Case Study

Intel® Xeon® Processor

Service Providers

Service Delivery Infrastructure

Transforming Job Search in Taiwan

104 Job Bank changes the landscape of Taiwan's job market with Intel® Xeon® processor technology[1]

Back in 1996, when classified job advertisements were monopolized by two major newspapers and sending curriculum vitae by post was still fashionable, Rocky Yang left a well-established computer business to forge a new era in his career by founding 104 Job Bank..

Ten years later, 104 Job Bank has thoroughly changed not only the job search ecology in Taiwan, but also the process of matching talents to employers by using IT to make the critical connections.

Through it all, 104 Job Bank's business has greatly benefited from Intel® technology enabling the phenomenal growth and delivering the IT support that has made online job matching possible in Taiwan.

104 人力銀行 .com.tw
www.104.com.tw

"As 104 Job Bank's business grew over the past 10 years, Intel has consistently matched our growth with products such as Quad-Core Intel® Xeon® processor technology for complete functionality in server infrastructure."

Rocky Yang
CEO
104 Job Bank

Challenge

- **Deliver holistic human resource service offerings**
  104 Job Bank has changed the face of job search ecology in Taiwan with the introduction of an online job search network. To maintain the standard of its services, 104 Job Bank needed to continually sense, predict and act on market demands to come up with new services.
- **Use technology to match talents to job openings**
  To use computers to match job openings to talents, 104 Job Bank needed the latest computing technology to perform data storage, analysis and administration, facilitating its ever-expanding, data-intensive operations.
- **Maintain 24/7 Web site availability**
  Job seekers look for openings any time of day. For 104 Job Bank, the biggest challenge is ensuring that its Web site is up and running 24 hours a day. This is especially critical during graduation seasons and the start of a new calendar year when throngs of job seekers go online, creating dramatic spikes in the data and traffic volumes.

Solution

- **Work closely with Intel to support services**
  To realize its Predictive Enterprise vision, 104 Job Bank works closely with Intel, taking advantage of the latest computing technologies to boost its IT infrastructure.
- **Acquire the right tools**
  Quad-Core Intel® Xeon® processor[1]-based servers were part of 104 Job Bank's new half-yearly hardware acquisitions to be deployed in data-intensive applications such as database management.
- **Move to the next level of computing performance**
  104 Job Bank servers running on Quad-Core Intel Xeon processor technology boost computing performance across the board, priming the online job search network's existing IT infrastructure for greater round-the-clock data workloads.

Quad-core Intel® architecture powers 104 Job Bank's daily operations.

Spotlight: 104 Job Bank

- 104 Job Bank founded in February 1996 by former marketing director Rocky Yang, who gave up his stake in a successful computer business to deliver professional human resource services to Taiwanese job seekers.
- 104 Job Bank has since grown to become the largest online job search network in Taiwan, providing basic job placement services to niche services such as full-time staffing, part-time staffing, head hunting, manpower dispatch and technical talent placement.
- In July 2000, 104 Job Bank delivered employment services for over 10 thousand enterprises, with daily page-views averaging over 1.95 million.
- Presently, 104 Job Bank receives over 3,500 new resumes per day and maintains a database listing of more than 1.5 million job seekers. 104 Job Bank also hosts more than 110,000 resumes and 70,000 job opportunities for online searches.
- With 104 Job Bank's huge database of employers and employees, it is able to provide information to the media on up-to-date employment market conditions. In addition to presenting monthly employment market reports, 104 Job Bank also provides job seekers with abundant and detailed information on Taiwan's job market segment.
- Besides job listings for both employers and employees, 104 Job Bank also operates 104Learn.com.tw, which hosts information on further studies; 104Heart.com.tw, which assists employees in job orientation; the Job Safety Web, which provides information on employees' job rights and benefits; 104Sense.com.tw, which provides an access for self-study; and 104Cafe.com.tw, where employees can exchange ideas.
- 104 Job Bank aims to provide Taiwan with a holistic employment service. To that end, the online job search network is looking forward to maintaining its high standard of human resource services to both employers and employees alike with the new 104 Technical Talent Bank, creating more value for the most important segment in Taiwan's workforce—technical professionals.

Assessing the Situation

People are a company's most important resource. And by adhering to this motto, 104 Job Bank has grown continuously, expanding from basic job placement services to niche services such as full-time staffing, part-time staffing, head hunting, manpower dispatch and technical talent placement.

Today, as a full service job search and recruitment network, 104 Job Bank boasts tens of thousands of business partnerships and over 3.6 million job-seeking members. And with over ten thousand users flocking to the 104 Job Bank Web site and up to 10 million Web pages being served each day, 104 Job Bank is well-established as the central hub of activity for job placements and recruiting in Taiwan.

However, with enhanced business growth comes an increased need for computer processing efficiencies. And an IT-based business such as 104 Job Bank knows this well.

At one end of 104 Job Bank's operations are corporations that constantly post and update tens of thousands of job opportunities. On the other end are millions of job seekers who are submitting their personal information 24/7 a day.

Data coming in from both ends regularly needs to be analyzed, mediated and matched. At the same time, users continue to refine their searches online.

In addition, ensuring that Web site responses to page and search requests, as well as the overall interactivity of the site, remain prompt under such heavy usage is a test of 104 Job Bank's capabilities as the No. 1 placement and recruitment service provider.

"The computational power of a server has great influence on the operations of any enterprise. Server downtime is business down time, especially since 104 Job Bank's main business operations is offering a wide range of online services for job seekers and recruiters," says Yang.

As such, 104 Job Bank needs to be supported by an industry-leading technology provider that can deliver a reliable high performance enterprise server solution for the online search network to sense, predict and act on marketplace demands.

