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INDUSTRY Government

SOLUTIONS *Virtualization, Enterprise Platform*
Hardware — Hitachi Universal Storage Platform® VM
Software — Hitachi Dynamic Provisioning, Hitachi Tiered Storage Manager
Services — Integration and migration services provided by Hitachi TrueNorth Channel Partner Compugen



City Government Elevates IT Efficiency, Reliability and Service Levels with Hitachi Storage Virtualization

For the city government in Coquitlam, British Columbia, providing quality services to its 125,000 residents is paramount. That is why the city IT department revamped its existing SAN to include controller-based storage virtualization. The Hitachi Universal Storage Platform® VM orchestrates seamless data movement capabilities, exceptional reliability and a user friendly interface. Now the City of Coquitlam provides efficient, highly available online services any time of day or night to its myriad customers.

The City of Coquitlam never sleeps. At least that is what the IT department professes. Supporting 15 buildings across three city campuses that serve 125,000 citizens, diverse businesses and over 1,000 city employees, it is no wonder the city provides a high speed fiber optic network infrastructure, known as QNet, and 24/7 online services to the community. Since 2003, the City of Coquitlam has doled out 36 of 144 fiber optic cable lines to improve the flow of information and commerce for its government buildings while reducing its carbon footprint and telecommunication costs. The remaining “dark” fiber strands can be leased out by local business and residential customers.

“Having the flexibility that this type of network provides means we can capitalize on cutting edge technologies to improve the levels and types of service. From the

resident who wants to register for swim lessons or make a payment online, to the city staff in need of ‘round-the-clock access to departmental records or testing and development applications, we have the capabilities to provide those — reliably,” says Darren Browett, the technical services manager for the City of Coquitlam.

Governing Flexible Business Growth

When Browett was hired into his current role five years ago, the IT department’s progressive technologies included new VMware, Voice over IP (VoIP) and a SAN based on the Hitachi Thunder 9570V™ modular storage system and Brocade switches. Soon, hefty increases in city services, applications and database requirements summoned the need for greater storage performance, scalability and manageability. The Coquitlam

IT department was small and efficient, with only one full time and one half time storage administrator. While data storage was multiplying, staff was not. Finding a way to reliability and cost-effectively manage storage was also key to successfully continuing the city’s visionary technology trajectory.

In conjunction with a sweeping upgrade hardware and software of their VM Server Farm, (which supports approximately 70+ virtual servers) to handle the increased demands, Browett determined that a more powerful SAN would take Coquitlam the extra leap forward. “We saw virtualized tiered storage and nondisruptive data migration as next steps. Ultimately, we wanted to deliver optimal service levels with minimal downtime and stay prepared for flexible growth,” he says.

Virtualizing the Way with Hitachi Universal Storage Platform VM

Coquitlam began evaluating vendor solutions, including the Universal Storage Platform VM. “We considered criteria such as cost-to-value, quality and scope of technology, support infrastructure and ease of use. The Hitachi Universal Storage Platform VM scored highest in these areas and had very compelling features, including controller-based virtualization and thin provisioning. Besides easily aggregating and managing our 15TB of storage — and growing — we saw that the Universal Storage Platform VM would allow us to virtualize across the wide area network, perform transparent data migration tasks and protect LUNs in case of disaster,” explains Browett.



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The Universal Storage Platform VM unifies controller-based storage virtualization, dynamic provisioning, universal replication and nondisruptive migration capabilities through an intelligent platform that manages everything virtualized behind it. The Universal Storage Platform VM is also the first external storage virtualization platform certified to operate with VMware ESX Server and VMware virtual infrastructures, enhancing secure and flexible alignment between host environments and storage platforms.

Unlike other vendor products that route virtualization through software or the SAN, Hitachi controller-based virtualization allows existing LUNs residing on external storage systems to be virtualized without needing to be remapped. In this way, cache images of the LUNs can be redirected for copying, replication and migration without disrupting application activity. The results are greater utilization rates with no need to allocate unused storage capacity and simpler LUN provisioning. “We don’t have to worry about modifying existing LUNs when we virtualize them because the Universal Storage Platform VM allows those LUNs to exist and remain accessible, even if the network goes down in the case of disaster scenarios. We can simply mount those LUNs and carry on. That’s thinking ahead,” Browett clarifies.

Migrating Data Transparently

The City of Coquitlam revamped its SAN architecture with the Universal Storage Platform VM, and added QLogic SANbox 9200 Stackable Switches for ultrahigh density and performance. The Thunder 9570V is virtualized and tiered behind the Universal Storage Platform VM, with new boot from SAN functionality. The city’s Oracle database servers run on IBM® AIX® and are all on the new Hitachi storage, along with other applications and repositories.

Browett brought in Hitachi TrueNorth Channel Partner Compugen to help with integration and migration to the Universal Storage Platform VM, and to configure QLogic and existing Brocade switches to play nice in the SAN fabric. “Working with

Hitachi Data Systems and Compugen has been great. It’s like having a unified support infrastructure as part of our team. They have a great handle on product knowledge and are open to helping us run and configure the systems in the ways that are best for our environment,” he adds.

The Universal Storage Platform VM implementation has completely changed the way Browett and his team think of data migration. “We went from a data migration mindset to transparently moving data and apps anywhere within the SAN environment using the Hitachi Universal Storage Platform VM. We’ve had no service disruptions, no service calls and plenty of improvement in performance and efficiency. Before the Universal Storage Platform VM, we would decommission drives, do migration, bring up the new drives, partition them and migrate data on. Now we can move storage between tiers, do memory upgrades, add disk, bring data online, and we can do it anytime with complete transparency to end users,” extols Browett.

Doubling Capacity and Lowering Total Cost of Ownership (TCO)

In the year since its new Hitachi SAN has been in production, the City of Coquitlam has tripled the number of VMware servers, nearly doubled its storage capacity and managed its storage adeptly with the same head count. “The team likes the user friendly interface and easy tools, and we can handle changes to the system during the work day, which saves on overtime and lowers our TCO,” Browett says.

The next step for Coquitlam is activating the Hitachi Dynamic Provisioning module. “We are waiting for the VMware 4.0 install so we can, in essence, do what we humorously refer to as ‘thin-thin’ provisioning. The reality is that this type of flexibility and this level of virtualization will enable to us save 50 percent of storage space. It’s very exciting stuff,” he concludes.

About Compugen

Compugen is a leading Canadian IT solutions provider and integrator operating nationally through the dedicated efforts of skilled and experienced consultants and certified technicians in 13 offices coast to coast. Compugen is committed to using industry recognized, best-practice frameworks to help medium and large organizations optimize their IT infrastructures for maximum business value generation and return on investment.

For more information, visit:
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