



Cloud Computing – *Getting Your Business Back to Business (And out of the IT Business)*

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The recent implosion of the Real Estate and Financial markets has been quite a harsh wake-up call for everyone. No one understands the resulting pinch better than CFO's & CIO's that are forced to "do more with less" in order for their company's to survive. Interestingly enough, the wake-up call has coincided with the emergence of "Cloud Computing" as viable and cost-effective IT solution. After all, why did non-IT businesses get into the IT business in the first place? Why would you have rooms full of complex, difficult to maintain, energy hogging IT equipment in a Law Firm, a Medical Practice, a Hospital, a Bank, or an Investment Firm?

The answer is simple: They had no choice. In order for business to have access to the data and applications needed to operate, they had to adopt the defacto model for business computing: Distributed Computing. Over 30 years ago, distributed computing emerged out the need to push increasingly-large volumes of data and ever-growing applications through a data infrastructure whose capacity was rapidly being outstripped.

So what's changed? 2 major components have changed:

- Data Network Infrastructure
- Application Delivery Platforms

The advent of high capacity fiber-optic data network infrastructure and highly efficient application delivery platforms have provided the capacity to enable Cloud Computing to take flight. This new capacity, along with the need to find greater efficiencies in IT has spurred the emergence of a new class of IT service providers that can deliver all applications and data to businesses from a hosted centralized data center in "the Cloud". In this model, Cloud Computing service providers can offer businesses true Enterprise-Class performance, reliability, security, compliance, and flexibility at a fraction of the cost of a traditional in-house distributed



computing solution. This is possible because Cloud Computing service providers host multiple businesses on this Enterprise-Class platform.

The result is that businesses can finally outsource their IT to “the Cloud” and free themselves to focus on their core business. Instead of IT being a costly and complex burden of managing networks, servers, and PC’s, suddenly IT becomes a service that businesses can use like a utility. Businesses can access all the applications and data they need from an Enterprise-Class environment without the capital cost or worry of procuring or managing the IT equipment. To add to the benefit, businesses using Cloud Computing services take advantage of perfectly scaled IT solutions because they only pay for the resources that they use.

When considering Cloud Computing, there are 3 core questions that must be answered:

1. What makes this different than ASP’s (Application Service Providers) or SaaS (Software as a Service)?
2. Are there Privacy and Security issues with utilizing Cloud Computing?
3. What are the key elements driving the rapidly growing success of Cloud Computing?

What makes this different than ASP’s (Application Service Providers) or SaaS (Software as a Service)?

In principle: Nothing. All three leverage the efficiencies and economies of scale of using a multi-tenant platform.

In practice: The Delivery Mechanism. Cloud Computing takes the fundamentally sound principles of ASP and SaaS to the next level of efficiency and effectiveness. True Cloud Computing solutions leverage ultra-thin client technology to deliver all applications and data in the most efficient manner. On the other hand, ASP and SaaS models typically use fat client applications and browsers as their delivery mechanisms, which are slower and more resource intensive on the client side.

Are there Privacy and Security issues with utilizing Cloud Computing?

There are Privacy and Security issues to be considered on any platform, but fortunately, they are more easily addressed on a centralized, multi-tenant platform than in a distributed computing environment. Because Cloud Computing by nature leverages the economies of scale afforded by servicing multiple clients from a centralized platform,



businesses want to understand how their data and applications are protected from unauthorized use.

The first important distinction to make is “Free” vs. “Enterprise-Class” Cloud Computing services. Free Cloud Computing services are not designed to provide high levels privacy and security. They are designed to be “Free”, and as such, they mine your data for information that will help them present you with relevant ads, which is how they make money.

Enterprise-Class Cloud Computing services are compartmentalized by client to provide the highest levels of privacy and security protection available in the industry, which otherwise could only be afforded by very large corporations. The Enterprise-Class model is subscription fee based, where businesses are specifically outsourcing their IT because the Cloud Computing provider can offer greater security than they could on their own.

What are the key elements driving the rapidly growing success of Cloud Computing?

- Efficiency
- Effectiveness
- Security
- Compliance
- Flexibility
- Mobility
- Sustainability

Efficiency - Better Performance at a Lower Cost

Recent estimates from IDC assert the market for remote hosting of office technology (i.e. Cloud Computing) will almost triple from \$16 billion in 2009 to \$42 billion by 2012, and the current downturn is likely to accelerate this trend because of the inherent efficiencies of remote hosting. By design, Cloud Computing leverages the economies of scale and enhanced performance that can be realized by hosting businesses’ IT on a multi-tenant platform. Because Cloud Computing utilizes an ultra-thin client, the performance of applications is less dependant on the resources of the client computer and those applications can run faster and more efficiently. This is even true of on client computers that would normally be considered end-of-life, thereby extending the life of outdated client hardware.