"Over 80 percent of our IT infrastructure now runs on Intel® Xeon® processor technology."

Rocky Yang
CEO
104 Job Bank

"104 Job Bank is the enabling force for many job seekers and recruiters while Intel® Xeon® processor technology is the enabling force for 104 Job Bank's IT infrastructure."

Rocky Yang
CEO
104 Job Bank

Delivering the Solution

"For the last 10 years, we have been relying on servers powered by Intel® Xeon® processor technology to act on as many labor-intensive and repetitive tasks as possible. We have also implemented comprehensive monitoring tools and intelligent reports to increase our productivity, and effectively manage our IT environment," says Yang.

To keep up with the development of its online services business, 104 Job bank also sets aside a budget for server acquisitions every year. While the purchasing cycle for the company is half-yearly, Yang further reveals that whenever Intel releases a new generation of processors for servers, it immediately becomes a focal point for 104 Job Bank's next server purchase.

This deep level of trust in Intel® processor technology stems from long periods of practical usage and actual experience.

"Servers based on Intel® Xeon® processor technology give us high performance and scalability without increasing the workload of our maintenance staff. This is the main reason why Intel continues to be our platform of choice", says Yang.

Indeed, 104 Job Bank estimates that each server running on the current Quad-Core Intel® Xeon® processor technology is not only equivalent to the performance of two to three servers based on conventional PC platforms, but are also able to transmit data more than 1.5 times faster than servers running on conventional dual-core processors.

Intel builds all its products on six technology pillars:

1. Trust management
2. Energy-efficient performance
3. Dynamic resource management
4. Data-intensive computing
5. Unified communications
6. Mobility and rich user experience

These technology pillars reduce the gap between knowledge and execution while data coming in from both ends regularly needs to be analyzed, mediated and matched. At the same time, users continue to refine their searches online. This enables 104 Job Bank to enjoy a better return on its IT investment and build a competitive edge to expand growth by deploying fewer servers for a greater number of tasks while enjoying enhanced performance across the board.

104 Job Bank's key focus area in the current phase of its IT development is energy conservation. As a result, low energy consumption is an important consideration in the job search network's server purchases.

And the current generation of Quad-Core Intel® Xeon® processor technology fits 104 Job Bank's criteria perfectly, enabling 104 Job Bank to respond to global energy conservation trends while an energy-saving design allows full-speed operations with reduced heat emissions, saving costs from the lower energy consumption.

Key Technologies

- Intel® Core™ microarchitecture forms the fundamental base for the deployment of quad-core computing technology.
- Quad-Core Intel® Xeon® processor technology-based servers deliver greater performance than conventional platforms and stay energy efficient.
- Servers with 64-bit Quad-Core Intel® Xeon® processor technology, including large 8 MB on-die cache, fully optimize 104 Job Bank's data-intensive operations, boosting search engine performance and website availability.

Integral Answers

- 104 Job Bank uses Intel technology to deploy quad-core computing efficiencies in its daily operations.
- 104 Job Bank servers running on Quad-Core Intel® Xeon® processor technology play a key role supporting the company's database applications.
- Servers based on Quad-Core Intel® Xeon® processor technology fully support 104 Job Bank's heavy network traffic while delivering uncompromising reliability and stability.

"Once the servers based on Quad-Core Intel® Xeon® processor technology was deployed, the savings were obvious—from rack space in the server room to time taken for database consolidation. This has, in turn, improved the productivity of our IT staff. We are looking forward to even more energy-saving, multi-core server processors from Intel in the future," says Yang.

With the successful deployment of Quad-Core Intel® Xeon® processor technology, 104 Job Bank can now better sense, predict and respond to marketplace needs as and when the situation dictates. 104 Job Bank now has a total of 400 servers in its data center.

These new capabilities prompted 104 Job Bank to roll out the next phase of its service expansion, the introduction of the 104 Technical Talent Bank.

As its business expanded, 104 Job Bank sensed the need for technical talents through the data it acquired. Predicting rising demand for technical professionals in Taiwan, the job search network is wasting no time in acting on marketplace demands.

With this new service bolstered by an IT infrastructure enhanced by Quad-Core Intel® Xeon® processor technology, 104 Job Bank now aims to create more value for the most important segment in Taiwan's workforce—technical professionals.

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Return on Investment

- According to data released by market research firms in 2007, over 80 percent of Taiwanese job seekers now use the Internet for their searches. Yahoo!* also announced that the top keyword search in 2006 was "104," while 82 percent of enterprises in Taiwan use 104 Job Bank most frequently as the channel for recruiting talent and 84 percent of online job seekers use 104 Job Bank most frequently for their job searches.
- Servers based on Quad-Core Intel® Xeon® processor technology are not only able to transmit data more than 1.5 times faster than servers running on dual-core processors, but also offer a more than 2.5 times performance improvement compared with processors from leading competitors, delivering a significant performance edge to 104 Job Bank's operations.
- With the higher performance of Quad-Core Intel® Xeon® processor technology, 104 Job Bank could deploy 20 percent more servers without increasing the overall power consumption required (i.e., 30 vs. 25 servers), delivering a better return on investment.
- Additionally, the energy-saving design of Quad-Core Intel® Xeon® processor technology allows 104 Job Bank's servers to operate at full speed while reducing heat emissions.
- Deploying servers based on Quad-Core Intel® Xeon® processor technology further saves rack space in 104 Job Bank's server room while reducing time taken for database consolidation, significantly improving the productivity of its IT staff.
- With the new deployment, 104 Job Bank will be able to support more customers, from 2 million to 3.6 million customers.

**Source: 104 Job Bank

[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.

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