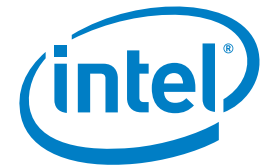


SUCCESS BRIEF

Intel® Xeon® Processor 5500 series

Enterprise Server

Virtualization: Dynamic Resource Management



Optimal Platform for Virtualization

IBT Securities chooses Intel® Xeon® processor 5500 series for its move into virtualization technology

IBTS' predecessor was one of the earliest securities houses in Taiwan and when acquired by the Industrial Bank of Taiwan, it became the first comprehensive security dealer dominated by an industrial bank.



CHALLENGES

- Maximize utilization of server resources for optimum performance
- Reduce IT operational costs through a more energy efficient server platform and reduce server sprawl

SOLUTION

- Utilize latest generation Intel® Xeon® processor 5500 series¹ with VMware* virtualization technology

IMPACT

- Reduced annual power consumption in server center by 3 percent

To maximize the potential of its IT infrastructure and enhance service efficiency, IBT Securities (IBTS) turned to the latest generation Intel® Xeon® processor 5500 series¹. Utilizing virtualization technology provided by VMware* on the Intel processor-based platform, the system proves an upgrade to the company's competitive power in the increasingly demanding financial environment.



"Over the past three years, our IT budget has remained constant while network storage space has grown eight times larger. Yet, IBTS' computer rooms have reduced their power consumption by 3 to 5 percent annually."

Jiang Yanshu
Deputy General Manager,
Securities Division
IBT Securities

Using technology to reduce business costs

Jiang Yanshu is the deputy general manager of the securities division at IBTS and also the chief officer of its IT department. Jiang understands the intricacies of business, and although IT plays a major role in running the operations of IBTS, he recognizes that it is impossible to draw primary revenue from it. Especially in the light of the current global financial crisis, Jiang knows that all costs must be reduced to survive in the increasingly tough financial environment. In line with this belief, Jiang says that all costs faced by the company should be assessed; specifically, staffing should be kept as lean as possible while products that are launched should be consistent with the specific marketplace demands. "For the IT department, all non-core business should be outsourced if possible," says Jiang, "and only the most essential business will be undertaken by ourselves."

Using exchange-traded funds (ETFs) as an example, Jiang says that IBTS engages up to 70 percent in ETFs in the current global economic market. This is the primary business of IBTS. As the financial operations of the ETFs are very complex, utilizing technology in the operations of ETFs financials is essential. Jiang says that "IBTS has built up its technology infrastructure for its ETFs services for a long time and it is not easy for competitors to set foot in this field."

However, IBTS believes there is still room for improvement in making use of technology to run the business as efficiently and cost-effectively as possible.

Virtualization maximizes resources for fixed budgets

IBTS' clients are mostly domestic enterprises and firms. IBTS provides these clients with services ranging from listing guidance to investment. In view of the sensitive and financial nature of these services, IBTS prioritizes safety and stability in its IT infrastructure running its services. Operations efficiency cannot be improved unless information is guaranteed under a safe and stable IT infrastructure.

Expanding capacity of its IT infrastructure to improve the efficiency in managing its expanding financial services operations is one way to move ahead. However, in IBTS' view, adding additional servers was not the optimal approach for the long term as more "real" hardware



IBTS chose Intel® Xeon® processor 5500 series and virtualization technology to run its business more efficiently and save on operational costs.

equipment leads to higher procurement costs and increased equipment management issues. The solution lay in virtualization technology.

Virtualization technology brings many benefits associated with reducing the number of physical servers and related IT hardware in the data center. Consumption of physical space, power supply and heat dissipation in the data center is reduced. This can lead to more efficient use of finite space in the data center, lowering operation and maintenance costs of physical equipment and increase efficiency of IT resource utilization. Virtualization breaks the traditional "one-application-to-one-server" model to greatly improve resource utilization efficiency. When a business has a fixed procurement budget, virtualization technology appeals to the "buy-one-get-one-free" mentality, as a single physical server can run several virtual machines concurrently. It provides a brand-new solution to IT infrastructure management and makes management easier. In Jiang's opinion, virtualization technology was the only solution that could meet the company's needs. "It not only improves operational flexibility and quickens response, it also reduces the human resource cost, which is reflected in control of overall costs," says Jiang.

Choosing an optimal platform for virtualization

IBTS chose to use VMware* for its virtualization software. Virtualization

is demanding in terms of processor requirements for optimal operation and IBTS found it necessary to upgrade its hardware in order to realize the desired operating effect of its virtualization system. Working with SYSCOM, a systems integrator, connected IBTS with VMware and Intel. This led to a close cooperative relationship among the three and resulted in IBTS choosing the Intel® Xeon® processor 5500 series as the platform of choice for their virtualization system.

VMware provided IBTS with data that showed that server virtualization can reduce hardware and operational costs by 50 percent and shorten the time to set up a new virtual server by as much as 70 percent. On average, most server and desktop processors utilize only about 8 to 15 percent of available processor time, and most x86 hardware consumes 60 to 90 percent of the processor's general loading power, even on standby. VMware virtualization makes it possible for clients to reduce energy consumption significantly without sacrificing reliability and service levels.

Through SYSCOM and Intel's help, system efficiency has been visibly upgraded at IBTS. "Over the past three years, our IT budget has remained constant while network storage space has grown eight times larger," says Jiang. "Yet, IBTS' computer rooms have reduced their power consumption by 3 to 5 percent annually." Jiang adds that the operational stability of the platform

Spotlight on IBT Securities Co. , Ltd.

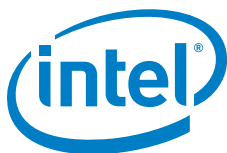
- Founded in 1961, the predecessor of IBT Securities (IBTS) was Shenghe Securities Co., Ltd., one of the earliest security dealers in Taiwan.
- In June 1989, IBT acquired nearly 80 percent of the shares through investment transfer and renamed it "IBT Securities", making IBTS the first comprehensive security dealer dominated by an industrial bank.

also provides assurance that their client information is under optimum protection.

Jiang says, "The ratio of virtual servers to physical servers is currently at 1:5. We cannot let server sprawl and platform dependence obstruct the path to our goal." For IBTS, turning to the Intel Xeon processor 5500 series as the base platform for virtualization allowed them to improve the service efficiency of hardware resources, save energy and reduce capital expenditure. It also improves resource availability, effectively manage resources, enhance data safety and improve disaster recovery programs. The company expects that its needs for virtual servers will grow in future. "If we consider just hardware procurement alone, virtualization can save a great amount of expenditure for us," says Jiang. "With business growth, we predict more efficiencies in cost control in the future."

Find a solution that is right for your organization. Contact your Intel representative or visit the Reference Room at www.intel.com/references.

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¹ 64-bit Intel® Xeon® processors with Intel® EM64T requires a computer system with a processor, chipset, BIOS, OS, device drivers and applications enabled for Intel EM64T. Processor will not operate (including 32-bit operation) without an Intel EM64T-enabled BIOS. Performance will vary depending on your hardware and software configurations. Intel EM64T-enabled OS, BIOS, device drivers and applications may not be available. Check with your vendor for more information. Performance will vary depending on the specific hardware and software you use. See most up to date benchmarks at <http://www.intel.com/products/benchmarks/server/index.htm> for detailed information.

Virtualization: Dynamic Resource Management: Optimize server utilization and increase agility through virtualization and dynamic policy-based resource management

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