As well, the centralized Cloud Computing model can provide full power, data, and application redundancy and built-in hot fail over capabilities to avoid any interruptions in availability. Leveraging Cloud Computing can enable businesses to avoid the capital costs of purchasing costly client and server hardware while at the same time delivering centralized control, greater application performance, higher availability, and a better user experience.

Effectiveness - Getting Back to Business

At the heart of the drive behind the need for Cloud Computing is the invasive nature of distributed computing in business. Distributed computing requires large investments in time, resources and capital to maintain in-house IT solutions. No one starts a non-IT related business with the intention of expending massive amounts of time and resources managing IT. "Effective IT" is IT that enables you to have access to all the applications and data needed to *effectively* perform your job at the lowest cost in terms of time, resources, and capital.

On a Cloud platform, you no longer have the hassle of maintaining computer and server configurations/versions or software licensing because that is all managed for you in "the Cloud". By providing access to data and applications as if they were a utility, Cloud Computing can enable businesses and users to focus their time and resources on doing their jobs instead of on managing IT.

Security – Enterprise-Class Protection

Arguably the greatest security vulnerability of modern computing is its distributed fat-client architecture. Cloud Computing eliminates the issues associated with distributed computing by creating a central point of control for all data and applications. No longer do you have to worry about pushing the latest security patches and virus definitions out to each of the clients because all environments are housed centrally and they are automatically updated ubiquitously.

Access to all data and applications is governed by policies and permissions down to the user level with one single point of entry that is centrally controlled. Data and applications are housed in an Enterprise-Class data center whose architecture is firewalled with best-in-class hardware and software to strictly prohibit unauthorized access.



Compliance – Greater Regulatory Compliance

Regulatory compliance is an ever-growing concern of many industries. Meeting government and industry regulations, such as HIPAA, the GLBA, Sarbanes-Oxley Act, Anti-Money Laundering Act, and The Patriot Act and can be costly to deliver. The centralized nature of access and authentication of the Cloud Computing model makes it far easier to comply with such standards and regulations.

Enterprise-Class Cloud Computing providers can help businesses easily maintain compliance to the latest regulations and standards as they are required for the various industries that serve.

Flexibility – Tailored Solution

In these difficult economic times businesses are constantly looking for ways to efficiently tailor their IT solutions to their specific needs. With Cloud Computing businesses only pay for what they use, thereby enabling them to custom fit solutions to their requirements. Adding or subtracting users, applications, or capacity can be as easy as changing permissions and policies.

Businesses no longer have to make large capital investments in IT infrastructure in anticipation of growth and can easily scale back when needed to reduce their costs even further.



Mobility – Your Traveling Office

Cloud Computing can give users the ultimate in mobility by making your desktop environment hardware independent. You can log on from any computer globally that has an internet connection and have secure access to all your applications and data. If you are a traveler, you no longer have to travel with your laptop if you know that you will have a computer to use at your destination. But if you need to work off-line, you can stream your applications and data to a laptop, work off-line, and synchronize when you are back online.

Laptops are a particular point of vulnerability for data security for businesses. There is added security for your data on a Cloud platform, because if your laptop is lost or stolen, then all data and applications will be automatically erased if the laptop is not logged back onto the network within a designated period of time.

Sustainability – Green Business

These days everyone is looking for ways to help the environment. Cloud Computing is one of the easiest and most effective ways to “Green” your business by eliminating energy hogging servers and fat-client computers. By having your data and applications hosted on a multi-tenant Cloud platform, you are in-effect carpooling and inherently maximizing the resources that you use. This eliminates much of the unnecessary power usage and toxic waste that goes into landfills every year.

Summary

Someone, somewhere once stated that doing the same thing over and over again and expecting a different result was the “definition of insanity”. Well, our recent wake-up call has necessitated that business start doing things differently in order to survive. Out of necessity, businesses are having to get creative about how they deliver data and applications to their users. Cloud-Computing offers businesses the opportunity to have Enterprise-Class IT solutions at a fraction of the cost, the ability to get their business “back to business”, and the freedom to get out of the IT business.

For questions or more information on Cloud Computing, please visit www.visiononline.com or email at info@visiononline.com or call (703) 860-3100.