

# Capital Engineering

## Growing Engineering Firm Migrates from Linux to a Microsoft-based Platform

Posted: October 11, 2005

Based in Edmonton, Capital Engineering is a Canadian-owned, multi-discipline consulting engineering company that has become a trusted leader in providing exceptional services and technical knowledge. The company has 126 employees across Canada offering world class solutions to clients that optimize assets, improve their competitive advantage and long term business success. Capital's multifaceted engineering and project management services extend throughout the oil, gas, power, mining and government markets. When Capital Engineering opened its doors, its technology requirements were simple – employees needed word processing, email capabilities and access to the Internet for research. Based on these needs, the firm implemented a homegrown Linux-based platform and OpenOffice. At the time Capital Engineering thought this solution seemed like a more cost-effective IT strategy. However, after rapid growth the company realized that its basic Linux system no longer fit its needs. In addition weekly server crashes were hindering employee productivity and increasing support costs. Capital Engineering turned to Microsoft certified partner Acrodex to replace its Linux-based platform with Microsoft® Windows Server™ 2003 operating system. The application was easy to administer and would help improve communication and collaboration abilities.



### Solution Overview

#### Customer Profile

Based in Edmonton, Capital Engineering is a Canadian-owned, multi-discipline consulting engineering company with offices across Canada. Capital Engineering offers a complete range of engineering and project management services.

#### Business Situation

Capital Engineering's Linux-based platform couldn't effectively meet the needs of this growing organization. Advanced communication and collaboration between employees and clients was a challenge, and weekly server crashes were hindering employee productivity and increasing support costs.

#### Solution

Capital Engineering worked with Acrodex to select an alternative solution and decided on a Microsoft-based solution that was easier to use than Linux, including Microsoft® Windows Server™ 2003.

## Company Overview

Based in Edmonton, Capital Engineering is a Canadian-owned, multi-discipline consulting engineering company that has become a trusted leader in providing exceptional services and technical knowledge. The company has 126 employees across Canada offering world class solutions to clients that optimize assets, improve their competitive advantage and long-term business success.

## Business Challenge

When Capital Engineering started its business, they implemented a simple, low-cost Linux-based system which provided basic applications for office management, and Internet access for research and email purposes. Over time as the organization grew, it became evident that Capital Engineering would need to seek technological solutions which would support a wider array of activities.

Rapid company growth meant that Capital Engineering's IT needs were becoming more complex. The company began exploring applications that would enable the automation of everyday business processes, improve management of business contacts and communications across the widely distributed firm. As well, server crashes had become a weekly occurrence, and the resulting network downtime not only cost the company in terms of productivity, but put its valuable data at risk. It was clear to the company's IT team that an infrastructure upgrade was needed to improve the overall IT environment and the overall experience for users.

After reviewing the requirements for supporting IT functions such as improving internal and external operations, and creating a more stable IT platform, the IT team felt that Linux would no longer meet the company's business needs.

"Even though the Linux platform appeared to be the cheaper option, it was our impression that it is expensive to configure and maintain," says Ed Castillo, technical team lead and infrastructure architect, Capital Engineering. "If you look at it from an ROI perspective, Microsoft might cost more as an initial payment, but as an overall long-term investment we believe that Microsoft-based technology provides more value for our money."

Most of Capital Engineering's 126 employees work either on client projects or at a client's office. The company's Linux-based platform made it difficult and expensive to collaborate with clients effectively because a majority of its customers work in a Microsoft-based IT environment. Capital Engineering found that OpenOffice did not easily allow its employees to share documents with their clients who were running Microsoft® Office System. This limitation to share important documents and collaborate on projects reduced the effectiveness in communicating with clients.

Sharing information with clients was further restricted because of the disparities between the two different networks. With Linux on the back end, Capital Engineering found there were issues with exposing confidential information when sharing data with clients. The need for greater security was a key driver in moving to a Microsoft-based platform.

