CASE STUDY

Intel® Xeon® processor 7500 series

Enterprise server
Performance: Data-Intensive Computing

A meta vision of the future

iMDsoft deploys Intel® Xeon® processor 7500 series to send its business to new heights

iMDsoft is a global leader in hospital clinical information systems. Its MetaVision* Suite uses a single platform to automate workflows in a range of acute-care environments such as intensive care, pre-op, operating theatres and general in-patient beds. To grow its business in a fiercely competitive marketplace the company benchmarked Intel® Xeon® processor 7500 series and discovered that it enabled 16,000 concurrent users on the MetaVision suite compared to approximately 4,000 on its previous version. iMDsoft is now offering large hospitals its MetaVision Suite running on an Intel Xeon processor 7500 series platform.

"The Intel® Xeon® processor 7500 series has provided us with leading performance and scalability which is enabling us to build our business out into large-scale hospital organisations. In turn, doctors are also able to gain an entire patient history, even if that patient was admitted to another hospital in the group. This helps doctors make quick and informed decisions when a patient enters hospital."

Eran David
Chief Technical Officer, iMDsoft

CHALLENGES

- **Business growth:** The company wanted to drive its business into the large hospital arena
- **A bigger punch:** It needed more processing muscle to achieve this
- **Up-to-date:** Also wanted to offer customers the choice of virtualisation so they could streamline their data centre operations

SOLUTIONS

- **Which is better?** Benchmarked the Intel® Xeon® processor 7500 series against Intel Xeon processor 7400 series
- **More for less:** Wanted to establish performance, scalability and memory benchmarks

IMPACT

- **16,000 and climbing:** Intel Xeon processor 7500 series easily scaled to 16,000 users, far exceeding iMDsoft's requirements
- **Never forgotten:** Delivered eight times the memory bandwidth of previous Intel Xeon processor generations.
- **Virtual reality:** Provided compelling virtualisation capability, enabling the company to bundle this option into its customer offering

iMDsoft is a leading player in clinical information systems for hospitals. Despite fierce rivalry, the company has won its spurs in this market segment thanks to its MetaVision* Suite, which streamlines the collection and consolidation of data throughout a hospital.

The MetaVision Suite has proven to be popular because it reduces the burden of documentation on hospital staff while reducing costs in what are traditionally expensive and labour-intensive acute units. Other important elements in MetaVision's success are the decision support it offers, workflow simplification and quality monitoring tools. It also interoperates with the broad range of medical devices and information systems that hospitals use.

iMDsoft's business model is based on delivering software for managing clinical information to medical organisations. For the last several years it had been providing servers powered by Intel Xeon processors 5300 and 5400 series running Microsoft SQL Server*. More recently, it has adopted the Intel Xeon processor 5500 series for its medium-sized customers. iMDsoft's offering includes two clustered servers, one for running the MetaVision software and the other for failover.

iMDsoft's systems are implemented in hundreds of hospitals worldwide and its services include a tested implementation methodology, application, and technical and integration services as well as around-the-clock support.

Doctors have all the information they need and patients receive the care they need

Launching an assault

The company wanted to expand its presence into large-sized customers in which health organisations can have many thousands of patient beds spread across a region or an entire state. Its existing system, based on the Intel Xeon processor 5500 series, had a limit of several 4,000 users, sufficient only for medium-sized hospitals.

iMDsoft's strategy was based not only on expansion drives, but also aimed to bolster iMDsoft's position in a competitive market segment. To achieve its goals, iMDsoft needed a more powerful server bundle that could easily provide MetaVision services for at least 7,000 concurrent users. Virtualisation was a key component of this strategy. Many hospitals are opting to use virtual servers to save space and energy in their data centers.

The company already had a good relationship with Intel and decided to benchmark the Intel Xeon processor 7500 series against the Intel Xeon processor 7400 series. Eran David, chief technical officer of iMDsoft, said: "We wanted to test the application on this new processor and were particularly interested in CPU performance and memory consumption."

When testing the Intel Xeon processor 7500 series, iMDsoft stopped measuring performance and scalability when it reached 16,000 concurrent users running on a single server. To achieve the same results using the Intel Xeon processor 7400 series required four servers. David added: "What was the point of going further? We could have taken it beyond 16,000 users, but this was more than enough to meet our needs."

Intel® Scalable Memory Interconnect uses affordable DDR3 memory components to provide eight times the memory bandwidth of previous Intel Xeon processor generations. The Intel Xeon processor 7500 series is designed for maximum performance and mission-critical reliability. It can handle the most data-demanding applications and virtualisation projects.

Virtualisation empowers medical staff

Sagit Agoor, vice president of sales support for iMDsoft, said: "It was a straightforward choice to go with Intel Xeon processor 7500 series. Not only does it provide powerful performance and scalability, but the virtualisation capability is also a significant feature.

"In fact, virtualisation provides a major step forward for our MetaVision Suite and we are now publishing hardware recommendations for hospitals that want to use virtual environments. This will allow our customers to improve the efficiency of their data centres, as well as lower the total cost of ownership."

Eran David added: "A virtual environment using the new Intel CPU architecture, which is optimised to support virtualisation through Intel Virtual Technology, introduced only a small overhead on the overall performance of the MetVision Suite compared to a physical environment. Our benchmark testing shows that the overhead of the virtual environment on the overall system performance is only two per cent."

The scalability of the MetaVision Suite running on an Intel Xeon processor 7500 series platform effectively provides a hospital with a single solution irrespective of physical location. Latest market trends show that many hospital groups in the United States and governmental health organisations worldwide are searching for solutions to consolidate their IT management services and operations and help save costs as a result.

Operating multiple clinical information system in the same organisation can be time-consuming and expensive. However, thanks to the Intel Xeon processor 7500 series, many hospitals can use the MetaVision Suite from a single location to manage several hospitals.

Not only is this less expensive than having single solutions in each hospital, it also benefits patients. Agoor adds: "One server and one database can be used across a large region and different hospitals. Doctors can access a patient's entire record from previous admissions to other hospitals in the region. All of the relevant data is at their fingertips, even if the patient has never been in the hospital before. This improves the quality of care because a doctor can clearly see the entire history which helps ensure a quick and informed diagnosis."

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

Spotlight on iMDsoft

Co-founded in 1996 by Phyllis Gotlib and Dr. Ido Schoenberg, iMDsoft is headquartered in Massachusetts, USA, with offices in Germany, the Netherlands, Israel, Japan and Australia. Its systems are designed to enhance overall care quality and improve financial performance, particularly in high-cost areas where the need is the greatest. Hospitals, healthcare systems, and major medical centers across the U.S., Europe, Asia and the Pacific, use iMDsoft's technology to promote patient safety, contain costs, support research and compliance, and achieve sustainable market segment leadership.

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