How cloud computing can transform your business landscape.

This whitepaper will help you understand the ways cloud computing can benefit your business.

Shaw) Data Centre & Cloud Solutions

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Introduction

It seems like everyone is talking about the "cloud." Cloud computing and cloud services are the new buzz words for what's really a not so new idea—storing data and performing computer tasks using software and hardware applications that are not installed on your computer. Instead of accessing information through your local PC/server/network, you are retrieving information via the Internet or private off-site data centre accessed via the Internet or a remote connection.

But cloud computing is far more than just a method of storage, and chances are that your business is already using cloud technology. Salesforce, Dropbox, Google Drive, Facebook, Twitter and LinkedIn are all ways that you can send and receive information over an infrastructure that somebody else owns. Email services such as Gmail and Yahoo, some video conferencing and Microsoft Office 365, are also in the cloud.

The following whitepaper discusses how your business can benefit from cloud computing, the different types of cloud strategies, and what you should consider if you decide to move your business into the cloud.

In a recent LinkedIn Poll of 1,700 small businesses, 80% said they are using cloud-based applications, with 47% of them using as many as they can.[1]

A survey by j2 Global found that almost 88% of respondents say they plan to, or wish they could retire one or more legacy business technologies and nearly 60% of survey respondents expect to save money by using cloud services in 2014.[2]

The top five reasons why your business can benefit from cloud computing

While 63% of small business owners said that they felt overwhelmed by the number of technology choices available to them, 49% placed technology as a top investment priority for 2014.[3]

1. Cost Savings:

Cloud technology offers a cost effective solution to help businesses leverage the best and most up-to-date software technology without investing in new hardware and software. Accessing or increasing storage through the cloud is also much more cost effective than buying and maintaining data storage facilities, and business only need to buy what they need, when they need it. Many applications can be designed to be intuitive. Once launched they require little to no management by staff saving on the cost of employees and resources.

2. Convenience:

The cloud supports the remote workforce by enabling more employees to work from home, travel or attend meetings outside the office, without ever losing touch. All they need is a desktop computer, laptop, smartphone or tablet—any device that connects to the Internet or Ethernet. The accessibility of a remote connection can boost productivity because it allows a number of people to work on the same project from anywhere in the world.

Over 35% of respondents said they plan to offer remote working options to employees in 2014.[1]

3. Flexibility:

Due to its dynamic nature, cloud technology is highly flexible and offers business the capacity and speed to scale up if a change in their traffic demands it. For example, in the case of a special sales promotion, cloud gives retailers the ability to access extra bandwidth to accommodate for a spike in online traffic. The risk of running out of memory or a reduction of computing power is greatly reduced which improves business efficiencies and increases agility when reacting to changing market situations.

The top five reasons why your business can benefit from cloud computing

4. Time saving:

For many companies, tapping into cloud technology also means giving their business a competitive edge. Businesses are changing the way their customers interact with technology, delivering applications to customers sooner, and bringing new products to market faster. Staff will also save a significant amount of time that they once needed to procure, provision and install new hardware systems. Another time saving benefit is that cloud computing requires less of a learning curve.

5. Driving sales:

The speed-to-market feature of cloud computing can bring a new product or service to market faster than a business rival, which is crucial in a world where being first to market has key implications for revenue generation, market share and competitiveness. For example, cloud supports rapid experimentation and innovation by allowing companies to quickly test and adopt new solutions all without large up-front costs.

Mobile devices are the number one tool (41%) that entrepreneurs rely on to run their businesses. CRM solutions are the number two spot at 32% followed by social media (21%) and the cloud (15%)[4]

Where do I start?

Start by identifying the key applications that support your business today, then see what's out there before developing a cloud strategy that's right for your business. There are essentially three models used to deliver cloud-based services to business.

Public cloud

The simplest and most affordable of the three models. In this model, the cloud provider owns all the infrastructure and resources such as the network, applications and storage facilities which they share with multiple users over the Internet. The advantages of the public cloud services are that they are easy to set up, highly scalable, and there are no wasted resources, because you only pay for what you use or subscribe to.

Private cloud

In this model, your company manages and operates the cloud for its own use. Because the private cloud is tailored to your specific business, it is usually more expensive than the public cloud because you are responsible for maintenance and upgrades, but it offers flexibility and comprehensive security, as well as control over your company's data. Companies that have a high degree of sensitive data such as a bank or medical clinic, often choose the private cloud for compliance with industry and government data security regulations.

Hybrid Cloud

As the name suggests, the hybrid cloud model shares some of the private and the public cloud features. For business, the advantage of the hybrid cloud is the scalability and cost effectiveness offered by public cloud services, with the security of the private cloud for mission-critical applications and sensitive data.

Where do I start?

According to the Gartner Group, worldwide revenue from SaaS-based delivery will reach $22.1 billion by 2015.[5]

Once you've chosen the right service delivery model for your business, it's time to assess your cloud needs. There are essentially three different models—software-as-a-service ('SaaS'), infrastructure-as-a-service ('IaaS'), and platform-as-a-service ('PaaS').

