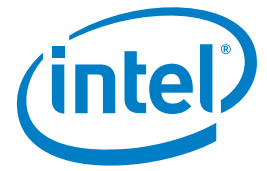


CASE STUDY

Intel® Xeon® Processor E5 Family

Financial Services
Enterprise Server



Enhancing financial transactions across Europe

StreamMind optimizes its innovative transactional software solutions applied on SEPAmail™ to support corporate-scale transaction processing requirements with Intel® and HP technology

StreamMind was chosen by the largest French banks to provide software to support SEPAmail™, a new messaging network designed to efficiently and securely transfer supporting information and documentation relating to financial transactions across the Internet. To ensure its software can meet the requirements of all potential customers, from individuals to large financial organizations, StreamMind has collaborated with HP to offer a range of hardware and hosting solutions based on the Intel® Xeon® processor E5 family and HP ProLiant® Gen8 servers. By optimizing its software to take advantage of the processors' capabilities, StreamMind has strengthened its offering to customers ahead of the launch of SEPAmail™.



STREAMMIND®



“Optimizing our applications for the Intel Xeon processor E5 family and HP ProLiant Gen8 servers has enabled us to develop a higher-performing, more reliable and – crucially – cost-effective proposition. By supporting our offering with Intel’s technology, we can ensure the scalability of our offering, and its compatibility with our customers’ existing IT environments.”

Nicolas Muhadri,
Founder and President,
StreamMind

CHALLENGES

- **Relevant solutions:** StreamMind aimed to ensure its software could support the transactional requirements of all types of customers, including individuals, businesses and financial institutions
- **Ensuring performance:** To support high transaction volumes, it needed to develop its applications to take advantage of high-performance processing technology and server hardware
- **Intel advantage:** It decided to optimize its software for Linux* and Windows* running on Intel® architecture and HP ProLiant Gen8 servers, to benefit from the increased compatibility and lower operating costs this offers to end user customers

SOLUTIONS

- **Collaborative development:** StreamMind started a strategic relationship with HP to develop a joint hardware and software offering to fulfill customers' requirements
- **Advanced processing:** The Intel Xeon processor E5 family and HP ProLiant Gen8 servers offered the ideal processing solution to power StreamMind's applications in both internal server deployments and in a cloud-based service
- **Optimized performance:** StreamMind collaborated with engineers from HP and Intel to optimize its software for the Intel technology, using the resources available at the EMEA HP Intel Solution Center in Grenoble, France

TECHNOLOGY RESULTS

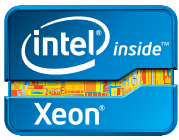
- **Processing performance:** The advanced processing capabilities of the Intel Xeon processor E5 family ensure that HP ProLiant Gen8 servers running StreamMind's applications can support high volumes of transaction processes
- **Achieving more:** Using the resources available at the HP Intel Solution Center, engineers optimized variables such as memory usage and processor features such as Intel® Hyper-Threading Technology (Intel® HT Technology)¹ to further improve the technology's performance
- **High volume:** A single eight-core Intel Xeon processor E5 family can process between 400,000 and 1.6 million transactions an hour, depending on the messaging protocol used

BUSINESS VALUE

- **Flexible platform:** StreamMind's collaboration with HP and Intel has enabled the company to offer customers a variety of software and hardware solutions, suitable for a wide range of end-user circumstances
- **Practical potential:** Optimizing the performance of the technology has strengthened StreamMind's proposition for SEPAmail™ ahead of the platform's launch
- **Future capacity:** Developing its software for Intel's technology enables StreamMind to deliver solutions that are compatible with customers' existing IT environments, cost-effective and can be easily scaled up to accommodate future requirements

New possibilities

StreamMind is a software developer, founded in 2008 to produce highly innovative IT, communications and adaptive transactional solutions for the worlds of finance and business. Later that year, it was chosen by large French financial institutions to be the software developer for SEPAmail™, an industry initiative designed to enhance financial transactions in conjunction with plans for a Single European Payments Area (SEPA). With SEPAmail™, senders and beneficiaries can securely, quickly and seamlessly share a range of supporting documents and information alongside a transaction. This provides banks, businesses and individuals with an uninterrupted, end-to-end procurement process as well as access to richer services, such as payment initiation with integrated invoicing to customers through their usual trusted device (such as a smartphone, tablet, computer or ATM).



StreamMind supports customers' long-term IT planning with reliable, high-performing software and hardware solutions

When developing the software for delivering SEPAMail™ services, StreamMind recognized the need to ensure its offering was compatible with a range of high-performing hardware and access models, with the aim of serving as broad a customer base as possible. It decided to convert its software from its existing platform to a Linux or Windows operating environment that was compatible with Intel architecture. By doing so, it aimed to improve the compatibility of its offering, taking advantage of the high proportion of existing enterprise hardware deployments that are based on Intel technology. StreamMind also aimed to take advantage of the lower operating and service costs typically associated with Intel-based implementations to enhance the business case for organizations considering using its solutions.

