Case study
State Grid Coporation of China

»Fujitsu PRIMERGY x86 servers help SGCC construct Smart Power Grids with inimitable reliabilities and compatibility«

The customer

Country: China
Industry: Public Utility
Founded: 2002
Employees: 1,500,000
Website: http://www.sgcc.com.cn/

The challenge

State Grid's construction of smart power grids has an extremely wide coverage and is intimately related to China's national goals: including overall resource allocation, economic operation, security and reliability, the national economy, and people's livelihood. It is therefore important that it provides guarantees for commerce, manufacturing and the population as a whole. To achieve this, the Transformer Station Automation System is a key component of the smart power grids, and requires a very high standard of reliability and compatibility of the IT hardware infrastructure platforms.

The solution

In accordance with State Grid's requirements for constructing the Transformer Station Automation System, Fujitsu provided hundreds of PRIMERGY TX series tower servers (including TX100 / TX150 / TX200). Their excellent performance, reliability and compatibility have laid a solid foundation in guaranteeing power supply and dispatching at SGCC.

The customer

State Grid Corporation of China (SGCC), established on Dec. 29, 2002, is a state-owned enterprise, which has become the backbone of national energy security and a lifeline of China's economy. The company's mission is the provision of safe, economical, clean, and sustainable electric power, for social and economic development. Core businesses include the construction and operation of power networks covering 26 provinces (autonomous regions and municipalities). Its service area represents 88% of the national territory, and is supported by more than 1.5 million employees, serving a population of over one billion. State Grid has grown to become the largest public electricity utility in the world, and is now ranked 7th in the Fortune Global 500 (2011).

The challenge

Demand for smart power supply

To meet user demand for high quality electricity supply, SGCC has commenced construction of smart power grids. These are based on integrated and high-speed bidirectional communication networks. They use a combination of advanced equipment, sensing and measuring technology, control methods and decision support systems, to create a "smart" power grid. The result is a more reliable, secure, inexpensive, efficient, environment-friendly and safe service. It also enables SGCC to better meet their users' requirements for power supply quality as well as access to various types of electric power, and power generation capability. As a result this is helping to stimulate the electricity market and allow its assets to operate in an optimized and efficient manner.

Upgrading IT purchasing under the context of rapid development

As SGCC's smart power grids enter the all-round construction stage, SGCC has accelerated its construction arrangements. This is to cater to the increasing demand for smart power and the informatization, automation and interaction features it supports. This has in turn required a comprehensive improvement in power grid's' resource allocation capacity, efficiency of economic operation, security, technology and intelligence; the result of which has led to increased demand for IT equipment purchases.

Reliability and compatibility become the primary targets

As construction of the Transformer Station Automation System expands, SGCC will purchase work stations and servers for thousands of transformer stations every year. With smooth operation of the

The benefit

- The excellent reliability of PRIMERGY tower servers has guaranteed steady and continuous operation of the Transformer Station Automation System;
- The power and compatibility of PRIMERGY tower server has laid a solid foundation for the smooth and efficient operation of the Transformer Station Automation System at all levels;
- With the performance excelling their counterparts, PRIMERGY tower servers have become SGCC's choice for use in large transformer stations as a guarantee of sustainable and smooth electric power supply.

Products and services

- PRIMERGY tower servers TX100/150/200
- ServerView Management Suite

power systems during this process of vital concern for the national economy and people's livelihoods, SGCC has set very high standards for IT server equipment stability and compatibility.

The solution and benefit

As the country's largest grid operator, SGCC has taken on the responsibility of ensuring nationwide electric power supply. To further improve its quality of electric power supply, SGCC is seeking to build a state-of-the-art system, based on advanced telecommunication and IT technology that achieves the best in smart power grids.

Based on this requirement, Fujitsu provided SGCC with a hardware infrastructure platform solution based on x86 servers at the core of its Transformer Station Automation System. The hundreds of systems were selected from Fujitsu's PRIMERGY TX series tower servers (TX100/TX150/TX200). Fujitsu PRIMERGY servers are a globally available technology, based on solid German and Japanese engineering. Their refined technology and cost protection features have fundamentally satisfied the needs for high performance and stability in the Transformer Station Automation System.

Additionally, in order to reduce the cost of purchase and maintenance to a minimum, PRIMERGY TX series tower servers not only take on the features of low cost and environment-friendliness, but also provide the most convenient product management, compatibility, and service. This makes them ideal for transformer stations at the basic level. In addition Fujitsu's advanced Cool-safe cellular ventilation technology and the enhanced ServerView management suite provide the reliability and remote monitoring that ensures hardware efficiency, as well as correspondence with the services and solutions needed in the complex environment of the Transformer Station Automation System. This has realized the dual goals of the smart power grids, in realizing energy savings and reducing costs. It has also comprehensively improved the performance and functionality of the entire environment.

Supported by PRIMERGY TX series tower servers, State Grid's Transformer Station Automation System has achieved excellent compatibility, and is capable of providing good support to third party panels. Other features, such as stable performance and low failure rates have also distinguished these servers from numerous other brands in the essential construction and deployment of smart power grids by SGCC.

Conclusion

The great number of Fujitsu PRIMERGY TX series tower servers deployed in SGCC's construction of its smart power grids, have again proved the powerful technical strengths of Fujitsu technology. SGCC's choice of FUJITSU PRIMERGY on such a scale in its smart power grids project, which underpins China's national economy and social development has further reflected the customer's approval and trust of Fujitsu's world-class quality.

About Fujitsu

Fujitsu is a leading provider of ICT-based business solutions for the global marketplace. With approximately 170,000 employees supporting customers in 100 countries, Fujitsu combines a worldwide corps of systems and services experts with highly reliable computing and communications products and advanced microelectronics to deliver added value to customers. Headquartered in Tokyo, Fujitsu Limited (TSE:6702) reported consolidated revenues of 4.5 trillion yen (US$55 billion) for the fiscal year ended March 31, 2011. For more information, please see: www.fujitsu.com.

In collaboration with

Contact
FUJITSU (China) Holdings Co., Ltd
Shanghai (China Regional Headquarter)
Address: 10F Taiping Finance Building, No.488 middle Yincheng Road. Pudong New Area, Shanghai
Phone: (86 21)5887-1000
Fax : (86 21)5887-5287
Post Code: 200120
Website: www.fujitsu.com/cn