



Small Business Case Study

Intel Products: Dual-Core Intel® Xeon® processor technology,
Intel® Centrino® mobile technology
Company Size: 1-25



Beanstream virtually cashes in with Intel

Case Summary

Beanstream Internet Commerce built a platform for Web-based selling and online verification for internal use but quickly found that its customers across Canada were seeking the same solution. To respond to client demands, Beanstream needed a scalable and reliable network infrastructure to ensure that its growing client list could quickly authenticate orders to minimize fraud and be live, online 24 hours a day, seven days a week. Using Dell* servers with Dual-Core Intel® Xeon® processor technology, Beanstream built a solid foundation for its growing business.

Challenge

Located in Victoria, British Columbia, Beanstream Internet Commerce started as a solution to expand its parent company's sales channel into the Internet arena. After developing a payment and authentication solution for its own internal use, President and CEO Craig Thomson quickly realized the opportunity to market the solution to other large and small retailers, as well as government organizations. So, before the solution was ever used for internal purposes, a new company was born, spun off and was quickly growing.

By forming partnerships with Equifax, TD Canada Trust and Sage, Beanstream found success linking merchants wanting to sell products, with the financial institutions transferring funds. Beanstream also provides bricks and mortar merchants with the payment and authentication processes they need to operate online.

Today, Beanstream estimates their merchant base represents some of the world's largest retail and service organizations including about 20% of the Canadian e-Commerce marketplace, as well as many small and mid-sized businesses.



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During the company’s rapid growth, Beanstream’s challenge was to ensure a reliable network infrastructure that could quickly and accurately process client payment requests without creating frustrating lag times during the authentication or payment process. With Intel processors, Beanstream has the reliability and compatibility it needs when developing software solutions for its customers.

Solution

After 15 years running technology companies, Thomson had already learned the golden rule for success: “If you want reliable infrastructure, you have to spend the money on good, solid technology.”

Thomson added that as a small company with specialized staff, they couldn’t afford time to troubleshoot hardware issues. Compatibility with operating systems needed to be seamless and easy, so staff could focus on software solutions and customer service. The company was also looking to simplify hardware maintenance. To ensure compatibility and simplicity, they chose Dell* servers with Dual-Core Intel® Xeon® processor technology because Thomson says that Intel processors are the standard and therefore compatible with all major software and hardware systems.

In any business there are risks, and according to Thomson, making good hardware choices and ensuring multiple levels of redundancy reduces

these risks. “We measure downtime in seconds and we’ve never had to reboot a server in production outside of a scheduled maintenance period,” says Thomson. “The availability of our hardware and operating system is critical to our business. Without it, our customers would be significantly impacted.”

Beanstream needed a system that could quickly scale up to meet peak demand times. The company optimizes its internal operations to reduce server use, and has maximized its available resources by running multiple load-balanced servers in a cluster configuration with hot spares available as needed to protect client data and availability of service. “Hardware is relatively inexpensive, so we’ve built scale into our network design and are running at very low network utilization,” says Thomson.

Key Advantages

Clients using Beanstream services for payment, payroll and verification need to be assured the service is there when they need it. Thomson says building in redundancy at the processor level with Dual-Core Intel® Xeon® processor technology and having an increasing number of available servers in a cluster formation is essential.

“In our business availability of services is very important,” says Thomson, who believes that having any single point of failure is not worth the risk. With the multiple processors, Beanstream can address any issues without impacting the use of



others on the system. This is thanks to the Dell* servers with Intel® HT Technology which process software threads simultaneously and allow for more efficient use of system resources that might otherwise remain idle.

Technology Saves Time

Retailers doing online transactions and organizations needing to verify and change customer address information must have a solid process to review, authenticate and verify each and every transaction. This is a critical part of doing business securely online, says Thomson, explaining that in the past many of these verifications would have been done manually, which was costly and time consuming.

In an era where customers demand instant information and results, companies have turned to automating the verification process for faster approval of a large portion of their transactions.

"If you look at a situation where someone has to manually review data, the cost could be easily five to 10 times what it would be to process electronically. You are looking at significant cost savings, as well as being a convenience factor for customers," says Thomson. On average manual reviews are now cut down to only a small percentage of transactions and companies have a more consistent screening process for their online transactions.

Peace Of Mind With Wireless

As a growing business, Thomson relies on wireless to stay in touch while visiting clients and travelling on business. Using his notebook with Intel® Centrino® mobile technology, Thomson can easily connect to wireless hotspots to download e-mail or follow up on internal office issues. He has found the added battery life made possible by the Intel® Centrino® mobile technology has been greatly beneficial on long flights.

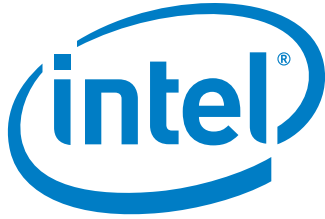
"It's reached the point where I choose my hotels by the availability of wireless," he says, adding he plans the remainder of his days around where hotspots are available for lunch and coffee breaks. This allows him to troubleshoot issues and stay in touch regardless of where he is. "In reality, it's peace of mind. I know that no matter where I am, I can access the information I need, or my clients need. I'm never really out of touch."

Security Online

While wearing his CEO hat most of the time, as a provider of online e-Commerce solutions, Thomson is also ultimately responsible for network and infrastructure security. His role is to ensure that their systems and solutions provide the highest level of security and meet the requirements of the credit card associations' Payment Card Industry Data Security Standard (PCI DSS) program.

"Many of the solutions available for network perimeter security and intrusion detection are highly customized and proprietary," says Thomson. "We preferred to stick with the market leaders and chose to adopt Intel Pro/1000 network products to ensure compatibility with 3rd party vendors.

For some customers, Beanstream has helped implement the new "Verified by Visa" authentication system which requires intensive choreographing of many different security levels in order to provide customers with further assurances of safety and security. Thomson notes the levels of verification and fraud detection all need to be fast and seamless to the consumer. While the processing power required for authentication isn't intensive, the speed and stability of the Intel® Xeon® processor technology makes sure all steps are processed quickly, and in the right order, to successfully complete the transaction.



Future Uses

As the company grows, it will continue to provide redundant backup systems and a high level of availability to handle spikes in customer traffic. Thomson says that the flexibility provided by Intel solutions allows him to scale out hardware to support increased customer demand without having to forgo earlier technology investments. Beanstream will also continue looking at new technology and forging new partnerships to ensure their customers have access to the widest range of electronic payment services and the tightest security available.

Find out more about a business solution that is right for your company by contacting your Intel® representative, or visit the Intel® Business Enterprise Web site at intel.ca/business or its industry solutions specific sites at intel.ca/business/bss/industry.



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