

White Paper on Cloud Computing
Surety Technologies, Inc.
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Introduction

If you are a small business owner or manager, you have likely heard that cloud computing is the next big thing in IT. It probably is the next big thing, but that doesn't necessarily mean it should be the next big thing for your company. We offer these observations on the topic.

For our purposes, Cloud Computing is defined as the use of internet-based services to support business processes. When trying to narrow in on the pros and cons of cloud computing, it's beneficial to first understand the various types of cloud computing. In most cases, cloud computing can be broken down into three categories.

Infrastructure-as-a-service (IaaS) – Rather than purchasing servers, software, data center space and network equipment, the vendor provides these services and bills the client based on the amount of resources consumed. Companies that provide these hosting services include Google, HP, IBM, Amazon, and many others.

Platform-as-a-service (PaaS) – The vendor provides and manages the operating system, database, and everything else needed to run certain platforms. This is used most often by software developers.

Software-as-a-service (SaaS) – Instead of purchasing a software license, vendors run the software application for you. Examples include Yahoo mail, Google docs, QuickBooks Online, Practice Fusion, ADP AdvancedMD and Salesforce.com.

Pros and Cons of Cloud Computing

Pros:

Cost savings – Through the sharing of IT resources with other companies cloud computing can minimize your capital investment and reduce operating costs. For example, it can reduce or eliminate the need for an IT staff. There is also the hassle-saving factor. Software provided online is upgraded and maintained by the provider, so small businesses do not have to purchase the newest version of a software program or stay current with fixes and patches.

Reduced up-front costs – Cloud computing agreements usually allow you to avoid up-front purchases of equipment and software licenses. These costs are spread over the term of a multi-year agreement in monthly or annual payments.

Scalable – Similar to a utility, depending on your application a cloud services will enable your company to pay only for what you use. With this “pay as you go” model, a business can incrementally increase or decrease the use of certain cloud services as needed.

Mobile access – Cloud computing can provide particular benefits to businesses whose staff works remotely. Either through Wi-Fi or a wireless modem your staff can have 24 hour access to your IT systems from wherever they are doing business.

Security – Cloud computing is often more secure than a traditional IT infrastructure because information is stored off-site and has more elaborate and sophisticated protections than if stored on your servers or PC's.

Business continuity – A major loss of data can be detrimental if not fatal to a small business. However, with cloud computing, it's not necessarily a disaster if a sales rep loses a laptop or your entire workplace is compromised or destroyed. Your business data will continue to be available.

Cons:

Data ownership and irretrievability – What if you decide to stop using a cloud service? What if your cloud provider suddenly went out of business? Can you get all your data back? Can you be certain that the provider will destroy your data once you've canceled the service?

Data security - The idea that extremely sensitive data such as client medical records, customer credit cards and perhaps even trade secrets or confidential legal documents is not locked up on company premises is disconcerting to some business owners.

Transmission speed – Depending on the amount of data you need to pass between you and your cloud provider, bandwidth limitations may create unacceptable response times and reduced staff productivity. Large bandwidth requirements and related costs may offset other cloud computing benefits.

Availability - Will your cloud service go down unexpectedly? Do you lose your internet connection periodically? You may be unable to serve your clients or customers for hours or more.

Idiosyncrasies – If you are transitioning from a local version of an application to the cloud version, do not expect it to be identical. Our experience has shown there can be significant differences in screen layout and functionality. You may also experience intermittent delays during normal daily use.

Summary

The portent of cloud computing is real. In big ways including end-to-end systems like those offered by General Electric, or NetSuite, and in lesser ways like QuickBooks online, small businesses and start-ups are moving toward cloud computing. As described in the pros and cons discussion above it may not be for every business, for a variety of reasons. Many small businesses are content to wait until the market is more mature and more of the risks are mitigated. Others may feel compelled to move more quickly.

Cloud computing has limitations and will not solve all the problems that some vendors may promise. Plus, cloud service providers are not all the same. We recommend you choose established providers and talk to their existing customers. Find out if they offer automated local back-up. Ask what kind of redundancy the company has built in to deal with a server that crashes or a power outage. Make sure the cloud provider has their own servers, not shared servers with other companies. Ask whether the cloud provider undergoes third-party monitoring by security standards firms that inspect providers' systems periodically for vulnerability to data breaches.

We recommend you take this topic seriously. A problematic transition between systems can and has put both large and small companies out of business. If you cannot schedule, treat, ship or bill your clients/patients/customers for a significant period of time, you will lose some of them and your business will suffer.

Conclusion

As usual for most technology questions, the answer is not easy or simple. It's important that business owners do their homework before making a decision. Do the research, weigh the pros and cons of cloud computing and decide on the best solution for your business.

If you decide that your business or some portion of it should take advantage of "the cloud," be sure to take the time to lay out your transition plan and determine how you will measure progress. If you can, start small. Avoiding an all-or-nothing transition is always preferable. If thoroughly researched and well planned the transition can work out well as it has for many small businesses. Finally, be sure to seek advice from and work with a technology professional whose opinion you trust.

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