

CASE STUDY

Intel® Xeon® Processor 5500 Series

Intel® Xeon® Processor 7400 Series

Enterprise Server

Performance: Data Intensive Computing



Driving China's Tax Innovations

Tianjin Provincial Office of SAT upholds high government tax service standards with multi-core Intel® Xeon® processor technology



“Besides being robust and powerful, the energy-efficient Intel® Xeon® processor 7400 series and Intel® Xeon® processor 5500 series fully address Tianjin SAT's technology issues with legacy single and dual processor servers, boosting not only our productivity but also meeting our cost-saving requirements perfectly.”

Li Yuan

Information Technology Center
Tianjin Provincial Office of SAT

CHALLENGES

- **Massive task** of managing tax revenue collection from four key municipalities of China's 6th largest city
- **Legacy IT infrastructure** was impeding the data processing, managing and maintenance of Tianjin's state tax administration
- Reduce costs of operation and improve environmental friendliness of server infrastructure while upholding national tax standards

SOLUTIONS

- **Refresh legacy servers** based on older single- and dual-core processors with multi-core Intel® Xeon® processors¹
- **Deploy 44 IBM® System x3650 M2 servers** based on Intel® Xeon® processor 5500 series to power Tianjin SAT's China Taxation Administration Information System (CTAIS)
- **Deploy 35 IBM System x3850 M2 servers** based on Intel® Xeon® processor 7400 series as well

IMPACT

- **Significantly improved performance** of the new server platform increased operational efficiency and productivity
- **Cost savings** in smaller server footprint and energy usage due to the higher performance-per-watt capabilities of the new Intel Xeon processor platform
- **Robust IT infrastructure** extends benefits to taxpayers through faster and improved customer services

Introduction

As one of the leading tax bureaus in the People's Republic of China, Tianjin Provincial Office of SAT (State Administration of Taxation) is tasked with a massive undertaking—the maintenance of tax records and the collection of tax revenue from the sixth largest city in China by urban population.

To meet its objectives of serving both the Chinese government and its citizens with impeccable service standards, Tianjin SAT turned to multi-core Intel Xeon processor technology for the performance it needs to drive productivity, efficiency and service quality to whole new standards altogether.

Replacing legacy IT with Intel® Xeon® processor platform to reap cost-savings and performance benefits

As Tianjin Municipality's tax bureau, Tianjin SAT relies heavily on its Predictive Enterprise vision and technology to maintain extensive tax records, often investing heavily in IT infrastructure to maintain the efficiency, productivity and quality of its services. To this end, Tianjin SAT has been using China's own proprietary tax management software, CTAIS v2.0, on Windows® 2003 Server, together with 64-bit RedHat® Linux, Oracle® 9i and Weblogic® service-oriented architectures to deliver its tax administration services. However, over the past few years, Tianjin SAT sensed that its fast-growing needs were rapidly outstripping its legacy IT infrastructure



Tianjin Provincial Office of SAT uses new Intel® Xeon® processor platform to improve service levels and manage tax revenue collection with greater efficiency

According to Li Yuan, a staff member at Tianjin SAT's Information Technology Center, the sheer complexity and volume of data that Tianjin SAT manages, combined with the demanding performance requirements of an improved CTAIS v2.0, means that the tax bureau's legacy IT infrastructure has been struggling to keep pace with rapid progress.

"Previously, our deployment array for single to dual processor-based server systems resulted in widely imbalanced processor utilization ratios. At times, individual server utilization may be low, leaving the large majority of server resources unused while other servers are overtaxed," says Li.

"To address this issue, Tianjin SAT had to continually add to its server array, putting additional demands on limited server room space, increased energy consumption and air-conditioning needs, among others," Li adds.

Turning to Intel for a more cost-effective solution, it was not long before Tianjin SAT decided on an Intel Xeon processor 7400 series and Intel Xeon processor 5500 series deployment. This has replaced over 100 of its legacy servers with significant cost-savings and performance gains across the board. Additionally, the successful deployment of Intel Xeon processor-based platform means that Tianjin SAT enjoys these Predictive Enterprise benefits:

- Data Intensive Computing. Tianjin SAT can satisfy its current and future performance

requirements for CTAIS with an overall systemic performance boost.

- Efficiency, Environment and Performance. Tianjin SAT further benefits from the unparalleled performance-per-watt advantage of multi-core Intel Xeon processor-based server systems while enjoying the advantages of a green IT infrastructure. Post deployment, Li is pleased to report Tianjin SAT's findings of improved CTAIS response time and overall platform stability, resulting in increased productivity for the tax bureau's staff.

The high performance-per-watt capabilities of Intel® multi-core processor technology allows the tax bureau to do more with less, delivering both space and energy savings to Tianjin SAT and reducing overall operational costs. "What's more, virtualization possibilities opened up by the advanced capabilities of Intel® multi-core processor technology serves to not only future-proof Tianjin SAT's IT investment but also potentially deliver extra cost savings such that we may easily upscale our infrastructure for greater productivity with a smaller server footprint. This is truly an all-round win-win situation," says Li.

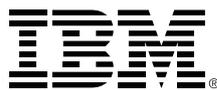
With such a strong back-end support infrastructure in place, Tianjin SAT is now perfectly poised to serve the needs of the Chinese government and its Tianjin population with the highest service standards available.

Spotlight on Tianjin SAT

- The Tianjin Provincial Office of SAT is Tianjin Municipality's key tax bureau.
- Tasked with the administration, collection and management of fast growing tax revenue from the sixth largest city in the People's Republic of China, Tianjin SAT has turned to IT to manage its duties in recent years.
- Tianjin SAT uses China's own proprietary tax management software, China Taxation Administration Information System (CTAIS), which covers numerous functions such as basic unit tax management, tax revenue service operations, archives examination and taxpayer records management, information acquisition as well as tax revenue monitoring and control, among numerous others.
- Besides CTAIS, which is now in version 2.0, Tianjin SAT is actively boosting the capabilities of its hardware infrastructure in anticipation of a significant revenue influx as the municipality moves towards greater affluence against the backdrop of China's stellar economic development. By deploying the latest multi-core server technologies, Tianjin SAT has further guaranteed the continued reliability and stability of CTAIS, while opening up an entire horizon for advanced system performance and future-proofed IT investment amidst an environment of reduced operating costs.

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

SOLUTION PROVIDED BY:



¹64-bit Intel® Xeon® processors with Intel® 64 architecture requires a computer system with a processor, chipset, BIOS, OS, device drivers and applications enabled for Intel 64 architecture. Processor will not operate (including 32-bit operation) without an Intel 64 architecture-enabled BIOS. Performance will vary depending on your hardware and software configurations. Intel 64 architecture-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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