



# Government Agency Streamlines Operations, Increases User Satisfaction with VDI, Zero Clients

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BRUCE MAGER  
SENIOR IT ARCHITECT  
THE CIVIL SERVICE SUPERANNUATION BOARD, MANITOBA, CANADA



The Civil Service Superannuation Board (CSSB) of Manitoba, Canada administers employee entitlement plans in accordance with the appropriate laws, regulations, and insurance policies, and under the direction of the responsible Minister. The CSSB safeguards members’ assets, pays benefits promptly, and maintains accurate records in accordance with good governance.

## AT A GLANCE

### Situation

- Provincial government
- Manitoba, Canada
- 70 employees

### Challenge

- High cost of IT and infrastructure-related utilities (energy)
- Security (confidential employee information; financial asset management)
- End-user productivity on out-of-date technology

### Solution

- Virtual desktop infrastructure (VDI) based on VMware Horizon View
- Teradici® PCoIP® Zero Clients

### Results

- **Cost savings:** 85 percent drop in desktop support time; reduced headcount requirements; lower energy costs
- **Security and resilience:** Sensitive data remains in the data center; less complexity for desktop component of disaster recovery plan
- **Mobility:** Employees have anywhere access to their desktops
- **IT manageability and flexibility:** New platform offers IT many new choices for application and data hosting and business-to-business services

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**The situation initially seemed daunting for the small IT organization.** The Civil Service Superannuation Board (CSSB) in Manitoba, Canada needed technology refreshes for its servers, system software, and desktop systems. IT decided to embrace a bold move, and migrate all 70 desktop users to a VDI infrastructure that could overcome numerous challenges:

- **Desktop management.** More and more time was required to support traditional PCs. End users were frustrated by disruptive update downloads and unpredictable reliability.
- **Access to centralized business data.** Faced with a Windows upgrade, IT wanted an easier-to-maintain platform for delivering a multitude of business applications.
- **Document scanning.** CSSB’s business processes are driven by an existing electronic document workflow. Any new system had to deliver similar performance with no disruption or large structural redesign.
- **Disaster recovery.** Significant redesign and enhancement of CSSB’s disaster recovery plans required a system that provides a very short recovery window without requiring significant increases in the number of technical staff or their workload.
- **Resilience and security.** Employees have entrusted The CSSB to safeguard their confidential information, and the management of the entitlement funds and payments imposed strict guidelines for protecting data.

#### Products used

PCoIP Zero Clients

#### Virtualization platform

VMware Horizon View

**Based on research and recommendations from local technology consultants, IT set up a pilot test for zero clients.** Past experience with VMware server virtualization helped them quickly get up to speed with the VDI platforms in the data center. Several Teradici PCoIP Zero Clients were deployed to test out all of the organization’s business applications.

“We tested every piece of software in our VMware Horizon View environment, from standard desktop productivity tools to our large financial packages,” said Bruce Mager, senior IT architect at The CSSB. The pilot exercised connectivity and interactivity with the organization’s centralized data, which had to be “rock solid.”

The main go/no-go factor – and most challenging use case – involved document scanning. “Our imaging system required seamless compatibility with our existing USB scanners and workflow,” said Mager.

“Stress-testing USB emulation over PCoIP during the pilot demonstrated that scanning from a VDI session imposed less than 10 percent additional overhead in practice. Our users conceded that this was an acceptable trade-off because there are now a hundred other tasks that are easier and faster with VDI and Teradici PCoIP zero clients.”

The rigorous testing of all applications was a success. Subsequently, the transition to zero clients was exceptionally smooth, with no surprises.

**Everyone at The CSSB – including the general manager and entire IT team – appreciates the new zero clients.** Hardware maintenance issues literally disappeared overnight with the introduction of VDI.

“Before we switched to zero clients, we had planned to hire an additional full-time desktop support person,” said Mager. “Now, the calls about PCs and video cards have stopped. We don’t have to add headcount, and we have cut back from one-and-a-half headcount for desktop support to approximately 20 percent of one person’s time.”

Today the end users can count on the stability of the zero clients. In the past, employees were never certain that their desktops would power up each morning, or if they would have to wait for updates to download, or deal with numerous other hardware issues.

“It has been interesting to see how quickly the reliability of the zero clients has become the norm,” explained Mager. “Our employees now expect their desktop systems to always work, and they do. Plus, employees that travel have a standard, reliable way to access their desktops from anywhere.”

**The new VDI and zero clients have also aligned nicely with the organization’s disaster recovery initiative.** Setting up a “hot recovery” center was straightforward, and carried out last summer. “With VMware, employee desktops are mirrored in the backup datacenter,” said Mager. “Zero clients give us full access to the DR site, just as if it was our local data center, and with indistinguishable performance. Everything worked right out of the box.”

Security within the new infrastructure and data recovery site has also improved, with all data remaining on the servers. “There is no personal information on anyone’s desktops – nothing that can be stolen. Even our laptops are now configured as PCoIP terminals – they have no personal information on them. The security benefits were a major consideration for us,” said Mager.

A year later, the migration continues to get excellent ratings from management, IT, and end users at The CSSB. “VDI and PCoIP zero clients have been disruptive – in a good way,” said Mager. “Resource sharing works like a snap. We’ve been able to get by with fewer scanners, for example. Employees can move between offices, and access their desktops and resources.

“And for IT, the new infrastructure model has freed us up to work on other projects instead of desktop support. VDI and zero clients have been a very positive wave of change throughout our operation, and it’s made us rethink how we can deliver services in the future. For me personally, I can never go back. I’d fight to keep this VDI and PCoIP environment.”

**The CSSB is now testing the delivery of business-to-business services within the VDI environment.** For example, to facilitate external payroll service providers around the province, the IT team is developing web apps and conducting pilot tests to identify practical options for delivery of desktop sessions to its payroll partners.

“We have many more choices now, such as cloud hosting,” said Mager. “I used to make three or four trips a day to our server room. Today, I went in for the first time in two months. Do we really need on-premise servers? VDI and zero clients have got us thinking about many new ideas.”

