



City of Pitt Meadows Implements Disaster Recovery Strategy with Help from Local Systems Integrator Sudden Technologies

INDUSTRY

Public Sector

LOCATION

Pitt Meadows, British Columbia, Canada

KEY CHALLENGES

- Replace aging IT infrastructure with a more flexible, virtualized environment
- Strengthen disaster recovery capabilities
- Improve backup and restore options

SOLUTION

VMware ESXi™ 4.1, VMware vSphere® Client 5.0 and VMware vCenter™ Site Recovery Manager™ 5.0—together with the NetApp FAS 2040 SAN—created a flexible virtual infrastructure to serve as a foundation for disaster recovery.

BUSINESS BENEFITS

- Full server recovery in a matter of hours rather than days
- Backups of critical applications every 3 hours versus every 24 hours
- Ability for government IT functions and citizen services to continue unaffected in the event of disaster

The City of Pitt Meadows wanted the peace of mind to know that its IT services could still function in the event of a disaster. Faced with a physical IT infrastructure that was nearing end-of-life, the City turned to systems integrator Sudden Technologies, to implement the new virtual infrastructure using VMware and NetApp technologies. With virtualized servers and production data replicated to an offsite location, the City can now do complete server recoveries in minutes.

Nestled between the Fraser River and the Golden Ears mountains, Pitt Meadows is a dynamic municipality in British Columbia, Canada, with a growing population of just over 18,200. Nicknamed “the Natural Place,” Pitt Meadows is committed to developing a safe, healthy and prosperous community for residents, businesses and visitors alike.

The Challenge

The City of Pitt Meadows IT department works behind the scenes to keep the wheels of local government moving. As its physical servers neared the end of their service life, the IT team faced a choice in how to get more out of its hardware investment.

“The simple thing to do would have been to just replace the aging hardware on an ongoing basis, but this would have been costly,” said Martin Brown, Network Services Specialist at Pitt Meadows. “Building new servers from scratch and migrating applications, on the other hand, would be time-consuming and somewhat tricky.”

Beyond refreshing its IT environment, Pitt Meadows had a pressing need to create a stronger and more robust disaster recovery (DR) environment for the City. While they had always had the ability to restore from backup tapes, recovery from a complete server failure would have taken days or even weeks.

Faced with these dual challenges, Pitt Meadows saw an opportunity to tackle both areas at once by creating a virtualized IT environment.

“We had two choices: We could stay with the status quo and replace those physical servers, or we could take a totally different approach,” said Dave Philp, Business Analyst/IT Coordinator at Pitt Meadows. “We saw virtualization as a way to gain efficiencies in our infrastructure—and at the same time achieve a greater level of flexibility and responsiveness that could help us better meet our DR goals.”

The Solution

Pitt Meadows’ new virtual infrastructure started to take shape through a combination of VMware software—including ESXi 4.1, VMware vSphere Client 5.0 and VMware Site Recovery Manager (SRM) 5.0—along with a storage-area network (SAN) based on a NetApp FAS 2040 storage system.

VMWARE CASE STUDY

“The citizens of Pitt Meadows can sleep easy knowing that the City’s data holdings are robust and recoverable. It’s rewarding to show real, tangible value from our investment in VMware and NetApp technologies.”

— Martin Brown,
Network Services Specialist,
City of Pitt Meadows

VMWARE FOOTPRINT

- ESXi™ 4.1
- VMware vSphere® Client 5.0
- VMware Site Recovery Manager™ 5.0

APPLICATIONS VIRTUALIZED

- Microsoft Exchange 2012, SP2
- Vadim iCity Enterprise municipal finance software
- GIS software, including ESRI ArcMap 10.1, Autodesk AutoCAD Map3D 2008, Pacific Alliance Technologies iVault and Cartegraph 7.0g
- OpenText eDocs 5.3.1

PLATFORM

- NetApp FAS 2040 SAN

PARTNERS

- Sudden Technologies
- NetApp

For guidance in putting together a comprehensive solution from these components—and designing a comprehensive DR strategy around it—the city worked closely with Sudden Technologies, a Vancouver, British Columbia-based systems integrator, as well as a VMware and NetApp partner.

“Pitt Meadows had heard about our results helping other municipalities with their DR needs, so they felt comfortable engaging us,” said Greg Cox, business development manager at Sudden Technologies. “Our extensive experience with VMware software, and our structured approach to technology implementations, made them feel confident that they were getting an expert opinion.”

“Sudden Technologies brought domain expertise, architectural expertise and best practices: the type of deep technical knowledge that we don’t have time to develop in-house for a one-time installation of new technology,” said Brown. “It would have been a lot slower and a lot more rocky if we hadn’t had their expertise.”

Sudden Technologies helped Pitt Meadows get started with the VMware software and then allowed them to migrate servers at their own pace. In less than a year, Pitt Meadows virtualized 85 percent of their servers, including Microsoft Exchange 2012, their Vadim financial system and their GIS systems.

This comprehensive virtualization enabled Pitt Meadows to develop the DR and business continuity capabilities they had long sought, but had been unable to realize. The NetApp FAS 2040 SAN replicates the virtual machines from the primary data center in City Hall to an offsite data center located in the City’s fire hall. The tight integration between VMware and NetApp technologies allows Pitt Meadows to manage snapshots, backups and restores from a single location in the vSphere client.

Business Benefits

The implementation of VMware and NetApp technologies has taken Pitt Meadows’ backup and recovery capabilities to a whole new level. Snapshots of a handful

of critical virtual machines are taken every three hours during the day. In addition, all virtual machines have daily, weekly and monthly snapshots taken, based on pre-defined retention periods. Additionally, the City’s production SAN is mirrored to its DR SAN every 15 minutes with NetApp’s Block Level Replication SnapMirror product.

The City used Site Recovery Manager to create an automated failover plan and successfully performed its first full failover test without a hitch. All virtual machines fail over to the backup site; tier 1 servers get powered up, and other servers can be powered up and back down again on demand. The complete process takes about 90 minutes, and the City aims to perform this type of full failover test at least once a year.

The net result of these processes: Pitt Meadows can do a complete server recovery in minutes, not hours. Moreover, with the offsite replication of all their data, the City can be confident that, if a catastrophic event occurs at City Hall, they can have key systems back online at their DR site within a couple of hours—all of which would have been impossible under the old system.

“The citizens of Pitt Meadows can sleep easy knowing that the City’s data holdings are robust and recoverable—and that we are not putting the City’s essential services and responsiveness at risk,” said Brown. “It’s rewarding to be able to show real, tangible value from our investment in VMware and NetApp technologies.”

Looking Ahead

“The IT department used to be seen as just a support or help-desk environment, but now we’re viewed as an entity that can deliver enhanced services and capabilities to the City—and disaster recovery is really the biggest example there,” said Philp. “We’re a pretty small shop, so without having that virtual infrastructure in place, it would be pretty hard for us to focus on these higher-value activities, which—moving forward—we hope to do more of.”