Most companies that enter the cloud begin by migrating some of their most basic applications to SaaS.

Instead of buying software, companies offer software as a subscription through the Internet via a provider such as Microsoft or Salesforce.com, a cloud-based customer relationship management (CRM) software. Two big advantages to SaaS is that the computer infrastructure is part of the service and businesses can pay per user or per device.

While CRM is one of the big drivers in growth in SaaS, businesses are becoming more comfortable in accessing their software through the Internet, and SaaS providers are now offering similar services for basic business needs such as email, data backup, and even phone systems.

In a SaaS environment, the service provider has complete control over security and management. It's up to the business to negotiate the type of services, the service, privacy and compliance levels with the provider.

How can I ensure it's secure?

In order to evaluate the security of a cloud provider, there are some basics you should ask about to find out how well you are protected against viruses and other disasters. Give some thought to how to best secure each layer of the public cloud environment including the infrastructure, the operating system, application and network layers.

When assessing a potential service provider consider:

✓ **The level of their network security.** What systems are in place—such as a dedicated physical or virtual LANs to secure their customers' precious data.

✓ **User access security.** Do they support role-based access controls? How do they monitor and report on usage and activities for audit purposes?

✓ **Compliance.** Any business handling sensitive data will need to know if they can audit the provider's security controls

✓ **How they secure virtual machines in the cloud.** How do they isolate one group of virtual machines from another?

✓ **The security of the data.** What mechanisms are in place to prevent the mingling of your data with that of other cloud users?

✓ **Disaster recovery.** Do they provide backup? Can they quickly restore services?

✓ **How their data centre is physically secured.**

✓ **Ownership of information.** It can come as a surprise to cloud customers who find that they are not the only owner of their own data

✓ **Customer feedback.** Review online forums and evaluations

Six questions to ask when choosing a cloud provider

Most small to medium-sized businesses have the greatest concerns around security when they are considering adopting a cloud-based strategy and selecting a supplier. And while security is important, there are several other things businesses should take into consideration including service levels, the provider's track record for privacy, and dealing with outages and disaster recovery.

1. Do they offer a user friendly interface?

Do they have a web based user interface and a robust application programming interface (API) to allow full control and administration of your cloud based servers and storage? In other words, you should be able to configure or provision from the cloud based infrastructure to meet your requirements, as you would in your own workplace network.

2. Where will your data live?

While the cloud is a virtual environment, the data must still be physically stored somewhere. Data sovereignty is the concept that information stored in the cloud is subject to the laws of the country in which it is located. The laws surrounding privacy vary widely from country to country. You may wish to set up a data privacy and sovereignty governance framework to ensure that your data stays in Canada.

3. Can your provider monitor your usage patterns?

If so, you'll be able to scale services up and down for maximum cost-efficiencies.

4. How will outages effect productivity?

How will the provider handle outages? What impact will an outage have on your day-to-day operations. What options do you have to recover lost data, how is data stored?

5. Will you have full control over login credentials?

Can you configure your own user authentication environments?

6. What is the cloud provider's support structure?

Do they have phone, email, chat support? Are they open 24/7/365 days a year or just during business hours?

Summary

For many companies, tapping into cloud technology means giving their business a competitive edge, whether that's cloud based CRM applications, virtual workplace support, or saving valuable time procuring, provisioning and installing new hardware systems.

Working in the cloud means that bandwidth requirements are on-demand and accessible from any device with an Internet or Ethernet connection. Cloud technology is highly flexible and offers business the freedom to scale up if a change in traffic demands it. Cloud computing limits the risk of reduced memory capacity and negative impacts to computing power, which improves business efficiencies and increases agility when reacting to changing market situations.

Acquiring cloud computing services means a positive impact to your budget, providing savings on expensive hardware upgrades and more access to the latest software.

No matter what size your business, our Shaw Business team can help support the cloud services you use with advanced technology solutions.

1 New Hampshire Business Review, January 10, 2014
http://www.nhbr.com/January-10-2014/2014-technology-trends-for-small-business/

2 www.smallbusinesscomputing.com/News/Software/small-business-technology-trends-for-2014.html

3 www.smallbusinesscomputing.com/News/Software/small-business-technology-trends-for-2014.html

4 Wakefield Research survey, cited in smallbusinesscomputing.com, March 19, 2014

5 Gartner, March 27, 2012
http://www.gartner.com/newsroom/id/1963815

About the Calgary Data Centre

Our services are highly configurable and designed to provide ease of mind for our customers. We work with passion and integrity. Shaw has over 40 years' history providing leading-edge technology in Canada.

The Calgary Data Centre offers:

40,000 square feet of raised floor	High energy efficiency, Projected 1.4 PUE	Multiple security zones	Meeting rooms and workstations	Carrier options

Our state-of-the-art facility represents Shaw's first Canadian offering deployed through our partnership with ViaWest. Shaw Business' Calgary Data Centre leverages ViaWest's 16 years of building and operating Data Centres with the power of Shaw's extensive fibre network.

To learn more: **business.shaw.ca/datacentre**

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