Vancouver Community College Addresses Escalating Data Demands with New Storage Infrastructure

Vancouver Community College

Industry:	Education
Students:	22,000 students, more than 1,000 employees
Website:	www.vcc.ca

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Objectives

Replace aging storage infrastructure to address exponential data growth

Design the storage architecture to integrate with the existing VMware virtualization environment

Lay the foundation for a cohesive data management plan that will allow the College to store, archive, share and move the data as required

Background

Vancouver Community College (VCC) is the largest and oldest college in British Columbia, with over 22,000 students as well as 1,000 faculty and staff. Like any modern educational institution, the College must stay ahead of exponential data growth and find a way to store, manage and back up the data that is critical to the school's operations. VCC's IT staff was faced with a storage system that had reached its end of life; expansion was not an option and the existing infrastructure was not able to address future growth. Jag Madan, Vancouver Community College Chief Information Officer, knew it was time to look at modern technology that would lay the foundation for the College's data protection and management plans for years to come.

"One of our key focus areas going into this project was to design a storage architecture that fit with our existing virtualization platform," said Madan. "Scalar were quick to understand what our needs were – they had the technical expertise and experience to design a solution which provided us options that worked for us," he continued. Scalar brought capabilities to the table that went beyond the storage infrastructure, spanning across multiple technology areas, including the virtualization, networking and Linux environments.

The migration plan

First off, it was vital to get a good handle on the size of the storage environment required to accommodate VCC's data growth over the next few years, giving them room to grow without overspending. "Scalar worked with us to understand our existing storage capacity and was able to size it correctly. We do not need to worry about space over the next few years," said Peter Gregorowicz, Network Services Manager at Vancouver Community College. Understandably, one of Peter's critical requirements was that the project would be managed with very little disruption to the business. Scalar crafted a careful, well thought out plan that took into account changing timelines and tight coordination with the College's IT team. "It is always a concern when you are working with a vendor that is new to you – Scalar's technical and project management teams delivered a smooth migration for us," said Gregorowicz.

New storage platform delivers marked improvements

While the VCC team had a good grasp on the new technology required, the process was streamlined through their affiliation with BCNET, a shared IT services organization for British Columbia's higher education sector. BCNET had performed a cost and feature set analysis and identified the NetApp® Clustered Data ONTAP unified storage platform as a clear leader for the education market. VCC have enjoyed improvements on many levels with the implementation of the modernized storage environment. New features such as clustering along with improved deduplication and replication tools have improved the College's data protection and disaster recovery capabilities.

Solution

NetApp Clustered Data ONTAP; Snapshot; SnapVault; SnapMirror

Storage infrastructure designed to integrate with the VMware environment

Data migration project management

Clustered Storage

The clustered storage allows VCC to perform critical tasks such as maintenance operations and software upgrades during business hours without impact to users. "We can perform 90% of our necessary management tasks during business hours without having to worry about outages. This has been a big improvement for us," said Gregorowicz.

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Snapshot™ copies

The Snapshot function of the NetApp storage system provides a fast and stable point-in-time copy of files, giving administrators near-instantaneous access to previous versions of data, without the bulk and complexity of maintaining completely separate backup copies. Archiving takes place without human intervention and rolling back is simple. "When we make changes to business applications that the College relies heavily on, we need to ensure that we have a solid backup plan in place. Prior to the implementation of this new technology, we had to spend a huge amount of time coordinating the plan," said Gregorowicz. "We can now roll back with a click of a mouse if something goes wrong," he continued. With this elimination of complex roll back procedures for each application, the internal effort required to upgrade and maintain applications went down by approximately 20-30%.

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Results

30% improvement in storage efficiency

Enhanced disaster recovery planning with the ability to quickly and easily roll back

20-30% reduction in time spent on application upgrades and maintenance with the elimination of complex roll back procedures

Improved ability to add storage as data requirements grow and flexibility to scale the VMware environment

Elimination of manual processes with automated replication and mirroring

SnapVault® and SnapMirror® backup software

The implementation of SnapVault and SnapMirror allows VCC to replicate from the primary campus data centre to the backup facility automatically each evening. The new replication capability provides system administrators insight into successful data replication without labour intensive monitoring. "We now have built-in reliability, redundancy and disaster recovery," said Ali Balandy, Systems Architect at Vancouver Community College.

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Storage efficiency and scalability

Deduplication now takes place at the block level allowing the system to compress many files at the same time. "The new system improved our space utilization by a factor of 30%," said Gregorowicz. In addition to saving money with the efficient use of space, the College now has the flexibility to easily expand the storage as required by adding another shelf.

Looking into the future

Now that the College has updated the storage infrastructure, Madan is focused on developing the roadmap that will give VCC the ability to grow and meet the continuous demand for computing power and data storage. From building the processes that will meet governmental requirements around archiving to further enhancing the business continuity and disaster recovery strategy, Madan and his team are ready for the challenges that lay ahead.

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