## Benefits

- More robust infrastructure
- Increased uptime
- Better network management
- Improved communication and collaboration

## Software and Services

- Microsoft Office 2003
- Microsoft Office Project 2003
- Microsoft Office Visio 2003
- Microsoft Exchange Server 2003
- Microsoft Windows Server 2003 Enterprise Edition

## Hardware

- Microsoft Active Directory

## Partners

- Acrodex Inc.



“Capital Engineering wanted to help its clients’ confidential company information to be secure and only available to the customers that needed to access that data point,” says Alaa Sabbagh, manager of software licensing services, Acrodex. “In the past with the Linux server, this was difficult without having someone onsite to provide an open connection to a certain folder. There was way more overhead involved with sharing data on the Linux server.”

While the Linux-based system was adequate for a basic business solution, Capital Engineering found it was a real challenge for IT administrators to manage its network easily and effectively.

“The upfront cost of Linux is free, or close to free, so there isn't really a lot of support provided by the vendors. In that sense you get what you pay for – basically nothing,” says Sabbagh. “When you buy something for free you should expect nothing from the product, and expect to incur costs by paying the vendor for support.”

As well, Capital Engineering’s Linux solution could no longer keep up with the volume of message traffic being generated by the growing company, and mobile users could not access email and customer data easily when they were travelling or working offsite. This was costing Capital Engineering in terms of productivity. Email is such a mission-critical application it was essential for employees to be able to work together effectively from any location.



“ The Linux platform appeared to be cheaper, but it was expensive to configure and maintain. Microsoft might cost you more initially, but we believe it is more value for your money.

**Ed Castillo**  
Technical Team Lead  
and Infrastructure  
Architect Capital  
Engineering  
Capital Engineering



the server management console to help perform network management tasks such as setting up new users.

### **Solution**

Capital Engineering worked with Microsoft certified partner Acrodex to find a cost-effective, easy to administer solution that would meet its evolving business needs. The company selected Microsoft® Windows Server™ 2003 operating system as its overall platform.

The platform migration began in August 2004 and took three days, from design through deployment. The implementation itself occurred on a rolling basis. Acrodex helped the IT team ensure a smooth transition for users and reduced any potential help desk overload. Capital Engineering experienced no downtime or loss of productivity throughout the entire migration process.

With the help of Acrodex, Capital Engineering was able to implement a solution that used Active Directory® directory service as a repository for network-based entities such as files, printers and user account information.

“Now we can manage and share data across the organization and with clients,” says Castillo. “Employees can log on to the domain and control each client’s profile and each user’s access to information.”

Capital Engineering IT administrators were able to use the built-in remote management tools included with Windows Server 2003 to manage the company’s server remotely from the main office. With the server management console, Capital Engineering can quickly deploy security updates. The company is also able to use

"Microsoft offers an out-of-the-box solution that matches our business needs," says Castillo. "With a Microsoft-based solution we were confident that you are getting a lot of great business benefits at a great price and we know that if disaster were to strike, support is a phone call away."

Capital Engineering deployed Arcodex's proposed solutions to track IT support services and customer interactions. Each client has its own listing on the Capital Engineering site home page to ensure easy access to data. All network information is loaded onto the site, including proposals which then can be accessed from virtually anywhere with an Internet connection. As a result, Capital Engineering employees have 24/7 access to all the information they need which helps them maintain their productivity when visiting customers.

Arcodex also installed Arcspan™. Arcspan provides an integrated view into the overall organization and captures real-time information to allow a company to manage projects and deploy resources more efficiently. Individual modules include a resource management feature that tracks human resource skills and assigns people with optimal skill sets to the highest-priority projects. The project management module tracks project milestones, identifies projects at risk, and sends automated alerts for intervention. An expense management feature allocates expense data against specific projects to accurately track overall project costs.

### **Business Benefits**

The deployment of Windows Server 2003 is helping Capital Engineering improve productivity, efficiency, employee and client communication and collaboration. The company is enjoying less network downtime and high availability in its messaging solution after running Windows Server 2003 for more than nine months without any hitches.

