronger data protection.

Solution Keeps Pace with Continuous Data Center Expansion

It was also vital for the infrastructure platform to take Shandong Unicom’s future growth into account. After an in-depth study of Hitachi storage technology, Shandong Unicom found that Hitachi VSP could deliver unparalleled scalability, total cloud-readiness and unprecedented flexibility in resources allocation. This has enabled the company to swiftly deploy new applications in response to market changes and new business goals. By consolidating existing IT resources with the new VSP, Shandong Unicom is also able to take full advantage of Hitachi Dynamic Tiering (HDT) to cost-efficiently enhance its storage resources with market-leading security, flexibility and scalability. HDT software is a revolutionary solution that eliminates the time-consuming manual processes of data classification and movement between storage tiers, thus optimizing tiered storage usage while improving performance.

Major Benefits for Shandong Unicom

Shandong Unicom’s new BSS4.0 system effectively eliminates the burden of system operation and maintenance. It also greatly enhances the company’s business agility and efficiency, empowering it to rapidly respond to evolving market conditions. This has enabled Shandong Unicom to significantly increase its ARPU (per user average income) ratio and sales revenue. The integration of marketing and servicing processes has also delivered higher customer satisfaction and achieved the company’s project goals with value-added economic and social benefits:

- Hitachi VSP centralizes all resources allocation and management, which has helped Shandong Unicom significantly reduce its operating costs.
- By effectively and automatically utilizing storage resources, Shandong Unicom can now flexibly expand and scale its storage capacity to meet future business growth.
- Hitachi VSP storage platform and disaster recovery system provide fast, secure and nonstop data management for mission-critical applications. With this seamless support, Shandong Unicom is able to deliver high-performance and high-quality billing services that increase customer satisfaction.

Why Choose Hitachi Data Systems?

Hitachi Data Systems is one of the world’s leading data storage and solutions vendors. Its wealth of expertise has helped Shandong Unicom establish a centralized, state-of-the-art storage infrastructure with open standards that enable a seamlessly integrated system.

- Hitachi storage solutions provide the optimal architecture for cloud computing. VSP dramatically improves storage utilization with dynamic data movement across different storage systems and tiering storage management, thus ensuring robust investment protection.
- The comprehensive Hitachi business continuity solution creates an emergency response system for fast and effective disaster recovery.

Hitachi also has a comprehensive storage technology roadmap, which gives Shandong Unicom the confidence it needs that Hitachi will keep pace with its business development long into the future. Building on the initial success of its VSP deployment, Shandong Unicom is poised to continue reaping the tremendous benefits of storage virtualization for many years to come in its operations, maintenance, new applications and disaster recovery.