



Case Study

Intel® Xeon®
Online Gaming



Intel® Technology Launches AsiaSoft into the Gaming Future

Southeast Asia's premier online gaming company satisfies growing customer needs with Intel® Xeon® quad-core processors

AsiaSoft Corporation Public Company Limited is the biggest** online gaming service provider in South-East Asia, serving over 15 million gamers in Thailand, Vietnam, Singapore and Malaysia. The dynamic company has garnered over 60 percent of the online gaming market in Thailand.

With a growing pool of new customers from across the region and more resource-intensive games, the company recently deployed 87 new Dell* servers based on the Quad-Core Intel® Xeon® processor L5320 at its Thai operations. The result for the company is more power—without a corresponding increase in cost.

“The remarkable benchmarking performance and compatibility with existing Dual-Core Intel® Xeon® processors—without any requirement to modify application software—ultimately swayed us towards Quad-Core Intel® Xeon® processors.”

Sunt Rojpornwatana
IT Director
AsiaSoft Corporation
Public Company Limited

Challenge

- Deploy servers that provide the headroom necessary for more online users and resource intensive online games.
- Upgrade existing dual-core servers to help AsiaSoft's backend operations deal with expanding needs of clientele.
- Meet the need for more powerful servers without increasing associated costs in power consumption, maintenance and IT administration.

Solution

- Deploy 87 Dell* Precision servers based on the Quad-Core Intel® Xeon® processor L5320 for new gaming services.
- Upgrade existing Dual-Core Intel® Xeon® based Web servers to Quad-Core Intel® Xeon® processor L5320.

Assessing the Situation

According to Sunt Rojpornwatana, IT director of AsiaSoft Corporation PLC., IT plays a critical role in the company's business success, providing core technology and business support for gamers as well as business partners.

He noted that with new games becoming more resource hungry, and the number of online gamers increasing daily, AsiaSoft required new servers that would provide excellent all-round performance—with less power consumption.

At the same time, Rojpornwatana was looking at upgrading the company's Dual-Core Intel® Xeon® processor-based servers. Such an upgrade would allow the company's back-end operations to cope with the demands of a growing clientele.

Rojpornwatana looked no further than the Quad-Core Intel® Xeon® processor to power AsiaSoft's move into Asia's gaming future.



Intel provides AsiaSoft Corporation PLC. with enough power to satisfy an expanding pool of customers—without increasing costs.

Delivering the Solution

To tackle AsiaSoft's need for more powerful servers with less power consumption, Rojpornwatana decided to deploy 87 Dell* Precision servers built on the Quad-Core Intel® Xeon® processor L5320. This was AsiaSoft's—and Thailand's—first large-scale quad-core deployment.

As Thailand's first major adopter of quad-core technology, Rojpornwatana felt that other online gaming companies in Thailand could learn from AsiaSoft's adoption of the new technology.

However, performance and energy efficiency remained critical criteria for deciding to adopt

the Quad-Core Intel® Xeon® processor. The fundamental opportunity Intel presented to AsiaSoft, was using a low-voltage, quad-core processor that was "powerful and more energy efficient for intense online game applications," said Rojpornwatana.

In addition to the Dell* Precision servers deployed for the new online game, CABAL*, several Dual-Core Intel® Xeon® processor-based Web servers were upgraded to the Quad-Core Intel® Xeon® processor L5320. Performance benchmarking of the upgraded Web servers was conducted with SPECweb2005*.

Rojpornwatana noted that though the new and upgraded Quad-Core Intel® Xeon® processor-based servers were just deployed at AsiaSoft's Thai operations, preliminary results were impressive.

He said that the solution was deployed rapidly, with accelerated time to install for the network operating system and its layered products. "Deployment was fast and seamlessly smooth. We could optimize the large L2 cache and its processor without any change in application architecture," he said.

Rojpornwatana also noted enhanced support for new features as well as new levels of online gaming. "Our customers are experiencing increased concurrent session capability and reduced latency time of access," he said.

Upgraded Web servers experienced improved performance with the Quad-Core Intel® Xeon® processor L5320. "Our IT Operations team migrated the existing e-billing system to the upgraded servers with no problems—only outstanding improvements in resource management," said Rojpornwatana.

