“We were very impressed by the competence of Hitachi team members. They were efficient, and the solution they proposed performs very well and is of very high quality.”

Robin Trottier
Manager, Data Storage Environment
Revenu Québec

Revenu Québec

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<td>Services</td>
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Hitachi Virtual Storage Platform Manages Data, Supports Growth and Reduces Data Storage Costs for Revenu Québec

Revenu Québec processes about 34 million transactions every year, including, but not limited to, income tax declarations. In other words, it manages a very large quantity of data. Faced with strong growth, the agency must equip itself with a single, state-of-the-art solution to handle all of its data. It must seamlessly increase capacity and performance as required, drive down capital and operational costs, and reduce storage management time and effort. To answer these demands, the agency chose Hitachi Virtual Storage Platform.

Growth Exceeds Forecasts

In 2008, Revenu Québec estimated that the volume of data it stored would reach 700TB within the next 7 years. But the agency, like many others worldwide, had not counted on exponential growth in data. The digitization of paper documents, for example, increases the volume of data that must be stored. “External and unforeseen factors increased the amount of data,” explains Robin Trottier, manager of Revenu Québec’s storage environment. “We had to revise our forecasts several times to adjust to this growth.”

In 2009, a few months after Hitachi Data Systems won the request for proposals, the agency’s volume of data reached 300TB. “From then on, it was clear to us that our target of 700TB would soon be overtaken,” says Trottier.

As it turns out, the volume of data rose to 1PB in 2012. This increase represents growth of around 300% in just a few years. And, in the coming years, the growth will likely continue. “What we needed at Revenu Québec was not only a solution capable of handling all this data,” Trottier explains, “but also a storage environment able to deal with anticipated growth over several years.”

Storage Virtualization Solution Exceeds Expectations

After evaluating several solutions to meet its needs, Revenu Québec finally decided to embrace the world of storage virtualization. “We realized that with storage virtualization we would get access to a number of useful functions and be able to drive savings,” adds Trottier. “The results exceed our expectations.”

Hitachi Data Systems proposed that Revenu Québec use Hitachi Virtual Storage Platform. By allowing the agency to integrate multiple storage pools under a single virtualization layer, this platform provides a single, logical and scalable storage environment. According to Alexandre Deschênes, Hitachi Data Systems account manager, “Revenu Québec chose to apply the Hitachi principle of ‘One Platform for all Data.’”

“We wanted to have integrated control of our virtual storage environment, without increasing the number of employees managing our data and maintaining the architecture. Hitachi Data Systems understood our needs very well and their solution has proved to be of very high quality. Hitachi Data Systems recommended consolidating the management of data rather than devices. While our storage capacity was increased by a factor of 12, the same 2-person team still manages it.”

Alain Brochu
IT Director
Revenu Québec
Jonathan Tremblay, junior engineer and solutions consultant at Hitachi Data Systems explains. “We recommended our Virtual Storage Platform to Revenu Québec. This solution is based on the virtualization of storage by including dynamic allocation and mobilization of data accessible by configurations using several processing modules. It includes an upper virtualization layer, which contains our tools for managing the storage of enterprise data. It allows the virtualization of data contained in the storage units installed at lower levels.”

At the lower levels, Hitachi proposed a modular system of storage pools for storing files and making backup copies on discs. “We connected the less-expensive units to the upper layer to add capacity to the solution while offering savings to our client,” explains Tremblay. “It’s a state-of-the-art solution and architecture that meets the current and future needs of Revenu Québec.”

The proposed environment particularly satisfied Trottier. “Hitachi Data Systems surprised us by recommending very high-performance technology that offers significant quality advantages,” he explains. “For the agency, and for our support team, it’s a dream technology environment.”

Hitachi Data Systems also implemented Hitachi Content Platform (HCP), a hardware and software content management system. HCP meets the needs of Revenu Québec for hosting, managing and archiving content. Revenu Québec plans to use HCP to archive its files, save email logs and manage electronic documents.

**High-Performance Consulting Services**

An upgrade of this scope required the intervention of Hitachi Data Systems consulting services. “It was essential that Revenu Québec employees perfectly master the new architecture and learn to configure the system and begin migrating data,” explains Deschênes. “We had to familiarize ourselves with different software, such as Hitachi Dynamic Provisioning,” adds Trottier.

“The migration was done during the summer of 2009,” Trottier explains. “It was a very large-scale project, but the Hitachi Data Systems team not only respected the schedule but also coached the Revenu Québec team, which carried out this work in record time and with minimal interruption of service.”

**Better Performance and Ease of Mind**

The new storage infrastructure enables Revenu Québec to manage stored data comprehensively, no matter what systems are installed at lower levels. In fact, it is possible to connect storage systems by different manufacturers to the Hitachi virtualization solution. These systems are seen as internal storage devices and benefit from all the functions of the Hitachi platform. Virtualization of data is considered the best way to increase efficiency in managing computer operations. For Revenu Québec, the Hitachi Data Systems solution means more uniformity, better use of resources, and much better performance. In short, it means data management that is integrated and much more flexible, efficient and effective.

Trottier is particularly satisfied with the performance of his new virtualized environment. “Users were never aware of the effects of the data migration. We moved great volumes of data between and on several levels at a time, without the least interruption of service. In 1 week we were able to move dozens of terabytes of data in a way that was transparent for users. We were entirely autonomous and comfortable managing disk space.”

Another fact worth noting is that in 2001, Revenu Québec needed 2 time-sharing employees to work on its storage environment. Today, despite the exponential increase in data volume, still only 2 time-sharing employees look after the new storage infrastructure. According to Alain Brochu, IT director at Revenu Québec, “In a decade we have been able to modernize our data storage infrastructure and its software capacity. The introduction of Hitachi Virtual Storage Platform represents a large step forward in technology for us, and a fully efficient and effective solution. Revenu Québec expects its data storage capacity to increase by several petabytes in the coming years. However, the solution Hitachi Data Systems proposed will enable Revenu Québec to continue the centralized, virtual management of its data.

**Lower Storage Costs**

The rapid and continuing growth of stored data is a global phenomenon affecting organizations of all sizes across all industries. This data growth requires more powerful architectures and hardware. As a result, organizations need solutions that can meet both their current and future needs, while reducing data-storage costs.

Hitachi Data Systems evaluated storage costs for Revenu Québec using its “Storage Economics” framework. The company developed its own analytical model containing no less than 34 categories of costs contributing to storage expenses. The Hitachi Data Systems experts analyzed Revenu Québec’s storage costs before implementation of Hitachi Virtual Storage Platform. They then measured the storage costs after platform implementation. Revenu Québec learned that storage costs per terabyte per year dropped from US$9,000 to only US$4,000. “It’s a significant reduction for us,” says Jean-Marie Lévesque, vice-president and managing director of data processing and technology at Revenu Québec. “And the good news is that storage costs should continue to go down in the coming years.” The use of Hitachi Data Systems virtualization technology and best practices in data storage have multiple efficiency advantages in management and, moreover, translate into substantial savings.