Hardware support

With this in mind, StreamMind entered into a strategic relationship with HP to jointly develop a range of solutions that combined StreamMind's software solutions with the hardware needed to get the most out of the applications. To keep their offering relevant to a broad selection of potential customers from finance and beyond, the two companies planned to produce both hardware-based solutions, powered by Intel architecture, for internal deployment within enterprises, as well as cloud-based packages that allow subscribers to access transactional platforms such as SEPAMail™ on a pay-per-use basis.

For StreamMind's solutions to deliver the level of service customers require from the platform, it needed the backing of powerful processing technology. After consulting with experts from HP, StreamMind decided to convert its applications to run on the Intel Xeon processor E5 family and HP ProLiant Gen8 servers, using a high level C++ development environment, and undertook a process of optimization to ensure that the software and hardware could deliver maximum effectiveness and efficiency.

HP ProLiant Gen8 servers feature embedded automation and intelligence that cut lifecycle operations tasks, facilities overhead, and downtime costs. With HP ProActive Insight* architecture, HP ProLiant Gen8 servers continuously monitor more than a thousand system parameters to optimize application performance and

proactively decrease downtime, while providing organizations insight into every aspect of their IT infrastructure.

Specialist resources

StreamMind's software engineers began the process of fine-tuning its SEPAMail™ applications for Intel's processing platform, with the help of engineers from HP and Intel, and the development resources available at the EMEA HP Intel Solution Center. This allowed StreamMind to test the performance of its solutions with the latest technologies, and benchmark how they performed on the kind of server deployments commonly seen within enterprise environments.

From an early stage, StreamMind saw a significant boost in the performance of its applications when running on the Intel Xeon processor E5 family². With support from HP and Intel, it was able to further enhance the effectiveness of its software using the features built into the processors, such as Intel HT Technology, and by optimizing other variables such as memory utilization using HP ProLiant Gen8 servers.

A compelling proposition

As a result of its work with HP and Intel, StreamMind has strengthened its offering to customers, and has maximized the range of situations in which its SEPAMail™ solutions can be applied. With support from HP ProLiant Gen8 servers and the Intel Xeon processor E5 family, its applications can support 7,000 to 27,000 transactions per minute (equivalent to 100 kilobytes each) for every 8-core Intel Xeon processor E5 family deployed, depending on the messaging protocol used. This enables them to accommodate the high volumes that need to be processed by large financial institutions as part of a cost-effective package. The robust processing performance of Intel's technology also provides a solid platform for delivering StreamMind's applications via the cloud using HP's data center resources. By providing access to innovative financial and business solutions on a pay-per-use basis, StreamMind and HP are able to serve a wider range of potential customers.

Besides boosting the overall processing capacity of StreamMind's software, the Intel Xeon processor E5 family also enables it to offer practical, dependable solutions that fit the

Lessons learned

By taking advantage of the insights and technical resources provided at the EMEA HP Intel Solutions Center, StreamMind was able to enhance the performance of its software on the kind of infrastructure commonly seen in real-world enterprise deployments. By optimizing its applications for the Intel Xeon processor E5 family and HP ProLiant Gen8 servers, StreamMind has been able to deliver a higher performing and a stronger value proposition to banks, businesses and customers. The transaction volumes achievable through StreamMind's transaction software solutions platform, combined with its reliability, compatibility and scalability, ensure that banks can be confident in basing their long-term transaction IT planning on StreamMind's technology.

priorities of its customers' IT departments. With Intel-based deployments commonplace within enterprise organizations, StreamMind and HP's joint offering can easily be integrated into existing IT environments, allowing organizations to upgrade their systems to support SEPAMail™ in conjunction with other business needs. The HP ProLiant Gen8 servers also offer the power, flexibility, serviceability and reliability needed for business-critical financial transactions, and can be scaled up to accommodate future requirements from customers in the financial service sector in addition to SEPAMail™.

Gaining momentum

StreamMind is currently working with financial and business organizations to help them prepare for the launch of SEPAMail™. As a significant strategic addition to businesses' transaction processes, it is important that StreamMind can demonstrate its ability to support the long-term goals of its customers. By basing its solutions on the processing performance, reliability and compatibility of the Intel Xeon processor E5 family and HP ProLiant Gen8 servers, StreamMind has established a platform that will continue to enhance transaction processes for years to come.

Find the solution that's right for your organization. Contact your Intel representative, visit Intel's Business Success Stories for IT Managers (www.intel.co.uk/Itcasesestudies) or explore the Intel.co.uk IT Center (www.intel.co.uk/itcenter).

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¹ Requires an Intel® Hyper-Threading Technology-enabled system; consult with your PC manufacturer. Performance will vary depending on the specific hardware and software used. Not available on all Intel® processors. For more information, including details on which processors support Intel HT Technology, visit <http://www.intel.com/go/ht>.

² Software and workloads used in performance tests may have been optimized for performance only on Intel microprocessors. Performance tests, such as SYSmark and MobileMark, are measured using specific computer systems, components, software, operations, and functions. Any change to any of those factors may cause the results to vary. You should consult other information and performance tests to assist you in fully evaluating your contemplated purchases, including the performance of that product when combined with other products. For more information go to <http://www.intel.com/performance>

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