

Case study

China Telecom

Fujitsu Server PRIMERGY and China Telecom set the platform for 4G network construction in China



The customer

China Telecommunications Corporation (China Telecom) established in 2000, is China's largest state-owned communication company and is consistently listed in Fortune's Global Top 500. As one of the top 3 telecommunication carriers in China, they manage the world's largest fixed-line telephone network and China's 3rd largest mobile telecommunication service. Through numerous subsidiaries, China Telecom provides telecommunication services across 31 provinces of China, and in the Americas, Europe, and Asia-Pacific.

On March 31, 2011, China Telecom's integrated mobile network service "Tianyi" (meaning e-surfing) recorded more than 100 million mobile subscribers, making them the world's largest CDMA network operators. China Telecom Group also owns two large holding companies; China Telecom Corporation Limited, and China Communication Services Corporation Limited, which went public on the Hong Kong and New York stock exchanges.

The customer

Country: China
Industry: Telecommunications
Founded: 2000
Employees: 312,520
Website:
<http://www.chinatelecom.com.cn/>



The challenge

As 4G mobile networks became more and more popular around the world, the Chinese government recognized their importance and made sure upgrading the networks from 3G to 4G was a top priority. The Chinese government also started to focus heavily on constructing new 4G networks around the country.

As a leading telecommunication carrier, China Telecom began working with the government to accelerate the testing of the 4G mobile networks. However in order to obtain the 4G licenses required to launch new 4G services, the testing project needed to be completed within a strict timeline. This was a critical factor as the tight schedule meant there was no contingency to handle any serious issues that may occur.

The testing project had to run without interruption for a two year period, if there was a system failure, the tests had to be restarted. This was made more difficult due to the size and complexity of China Telecom's ICT environment and the custom testing systems developed specifically for the project. The tests needed to be carried out over China Telecom's large ICT environment that consisted of thousands of x86 servers. Within this environment, the tests also had to communicate with various network management systems and business application software.

The challenge

China Telecom's testing environment was complex including a large server environment and a wide range of operating systems from Windows to SUSE Linux and various others. The testing project needed to be completed over a tight, uninterrupted, two year timeline to ensure it aligned with the 4G launch date. China Telecom needed a highly compatible platform solution that could provide stability to ensure the project proceeded smoothly.

The solution

Fujitsu proposed a total of 500 Fujitsu Server PRIMERGY RX100S7 and PRIMERGY RX100S7p due to the products high reliability and low power consumption. The durable and compatible PRIMERGY servers were able to deliver China Telecom a high performance solution that best fit their requirements for a stable platform that could support the 4G network tests. Additionally by reducing power consumption China Telecom could also drive costs down.

The benefit

- High stability and reliability over the 2-year testing period
- Increased performance for the different applications
- Compatibility for the multi-vendor ICT environment
- Reduce power consumption to decrease project costs

Further compounded the difficulty of the project was China Telecom's wide range of operating systems, including Windows, SUSE Linux and various others, as well as the unique systems designed specifically to perform the testing .

The solution

As a result of this complexity, China Telecom identified the need for a highly durable and compatible system that could provide strong performance and consistent quality. In the end, Fujitsu Server PRIMERGY was selected as the ideal platform for the 4G network tests. China Telecom recognized Fujitsu for their experience and continued pursuit of advanced technology, quality and reliability. In addition, the environmentally friendly green design of Fujitsu's products also proved very positive, as it closely aligned to China Telecom's environmental strategy. Fujitsu proposed a combination of 500 PRIMERGY RX100S7 and RX100S7p servers. The solution strongly met the requirements set by China Telecom and delivered a highly reliable platform that also lowered power consumption.

The benefit

In total 500 PRIMERGY RX100S7 servers were successfully deployed across China Telecom's ICT environment in order to support the testing project. Following their implementation, the new platform soon demonstrated superior performance over other vendors, and achieved some excellent results:

Stability and Reliability: Over the two years the uninterrupted tests were completed running 24 hours a day, 365 days a year, with a zero failure rate. This result not only ensured the phased tests were performed to schedule with a high rate of stability, but also provided China Telecom with confidence in working with Fujitsu.

Excellent compatibility: the 4G test project could continue smoothly with the solid and reliable performance of PRIMERGY platform, even under such a complex environment that the PRIMERGY platforms needed to interact with various vendors' hardware and software products.

Products and services

- 500 x Fujitsu Server PRIMERGY RX100S7 / RX100S7p



Fujitsu Server PRIMERGY RX100S7 / RX100S7p

Reduced Costs: Fujitsu Server PRIMERGY RX100S7p offers outstanding energy efficiency. Leveraging this strength, China Telecom significantly reduced energy consumption and thereby was able to decrease the costs of the test project by approximately 100,000 RMB.

Conclusion

4G has become a top priority for all companies within China's communications industry, as such the government and the whole industry is paying close attention to the project. The Chinese governing body is expected to release the required licenses as scheduled to vigorously promote the construction of 4G networks. The test project, utilizing the strengths of PRIMERGY, proved to be highly successful and paved the way for the construction of the 4G networks. PRIMERGY's leading technology and quality was recognized by China Telecom, and has resulted in a plan to invest more in not only the entry-level RX100 servers but in the high-end Fujitsu server PRIMERGY RX500 as well.

The compatibility and reliability of Fujitsu Server PRIMERGY ensured the trusted platform needed to support China Telecom's 4G network service was formed.

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