



## VMware Virtual Desktop Infrastructure Connects Bell Canada for Optimized Customer Care

### Bell Canada Uses VMware Software to Provide 1,700 Customized Desktop Environments

#### RESULTS

- Lowered TCO
- Enabled company agility to manage workforce locations
- Deployed more than 1,700 hosted desktop environments
- Optimized development environment
- Centralized, simplified management using VirtualCenter
- Gained ability to deploy 60 new desktop environments in two days
- Enabled hardware independence; allows development partners to choose any type of hardware

#### A Solution to Echo Growth

Bell Canada Enterprises (BCE) is Canada's largest communications company. The main subsidiary, Bell Canada, provides local telephone, long distance, wireless communications, Internet access, data, satellite television and other services to residential and business customers through some 27 million customer connections.

In October 2004, Bell Canada began an initiative to provide desktop solutions at reduced costs. With 8,000 call center agents, Bell Canada faced hardware attrition and rising costs. Streamlining systems, facilitating outsourcing and increasing capabilities to telecommute would reduce costs while improving service. This would require creating customized workstations for users.

Bell Canada approached VMware Partner CGI Group Inc., which provides end-to-end IT and business process services, for a solution. CGI is Bell Canada's preferred solutions provider. CGI has been partnering with Bell Canada since 1993, when Bell Canada made the decision to outsource its IT operations.

"Bell Canada came to us with a project to provision, connect and securely deploy 400 desktop environments within three weeks," says Martin Quigley, CGI senior technical consultant to Bell Canada. "Because of the space restrictions and the security restrictions, we knew that the complexity of their needs ruled out several other solutions, so we said, 'why not use VMware?'"

#### Calling on VMware

Quigley explains that Bell Canada needed a lockdown environment that would accommodate "fat clients." For example, if a bank needed to change its phone lines, Bell Canada would extend its LAN to the building, and enable a few people to work in a locked room because of security requirements.

"Bell Canada utilized multiple protocols for security, so it was a complex environment," Quigley explains. "It was a lockdown environment. You couldn't install programs; you couldn't install anything on the hard drive because they used file sharing. So they had to keep it in a locked room. It was difficult to manage, and it was expensive."

Bell Canada evaluated other possible solutions along with VMware software. Bell Canada considered getting 400 desktop computers, power feed and data connections to reside in the datacenter on racks. But it would have been difficult to manage and maintain. Also, with shared services software, terminal-server testing revealed that the applications would not behave correctly.

VMware, on the other hand, seemed to bring multiple advantages. Quigley explains, "The beauty of VMware virtual desktop infrastructure solution is that it makes everything so easy. To build an environment, we take the CD used to build the desktop, load it onto VMware software, update the drivers and we're done. Then to deploy, it's simple. We have everything in a file that we can copy. Now we just use VirtualCenter to push out the images. Everything is easier to maintain because it's centralized in the datacenter."

**"With VMware virtual desktop infrastructure, we are able to manage complex, secured desktop environments from our datacenter. This has made it easy for Bell Canada to create and manage more than 1,700 desktop environments for call center agents. We will continue to utilize the solution because it gives us the flexibility to easily and cost-effectively provide customized desktop environments."**

*Martin Quigley*  
CGI Senior Technical Consultant to Bell Canada



## Resonating Success

Bell Canada also knew the VMware solution would lower TCO while maximizing efficiency. “Bell Canada continues to add to its VMware virtual desktop infrastructure because it enables the company to quickly meet growing business demands,” Quigley says.

Benefits include:

- **Lowered TCO.**
  - » Single server replaces multiple desktops
  - » Single network connection replaces multiple network connections
  - » Centralized creation and deployment of desktop environments
  - » Eliminates MAC requests
  - » Eliminated site visit for incident or upgrades
  - » Eliminated requirement to courier old/upgraded workstation of teleworkers. “Before, we had to ship hardware and applications to remote workers,” Quigley says. “When we would update hardware, we would send a courier to pick up old hardware. We have eliminated those costs with the VMware solution.”
- **Enabled company to manage work location to meet business needs.** VMware virtual desktop infrastructure enables Bell Canada to hire more people who are able to telecommute. “We don’t have to worry about security or the difficulty of setting up their environments,” says Quigley.
- **Optimized development environment.** Bell Canada also uses the solution to provide development environments. “Developers cannot tell the difference between working in a virtual environment and a physical environment,” says Quigley. “In fact, we can give them more computing resources because we can easily provision virtual machines and allocate their resources using VMware VirtualCenter.”
- **Centralized, simplified management.** Bell Canada is able to manage thousands of desktop environments from its datacenter. “We are able to monitor usage, manage access and reallocate resources as necessary—all from our datacenter,” says Quigley.
- **Rapid deployments.** The VMware solution enables Bell Canada to quickly and easily deploy as many desktop environments as necessary to meet business demands. A new environment takes about 20 minutes to deploy, whereas a physical environment could take weeks. “If we have a request for 100 new desktops, we can have it ready by the next week,” says Quigley. “If we were not using this solution, we would have to order connectivity, order and ship hardware and configure the systems. It would take weeks.”
- **Hardware independence.** Agents can use any type of hardware to use the desktop environments. The only requirement is that they use a Microsoft® Windows operating system that supports the Windows XP RDP (remote desktop protocol) client. Bell Canada simply provides a RDP file so users can connect.
- **Seamless user experience.** Internal users are able to connect through Bell Canada’s network, and external users are able to connect using T1 lines with RDP.
- **Disaster recovery and backup.** Because the virtualized servers are attached to storage area networks (SANs), Bell Canada can use VMware VMotion™ technology to easily move virtual machines to another host server with VMware ESX Server for recovery. The additional standby servers can be commissioned within 15 minutes since all of the virtual desktop infrastructure environments are identical.



#### VMWARE VIRTUAL DESKTOP INFRASTRUCTURE SOLUTION AT WORK

- ESX Server and VirtualCenter on IBM HS20 8832s and 8843s, each with 2-CPU, 8GB RAM, attached to HP MSA 1000 SAN
- ESX Server and VirtualCenter on IBM HS20 8843s, each with 2-CPU, 8GB RAM and 2 \* 300GB Local SCSI Raid1
- ESX Server and VirtualCenter on HP DL585, each with 4 Opteron Dual Core CPUs, 32GB RAM and attached to HP EVA 8000 SAN
- Use IBM Director to perform native ESX Server install and monitor ESX Server hosts
- 80+ custom and "off-the-shelf" applications running on desktop environments

## Expanding the Remote Desktop Network

As Bell Canada experiences the benefits from its virtualized desktop infrastructure, the company continues to expand its use. "With VMware virtual desktop infrastructure, we are able to manage complex, secure desktop environments from our datacenter," Quigley says. "This has made it easy for Bell Canada to create and manage more than 1,700 desktop environments for internal and external clients. We will continue to utilize the solution because it gives us the flexibility to easily and cost-effectively provide customized desktop environments."

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