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Wintel Server Virtualization Reduces Infrastructure Costs and Drives Organizational Change at Canada Post

Innovapost recently led an ambitious server virtualization project at Canada Post that has reduced ongoing infrastructure costs, optimized server resource usage and enabled business managers to focus on results.

Project Highlights

Customer

Canada Post

Challenge

Virtualize ~125 Wintel servers at Canada Post's Montreal Data Centre

Project Duration

15 months (pilot to deployment)

Products & Technologies Deployed

Dell R610 Servers, VMware vSphere 4.0 Update 1 Hypervisor, Novel Platespin Migrate

As part of an ongoing effort to modernize its technology and reduce costs, Canada Post outlined a number of ambitious business goals for 2010. These objectives included the need to identify infrastructure cost savings, improve server resource usage and facilitate more nimble business operations.

"We needed to reduce costs, but we also wanted to modernize our technology and improve our ability to offer 'always-on' applications," explains Jim Bezanson, Director of IT Infrastructure at Canada Post. "With those goals in mind, we focused on our Montreal Data Centre, which houses more than 200 Wintel servers that power mission-critical database, online and mail applications."

The Wintel servers (machines running Intel x86 compatible processors and a Microsoft Windows operating system) were key components of Canada Post operations, but were expensive to operate. Facing monthly maintenance costs of thousands of dollars per server, Canada Post wished to reduce these expenses without compromising – or interrupting – performance.

A Virtual Solution

For assistance, Bezanson and his team turned to Innovapost, Canada Post's dedicated IT partner for ideas and technical assistance. "Innovapost recommended that we 'virtualize' as many Wintel servers as possible," Bezanson recalls. "By converting physical servers into virtual machines, we would be able to dramatically reduce our physical server count and eliminate up to 75% of our server maintenance costs."

Virtualization would also allow Canada Post to deliver services more efficiently and reduce waste. "Traditionally, if a business unit wanted a new application, they would not only need to buy the application, they would also have to provision the hardware to put it on, wait for delivery, and then wait for the server to be set up with the application," explains Bezanson. "This could take months and often resulted in redundant or unused storage space because many of the servers were purchased solely to run a single application. Virtualization would allow us to deploy and run applications in a much more efficient fashion."

INNOVAPOST CUSTOMER EXPERIENCE

Wintel Virtualization Highlights

Scope

Consolidated ~100 Wintel servers into 10 virtual servers

Benefits

- Delivered \$2.4 million in annual cost savings
- Eliminated 75% of server maintenance costs
- Faster installation and delivery of business applications
- Allowed for more efficient use of server resources
- Changed the organizational mindset towards technology investments

A Phased Approach

Innovapost developed a detailed migration roadmap with Canada Post partner, CGI. This roadmap recommended a two-part pilot program, a planning phase and an execution process that included three main “waves” of migration and consolidation activities.

Before the technical activities could begin, however, Canada Post needed to inform its stakeholders of the project and its benefits. “Innovapost provided the project management and leadership activities needed to help everyone understand the project and get on board,” Bezanson recalls. “Innovapost identified the applications that would be affected, reached out to the application owners, educated them on the objective of the virtualization project and gained their support.”

Piloting and Rollout

In February, 2010, Canada Post began the first pilot phase of the virtualization program. In this phase, Innovapost identified seven servers that could be virtualized with the least risk of disruption to existing services. These servers were then consolidated into one VMware ESX physical host.

“Innovapost worked closely with CGI to identify the lessons learned from the first pilot project, refine processes, and apply them to subsequent virtualization phases,” notes Bezanson. “In the second phase, we consolidated ten additional physical

servers and gained the confidence needed to begin the rollout of the full virtualization program.”

Over the next five months, Canada Post built up its “farm” of VMware ESX servers and consolidated more than 70 additional Wintel servers in total.

Throughout the migration, Innovapost also helped to upgrade the Wintel servers from Windows 2000 to 2008. In total, approximately 100 servers were virtualized and upgraded by the end of the virtualization program.

“Innovapost not only helped to migrate the servers, they helped our support teams package all of the applications, move them onto the new operating system and test them,” says Bezanson. “They watched for capacity and performance issues and ensured that the transition went smoothly.”

Delivering Results

Bezanson estimates that Canada Post is now saving \$2.4 million per year thanks to the virtualization of its servers. “We were able to take 100 servers and bring that number down to 10, which is a massive consolidation,” says Bezanson.

While the cost savings are of great importance to Canada Post, the organization has also seen a number of business benefits. Canada Post now has a common, repeatable process through which it can offer processing power to business units.

“We are now much more nimble when it comes to the provisioning of services. Today, our business units can get an application up and running very quickly and for a much smaller budget. They don’t have to worry about the actual machine that’s running it or its underpinnings – they can simply focus on enabling their business.”

Jim Bezanson, Director of IT Infrastructure at Canada Post

The virtualized servers have put Canada Post in a better position to accommodate future growth and deliver new services without the need to provision, install and maintain new server hardware.

“We are now much more nimble when it comes to the provisioning of services,” Bezanson adds. “Today, our business units can get an application up and running very quickly and for a much smaller budget. They don’t have to worry about the actual machine that’s running it or its underpinnings – they can simply focus on enabling their business.”

Canada Post is also better able to handle emergency outages and reduce its exposure to risk. Resources can be quickly moved from one virtual server to another in the event of a hardware failure within the server “farm”. Moreover, virtual servers make better use of existing resources by continually rebalancing server loads and moving applications from one virtual server to another to accurately match demand and usage.

“We are also able to take virtual snapshots of existing processes,” notes Bezanson. “This offers a record of activity and lets us to ‘rollback’ to previous activity states if needed.”

In addition to helping Canada Post meet its technology modernization goals, Innovapost also helped to drive organizational change. “The virtualization project has helped to change the mindset throughout the organization,” notes Bezanson. “In the past, executives were often reluctant to make technology investments, but that has changed. Today, when I present to COOs and CFOs at Canada Post, the conversation is focused on business benefits, not the status of server assets.”

Partnering for Success

Bezanson credits the success of the virtualization project to the close working relationship built between Canada Post, Innovapost and CGI. “Innovapost’s expertise was fundamental to this project’s success,” Bezanson says. “They were ‘prescriptive’ in regards to what we wanted to do, how we wanted it to work, and our expectation of the technology. Our success was directly related to their capability and leadership.”

Innovapost continues to work with Canada Post and plans are underway to identify additional virtualization opportunities within the organization.

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