"At first, we were apprehensive about implementing a Microsoft-based solution. But after the initial testing and limited deployment, we were pleasantly surprised and excited about the improvement we experienced with Windows Server 2003," says Castillo. "It is a very robust operating system. The administration tools that are included in the solution helped to greatly reduce the effort to install and administer our servers."

### **Robust Infrastructure**

Windows Server 2003 provides flexible tools that are helping Capital Engineering manage its network proactively, with less cost strain on the IT department.

"With the Linux-based platform we would have a system crash at least one a week," says Hussein Kaddoura, IT project manager, Capital Engineering. "Migrating to a Microsoft-based system has virtually eliminated server crashes and we have vendor support."

### **Reduced Cost of Ownership**

With the Terminal Services capability of Windows Server 2003, the company's computing environment provides a virtual desktop that enables users to operate Windows-based applications over the Internet.

"This eliminates hardware obsolescence and greatly reduces software maintenance costs," says Sabbagh. "As long as employees have Internet access, they will enjoy the computing power of the system. This virtual business environment gives their business the lowest total cost of ownership." The Microsoft-based platform is scalable, so Capital Engineering can be confident its IT environment will support its continued growth. A simple task such as adding memory can be completed easily, without having to search the Internet to find ways to accomplish it. This will help employees spend more time serving clients or working on strategic areas of the business, and less time on administrative tasks.

"Instead of spending a significant amount of time on administration and assessment and diagnosis, we are finding that we are now only spending minimal time on administration," says Castillo.

#### **Enhanced Operational Efficiency and Productivity**

Microsoft Exchange Server 2003 is helping Capital Engineering employees share real-time information with their customers and colleagues, virtually wherever they are located. By linking its offices across Canada, the company is now adopting a truly national approach to its business in the way it views and analyzes business opportunities across the board.

"Being well-connected means we can manage our time better, and we are very well informed now about what is happening in all our offices," says Castillo. The bottom line is we have become more efficient by eliminating bottlenecks within our operations."

#### **Future**

With the migration to the Microsoft-based platform complete, Capital Engineering is planning on taking the next step and migrating the last remaining OpenOffice to Microsoft Office in the coming months. It is also planning to deploy Microsoft Business Solutions CRM to manage their customer pipeline and service requests. The Microsoft CRM solution coupled with Arcspan will enable the Capital Engineering management team access to complete visibility of actual and planned activities to help further reduce administration costs and at the same time enhance client service.

#### **Microsoft Windows Server System**

Microsoft® Windows Server System is a comprehensive, integrated, and interoperable server infrastructure that helps reduce the complexity and costs of building, deploying, connecting, and operating agile business solutions. Windows Server System helps customers create new value for their business through the strategic use of their IT assets. With the Windows Server operating system as its foundation, Windows Server System delivers dependable infrastructure for data management and analysis; enterprise integration; customer, partner, and employee portals; business process automation; communications and collaboration; and core IT operations including security, deployment, and systems management.

For more information about Windows Server System, go to:

<http://www.microsoft.com/windowsserversystem>

#### **For More Information**

For more information about Microsoft products and services, call the Microsoft Sales Information Center at (800) 426-9400. In Canada, call the Microsoft Canada Information Centre at (877) 568-2495. Customers who are deaf or hard-of-hearing can reach Microsoft text telephone (TTY/TDD) services at (800) 892-5234 in the United States or (905) 568-9641 in Canada. Outside the 50 United States and Canada, please contact your local Microsoft subsidiary. To access information using the World Wide Web, go to: [www.microsoft.com](http://www.microsoft.com)

For more information about Acrodex, call (780) 426-4444 or visit the Web site at:

[www.acrodex.com](http://www.acrodex.com)

For more information about Capital Engineering, call (780) 488-2504 or visit the Web site at:

[www.capitaleng.ca](http://www.capitaleng.ca)