Spotlight: AsiaSoft Corporation Public Company Limited

Founded in 2001 with its headquarters in Bangkok, Thailand, AsiaSoft Corporation PLC. provides games, support and online content for the Thai market. This includes publishing massive multiplayer online playing games (MMOPG), multiplayer online games and developing new products.

- Asiasoft Online Pte Ltd was established in 2006 to publish MMOPG in Singapore and Malaysia. The subsidiary helps game developers in the two countries create an integrated service platform that includes localization, marketing and game service management.
- Asiasoft Co., Ltd. (Vietnam) was established in 2006 and holds the license to publish Asiasoft Corporation PLC. games in Vietnam.
- Asiasoft Online Sdn Bhd., founded in 2007, supports Asiasoft Online Pte Ltd in providing online gaming services and the distribution of cash cards in Malaysia.



"Our Web servers have been boosted the capacity for concurrent users, memory caching and also minimized processor utilization time," he said.

Though AsiaSoft considered alternative quad-core processors, cost-performance was the deciding factor that swayed AsiaSoft towards the Quad-Core Intel® Xeon® processor. "Cost saving was an important reason why we choose a low-voltage processor like the Intel® Xeon®. It promised to lower overheads in terms of power consumption as well as administrative and maintenance costs," he said.

"The remarkable benchmarking performance and compatibility with existing dual-core Xeon® processors—without any requirement to modify application software—ultimately swayed us towards the Quad-Core Intel® Xeon® processor," Rojpornwatana said.

Rojpornwatana also noted that the ease of deployment of the Quad-Core Intel® Xeon® processor meant that AsiaSoft employees had more time for critical tasks.

"Installation has been speeded up from hours to minutes," he said.

"This has greatly increased our productivity and reduced overhead costs of operations such as overtime payment," he said.

Over the long-term, with AsiaSoft spending less than USD 320,000 on the Quad-Core Intel® Xeon® deployment, Sunt Rojpornwatana expects a better price-performance cost of ownership compared to dual-core servers.

Furthermore, with the Quad-Core Intel® Xeon® deployment having the potential to use 'predictive' technology—allowing the system to 'sense' failures before they occur—AsiaSoft is indeed ready for the future.

Key Technologies

- Eighty-seven new Dell* Precision servers featuring the Quad-Core Intel® Xeon® processor L5320 allowed AsiaSoft to deploy more resource-intensive games, at the same time increasing concurrent session capabilities and reducing access latency time for clients.
- Existing Dual-Core Intel Xeon processor-based Web servers were upgraded to the Quad-Core Intel Xeon processor L5320, boosting capacity for concurrent users, memory caching and also minimizing processor utilization time.

Integral Answers

- Deployment was fast and seamlessly smooth, optimizing the full capabilities of the Quad-Core Intel Xeon processor L5320 without any need to update application architecture.
- The AsiaSoft IT operations team migrated the existing e-billing system to the upgraded Web servers without problems—only creating outstanding improvements in resource management.

With AsiaSoft seeking to consolidate itself as the premier online gaming service provider in the region, more Quad-Core Intel® Xeon® deployments are being planned for the dynamic company's new services.

In particular, the 45nm Intel® Xeon® processor, with low power consumption and large L2/L3 cache is being studied by the company, according to Rojpornwatana.

A new architecture based on this Intel® processor would provide more power with less cost.

"This would decrease the number of servers and time taken to deploy and administer the solution—extremely important in our fast-moving and competitive industry with ever increasing users and products," said Rojpornwatana.

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Return on Investment

- Low-voltage requirements of the Quad-Core Intel® Xeon® processor enables AsiaSoft to achieve lower overheads in terms of power consumption as well as administrative and maintenance costs.
- Compatibility with the existing Dual-Core Intel® Xeon® processor allows the Quad-Core Intel® Xeon® processor to be deployed in upgraded Web servers without any need to modify application software.
- Ease of deployment of the Quad-Core Intel® Xeon® processor meant that AsiaSoft employees had more time for critical tasks—increasing productivity, and reducing overhead costs of operations such as overtime payment.
- Though results are preliminary, the capital outlay of less than USD 320,000 on the Quad-Core Intel® Xeon® processor-based server deployment, promises better price-performance cost of ownership compared to dual-core servers.



Solution provided by:



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